

NOMINAL COMPOUNDS IN DANISH, ENGLISH AND FRENCH.

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SUMMARY

A definition of four current linguistic theories is given and it is suggested that the field of compounding might provide a method of evaluating these theories.

A review of the literature on compounding is carried out, showing that counter-examples can be found to definitions of compounds that have been suggested and that extant theories of compounding are unable to cope with the data.

A discussion of several factors including lexicalisation, structural ambiguity and pragmatics is provided showing how these concepts are vital to a full understanding of compounds. The nature of the Germanic linking elements and of the verb form in verb + noun compounds is discussed.

Building on these discussions a theory of compounding is developed to account for adjective + noun, noun + noun, verb + noun and agentive endocentric compounds. It is shown that the strongest generalisations can only be gained in a case grammar framework.

This theory is then extended to account for exocentric compounds, compounds including other parts of speech and nominalisations. The advantages and disadvantages of a localistic model as opposed to a Fillmorean model are discussed.

It is suggested that the model developed might prove suitable for dealing with word-formation as a whole.

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This thesis is my own work and composition.

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PART ONE

PRELIMINARIES

CHAPTER I

INTRODUCTION

1.1 PREAMBLE.

1.1.1 The impulse for this work came from two entirely separate sources. The first was the difficulty encountered in attempting to deal with French compounds in a bilingual dictionary, which led to a desire to know how compounds could be classified; The second impulse came from the satisfaction I found in using compounds in the Germanic languages I learnt. I first discovered this in German, when I found out that one could often make oneself understood without knowing complex vocabulary items by creating compounds which, if not the mot juste in the situation, were comprehensible to the native speaker. The acme of achievement in this field came when I was learning Danish. Not knowing what the word for a punch for making holes in papers for filing was, I coined the term hulle-maskine, only to hear it called that by a Dane on a later occasion.

Later, linguistic speculation of a different type came into play; very often, it seemed, a compound in German or Danish took the place of a latinate or hellenic word in English. This tendency is even more pronounced for Icelandic; we find, for example, Icelandic máfræði, English grammar; Icelandic dýrafræði, English zoology; Danish

sprogvidenskab, German Sprachwissenschaft, English philology; Danish lydskrift, English phonetics, phonetic script. If one takes this one step further, one finds that many compounds in English, as well as in Danish, German, Icelandic, have as their equivalents noun phrases of different types in French: Danish skolebørn, English school-children are equivalent to French écoliers; Danish modersmål, German Muttersprache, English mothertongue are equivalent to French langue maternelle; German Dampfschiff, English steam ship are equivalent to French bateau à vapeur; German Aschenbecher, English ash-tray are equivalent to French cendrier. It seems, from data like these, that where Germanic languages use compounding, French uses either derivational morphology or analytical means to express the same relationship. English being a Germanic language with a greater Romance content than others falls rather between two stools. This leads one to speculate as to whether compounding is a Germanic but not a Romance prerogative (even though it is productive in other languages, both Indo-European and non-Indo-European: Sanskrit, Russian, Finnish, Turkish, Hebrew, Chinese etc.). If this is the case, what is the status of apparent compounds in French? A survey covering Danish, as a Germanic language, English as a Germanic language with a strong Romance or French admixture and French, either in its own right or as a representative of the Romance languages, might provide some kind of answer to these problems.

Only partial answers have been obtained to these problems in what follows. It is very largely to the solution of a different, much wider, question which arises from consideration of these problems that the work in this thesis has been directed. This point may be explained with reference to the example hullemaskine. When I first coined this expression I had almost certainly never heard it before, yet I happened to coin a correct lexical item. The coining of a new but correct lexical form would seem to be parallel to the coining of a new but correct sentential form, in other words, a case of the productivity of language. Now, if a non-native speaker is able to coin a new and correct lexical form in a language, there are four possibilities as to the procedure which has been undergone: (1) he has translated morpheme by morpheme or element by element from his own language; (2) there are no rules for the collocation of such nominal elements; (3) he has transferred the rules for lexical creation from his own language and they fit; (4) he has acquired the rules for the collocation of such elements into lexical units. We can, in the case in hand, eliminate (1), since the word in English is presumably 'punch'; 'hole machine' would very definitely be a second best. We can eliminate (2), since if there were no rules it would be impossible to create an unacceptable compound, whereas in fact this is possible. Jespersen quotes Carlyle's form mischief-joy as being alien to the

genius of English; a knife-killer could not be 'one who uses a knife to kill'; and Barbaud (1971:80) claims that French forms like kilo-mouche, boulevard-porte are unacceptable, the same, presumably, being true of the Danish translations fluekilo, dørboulevard. We cannot completely eliminate (3) from the case in point -- indeed, we would not wish to, since it is our thesis that there is a large common core of compounding rules in Danish, English and French (and by implication in any other language which uses compounding as a method of word-formation: this is of course subject to empirical verification) -- but we can see that it is not true of all compounds. We need only quote Danish smagssag which cannot be in English taste-thing or tastematter but has to be matter of taste. The moment a non-native speaker produces a compound of this type, we have to conclude that possibility (4) is in fact correct. But to postulate that the non-native speaker has, in his learning of the language, acquired rules for making compounds, is to imply that such rules exist. It is the discovery of these rules which is the primary aim of this work.

But there was one point which was kept firmly in mind during this search. Although the form taken by the compound noun, and particularly the form of the 'linking element' (for example the e in børnehave, the en in Tiefenstruktur), frequently causes difficulty to foreign learners of lang-

uages which compound a lot, the semantic interpretation of these compounds does not seem to cause any great difficulty, even though a compound seems to neutralise a lot of semantic information (see below, Chapters II and III). One would expect difficulties to arise here if it were true that there are, as has been variously suggested, ten, forty or a hundred different types of compound, simply because of the amount of choice of interpretations and the great ambiguity available to the speaker/hearer. We have therefore been looking, ceteris paribus, for a system which would offer a simpler description of compounding than has hitherto been available.

There is another reason why we should look for a simple description of compounding. Most of the approaches that have been made to compounding, particularly in more recent years (e.g. Lees, 1960, Brekle, 1970) have assumed not only that compounding, as a productive process, is a central part of the grammar, but also that since compounds appear to be a neutralisation of a vast number of semantico-syntactic relationships they must form almost a grammar within a grammar, a type of concentrated grammar of the language, what we might call a "mini-grammar". But whether or not this is true, it would seem to be true that compounding is a central enough part of the grammar of English or Danish, at least, to be able to act as an evaluation criterion for different linguistic models: any generative model of

language ought to be able to deal satisfactorily with compounding, and any which cannot must be an unsatisfactory model; also, *ceteris paribus*, if two models can deal with compounding, then the one which is the more economical must be seen as the more satisfactory model.

1.1.2 A knowledge of French and German on the part of the reader has been assumed throughout in the quotation of examples and texts. Such a knowledge has not been assumed for other languages, in particular, not for the Scandinavian languages; but rather than complicate the main text unnecessarily, translations are given in the appendices. Appendix A gives translations of all texts quoted in languages other than English, French and German; appendix B lists alphabetically all the Scandinavian compound words used as exemplificatory material in the text, along with an element by element gloss and a translation where appropriate. Any examples in other languages are glossed in the text.

As far as the Scandinavian languages are concerned, it has been assumed that, except in the form of the linking elements (see §3.7), what is true of one is true of all, so that discussions on the syntax and semantics of compounds

have been taken to be simply transferable from one of the Scandinavian languages to another.

1.1.3 For the moment we shall use the term compound entirely pretheoretically. We shall discuss definitions of the term at more length in Chapter II. It will, however, be useful to draw a distinction between three types of compound: endocentric, exocentric and appositional.

The distinction between endocentric and exocentric compounds is drawn by Bloomfield (1933:235). Although Bloomfield uses both semantic and syntactic criteria to define these two terms, we can confine ourselves to a semantic definition and say that an endocentric compound is one in which the whole compound is a hyponym of the head element, where the head is the syntactically obligatory lexical category (which in English, Danish or German will be the second element). Thus madman denotes a member of a sub-class of man: madman is therefore an endocentric compound. Similarly houseboat, wagon-citerne, eating apple, Gebrauchtwagen, legeplads are all endocentric compounds. An exocentric compound, on the other hand, is one where the compound as a whole is not a hyponym of the head. A red-coat is not a type of coat; a whitecap is not a type of cap.

To call someone Bignose is not to imply that he IS a big nose, but rather that he is a person who HAS a big nose; to call someone Blåtand implies that he HAS, not IS a blue tooth. For this reason this type of compound has been termed a 'possessive' compound by some linguists. The terms Dickkopfkomposita, indirect compounds and the Sanskrit term bahuvrihi compounds have also been applied to this group (see Morciniec, 1964:110/1 for other terminologies). Purely syntactic criteria would, of course, give a different result. Madman and whitecap both belong to the same form class (noun) as their heads. But we are not concerned with this type of endocentricity here, only with the semantic criteria we have outlined.

If we look at Bloomfield's (op.cit:195) introduction of the term endocentric, he says that

"endocentric constructions are of two kinds, co-ordinative (or serial) and subordinative (or attributive)."

This distinction applies as much to compounds as it does to other structures. The examples we have quoted above are all subordinative examples, and these in fact form the majority, but there are also co-ordinative compounds, where the resultant compound belongs to the same form class as both of the elements which go to make it up, and is a hyponym of both the elements which go to make it up. This sub-class of

endocentric compounds we shall call appositional compounds (though this group may be further sub-divided, see §3.1). This sub-group contains compounds like boucher-charcutier, maid-servant, Schleswig-Holstein. When we use the term endocentric compound it will apply, generally, to subordinative endocentric only.

Bloomfield (op.cit:235) applies these distinctions to compound adjectives as well as to compound nouns, and others have followed this lead. But in what follows we shall be concerned purely with nominal compounds, that is, with compounds which, whatever parts of speech their elements might be, function as nouns in a sentence, and the problems of the application of these categories to other types of compound will not be treated (but see §3.1.1 for a brief mention).

Most of what we shall have to say will deal with endocentric nominal compounds. Appositional compounds are discussed briefly in §3.1 and §§4.2.22/3, 4.2.3, and the generation of exocentric compounds is illustrated in §5.2. Otherwise we deal entirely with endocentric compounds. It has been claimed by Botha (1968) that this distinction between endocentric and exocentric compounds is arbitrary and ~~not~~ properly motivated. Intuitively this seems not to be true. Semantically, exocentrics denote an object which is

not denoted by one of the constituent forms in the compound, while endocentrics denote an object which is denoted by one of the constituent forms (a madman is a man); grammatically, exocentrics very often have peculiarities of, for example, gender reference: a red coat must be referred to as it, a redcoat as he/him. This is more pronounced in a language where grammatical gender can play a rôle, and we find examples like la gorge but le rouge-gorge. We shall see that endocentrics and exocentrics have rather different deep structures, though the two are related. We therefore do not believe that this dichotomy is purely arbitrary, but believe that there are both syntactic and semantic correlates of the distinction.

1.1.4 It may be of value at this point to make a brief digression into the stylistics of compounding. E. Hansen (1967:§129) compares the phrase en pige med lange fletninger with the compound fletningpigen from a stylistic point of view:

"I sammensætning... forbinder sig adled og kerneled langt fastere, også fastere end når kerneled og foranstillet adled er selvstændige ord: fletningerne synes at opfattes som noget meget væsentligt og karakteristisk hos pigen, hun ville ikke være den samme uden fletninger,

idet disse hører med til hendes personlighed:
fletningpigen kan minde om et navn, der passer
 kun på én bestemt."

We shall see later (§§3.2, 4.1) that part at least of this stylistic effect is grammatically conditioned. The stylistic effect of compounds is, naturally enough, exploited in their use. Vinje (1970:§3.7.1 fn) points out that

"I reklamspråket fins enda dristigere og ukonvensjonelle (sic) dannelser: kåpesjokk - se vår annonse mandag morgen (annonse). Kåpesjokk er det sterkt komprimerte uttrykk for et innhold av omtrent denne art: 'salg av kåper til priser som vil gi Dem et sjokk av begeistring'."

We shall see later that compounds are also used in the language of advertising far more than elsewhere in French. The reasons are summarised by E. Hansen (op.cit:§127) thus:

"Fordelen med sammensætningerne over for udtrykkene med de mange ord er indlysende: de er praktiske fordi de er kortere og fylder mindre."

This is, of course, also the reason why compounds occur so often in newspaper headlines, as is pointed out by Åkermalm, who claims, however, (1952:16) that

"Lusten att finna nya slående uttryck spela(r) en viss roll."

Although these comments are made of compounds in the Scandinavian languages, they apply equally to German or English, and, to a slightly lesser degree, perhaps, to French. Carr (1939:319), for example, says that

"Compounds are more vague and less precise than syntactic phrases, but what the compounds lose in precision they gain in flexibility and suggestiveness."

and Darmesteter (1875:118) speaks of

"la vivacité, le pittoresque, l'éclat de l'image qui les (les composés) caractérisent."

To a certain extent these stylistic effects and the resultant specialisation of usage limit the data which one can collect, particularly in English and French; most of the examples of nonce compounds one finds in these languages are either from advertising or journalese, and whilst compounding is productive outside these fields -- can, indeed, be used to great effect in all kinds of literature -- it is from these areas that the most extreme examples come: Ex 'Student' journalist sex drug probe mercy dash allegation shock, to take a joking example from 'Student' (28/11-74), could only ever occur as a headline. In many cases one suspects that rules for compounding are relaxed in newspaper headlines just so that a 'new, striking expression' which takes up a minimum of space can be created. To this extent newspaper headlines in English can be misleading.

The same is not quite so true of German or Danish. Although joke compounds like Donaudampfschiffsgesellschaftsunteroffizier are found, genuine ones of equally staggering proportions are found in texts; Fleischer (1969:§5.1.2.4) quotes Ultrakurzwellenüberreichweitenfernsehrichtfunkverbindung. Though Danish does not usually go to these extremes, compounding is very much more frequent there than in English or French, particularly in aesthetic literature (though this depends largely on the style of the author in question): the works of Leif Panduro, for example, bristle with unlikely-sounding compounds like klippevægsansigt, kitteldeflorationssyndromet, indfaldspapir. These are the real products of the full generative system of compounding that exists in Danish, and provide some of the best examples of the productivity of the compounding processes in contemporary Danish.

1.2 THE FORM OF THE GRAMMARS.

1.2.1 In our discussions involving different models of transformational grammar, we shall simplify, and pretend that there are four main schools which we have to compare: the Chomskyan (or perhaps more accurately, the Interpretive Semantic), the Generative Semantic, the Fillmorean and the Andersonian.

A Chomskyan grammar we shall take as being one as defined in Chomsky (1965) with only minor variations. That is, we shall not take into account the modifications proposed by Chomsky (1971) in the so-called EST (extended standard theory). The semantics of such a grammar is interpretive, as is the phonology (as described in Chomsky & Halle, 1968), syntax is central and lexical insertion follows the "lexicalist hypothesis" as opposed to the "transformational hypothesis" of lexical decomposition, although this is not a sine qua non of the theory. The semantic component in such a grammar follows the lines set down by Katz & Fodor (1963), Weinreich (1966) and Katz (1972).

The Generative Semantic model is not so easy to define, since no actual model as such has been set up. The best summary, however, is provided by Dubois-Charlier (1972), who collates material from papers such as Ross (1970), Lakoff (1968, 1971, 1972), McCawley (1968, 1970a, 1971)

and others. Further partial summaries of the tenets of this school are given by Postal (1970:95ff) and Seuren (1974). We may identify this school (a) by its claim that deep structure is semantic, not merely syntactic, (b) by its insistence on lexical decomposition or the "transformationalist" approach to lexical insertion and (c) by its denial of the existence of an autonomous level of deep structure at which lexical insertion takes place and at which the semantic structure of a sentence is defined.

There has been a model drawn up for an Andersonian grammar (Anderson, 1971), but the model has been developing so quickly since then that it is difficult to draw a definitive version. Matters are further complicated by the fact that very few people other than Anderson's own students appear to have taken up his ideas, and since they tend to assume a knowledge of this type of grammar, there is very little discussion of it in the literature. The framework we shall employ here is basically that of Anderson (1971) as modified and expanded by, for example, Anderson (1973a, 1973b, 1973c).

Basically, the Andersonian grammar can be defined as a localistic dependency case grammar. The notion of case grammar is reasonably familiar, particularly through the works of Fillmore (see below), and we shall discuss the notion of dependency grammar below (§1.2.2). The term

'localistic' might require some explanation.

One of the criticisms levelled against Fillmore's case grammar has been that there is no principled way to limit the number of cases, or indeed, by which to tell when one is dealing with a new case. Anderson has only four cases, which can be further broken down into binary features:

		LOCATION	
		-locative	+locative
DIRECTION	-negative	abs(olutive) or nom(inative)	loc(ative)
	+negative	erg(ative)	abl(ative)

(although it is suggested in Anderson 1971:169ff that the number of cases might be further reduced, we work with the full complement here). Everything, then, it is claimed, can be seen in terms of location and direction, and there is

"a relationship between the 'concrete' and more 'abstract' uses of the same case or preposition -- ... and ... common principles underlying both such uses and 'purely syntactic' uses."

(Anderson, 1971:§1.2).

Such a theory has roots going back at least as far as

the Byzantine Maximus Planudes (see Anderson, 1971:2; 1973a), was widely discussed until the middle of the 19th century, and was taken up again for review by Hjelmslev in his "La catégorie des cas" (1935 - 37). For a more complete history and account of localism see Jessen (1974: 153-183). But Anderson terms his theory 'localistic' rather than 'localist' because (1971:§1.42):

"I would like to reserve the latter term for a stronger proposal than I shall present evidence for here, namely that not only are there common principles underlying spatial and non-spatial cases, but that also ... the spatial variant has ontological (and perhaps chronological -- both short- and long-term) priority."

Since the notion of case in the sense of 'underlying case' as opposed to 'case form' (e.g. case endings in inflecting languages) is primarily a semantic notion, the cases expressing relationships between various arguments in a sentence or the relationship of a given argument to its predicate, the base of a case grammar of this type must be said to be primarily semantic rather than syntactic. Anderson also brings his grammar more in line with the Generative Semantics model's semantic base by using a transformationalist approach to lexical insertion (see Anderson, 1971:§2.12).

This brief summary leaves us with the Fillmorean grammar to consider. However, since this is the one with which we shall be most concerned, and since there are modifications to Fillmore's (1968) proposals to be discussed, we shall look at this at greater length below.

1.2.2 Fillmore (1968) considers the underlying structures associated with surface structures to consist of a modality component and a propositional component, the latter consisting of a verb and a series of noun phrases each related to that verb in a particular case relationship. He dissociates himself from the view that case is a matter of 'looking at the endings', but suggests that cases should be seen as deep semantic relations. The verb and its associated noun phrases form the Proposition,

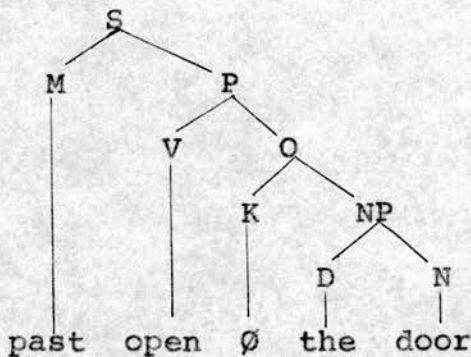
"a tenseless set of relationships involving verbs and nouns (and embedded sentences if there are any), separated from what might be called the modality constituent. This latter will include such modalities on the sentence-as-a-whole as negation, tense, mood and aspect."

(op.cit:23)

The primary distinction is set out in the rule

Sentence → Modality + Proposition.

The Proposition in turn is then rewritten as a verb plus one or more of an array of (at the beginning of the 1968 paper, six) cases. Each of these case nodes is subsequently rewritten as K (for Kasus, equivalent, in English, to preposition on many occasions) plus NP, and the NP as D(eterminer) plus N(oun) (see Fillmore, op.cit:33). The resultant structure for a sentence like the door opened is then:



Now, there is some redundancy inherent in this arrangement, since the 'case' part is being generated twice: once in the case node -- O in the example above -- and once in the K, which has to agree with the case node anyway. Anderson (1971:§2.5) makes this point, and also points out that it is misleading to look upon K and NP as constituents of O, since it is rather O which expresses the function of the NP.

Anderson (op.cit:§2.6) sees the solution to this problem in a possibility mentioned by Fillmore (1968:87; 1971b:55), namely dependency. The implications of

dependency theory in terms of directed graphs are gone into more thoroughly in Anderson & Jones (1972:§2). It is also taken up by Robinson (1969, 1970) who attempts to rewrite a Fillmorean grammar using this formalism. ^x

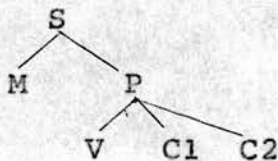
The advantages of a dependency grammar are discussed by Robinson (1969, 1970). The main argument in its favour is that it automatically marks the head of a construction since the head governs all elements dependent on it. There seem to be cogent reasons for believing that the head of a construction is a valuable concept, and linguistically 'real' in some sense, and Robinson (1970) points out that even linguists using models which do not mark the head (e.g. Ross in his dissertation) have used the notation of head. Chomsky (1970:210ff) attempts to introduce the idea of head with his \bar{X} notation, but such a notation merely draws attention to the problem, and in fact the question of the head of the construction has been implicit in earlier names given to the constituents of his grammar: noun phrase, verb phrase, adjective phrase, etc.. The head is the obligatory element in a construction and also a characteristic element in that type of syntagm. If we can mark this in a natural way in a grammar it will lead (ceteris paribus) to a more restricted, more constrained grammar. Using a dependency system also leads to some valuable side-effects: Robinson (1970:281ff), for example, shows that using a dependency grammar does away with the need for pruning of the Ross type.

It also provides a description in which it is easier to see what is going on in many cases. And, not least, it gives a structure which is intuitively pleasing.

Once we have decided to use a dependency grammar, we have the problem of what the initial symbol should be. Anderson (1971:§2.6) argues that it should be the verb. Robinson (1970:265) takes T, which

"stands for sentence TYPE; it is the element which bears the tense feature and a feature which determines whether the sentence is declarative or interrogative; its ultimate speech correlates appear in the shape of the tense carrying morphemes, the word order and the intonation contour."

This element, then, includes much which Fillmore includes under Modality. However, since the distinction between Modality and Proposition is one of the basic points made by Fillmore, we wish to keep this distinction intact, and the problem then arises more strongly than ever. We have chosen to keep the first divisions the same as Fillmore, thus:



but these must, in a dependency grammar, be interpreted

differently. The S (we keep Fillmore's label for convenience) may be seen, possibly, as the illocutionary force: this is merely a suggestion and no theoretical points will arise from it in our discussion. M may be seen as being realised as tense (the obligatory element), with negation, aspect and mood dependent on it. P may be seen as being realised by the intonation contour. One could equally well, and perhaps more consistently, change the P into a V with the case nodes dependent on it, and merge Fillmore's S and M into Robinson's T. This would make no difference to the reasoning in what follows: the above arrangement is kept merely to allow the Fillmorean structure to be seen more clearly.

1.2.3 One of Fillmore's strongest claims for his grammar is that only one occurrence of any given case node is permitted per proposition (see, for example, 1968:21). Although this has in some instances been queried (see below) generally speaking workers in the field have accepted this claim as being valid and useful. Boagey (1973:§2.2.1), for example, specifically accepts the claim. On the other hand Anderson, while not disputing the validity of the generalisation for most of the proposed cases, has refuted its validity as far as the Objective (in Anderson's

terms, the nominative) is concerned. Anderson (1971:§3.1) claims that the nominative is an obligatory case in any proposition, and has argued for allowing two nominatives, one obligatory, one optional, in one proposition. He argues, for instance, that the much discussed pair

Fred loaded the wagon with hay

Fred loaded hay onto the wagon

which have been explained by different mechanisms by, for example, Vestergaard (1973) and Boagey (1973), can be explained more naturally if two nominatives/Objectives are permitted (lectures, University of Århus, spring semester, 1974¹). We shall consider the point in some detail.

Anderson (1971:§5.9) originally introduces this idea to account for predicate nominals in sentences like

He is president,

so we shall consider these sentences first. Anderson's claim is that since the occurrence of two Objectives is independently motivated by this construction, we can make use of it in accounting for the 'load with' construction.

One way of preserving the stronger claim of only one occurrence of each case per proposition might be to build these equative sentences into the grammar in a different way. This seems hopeful in the light of Fillmore's (1971b:37)

¹ The matter contained in these lectures is to appear, slightly modified, in the introduction to the forthcoming number of Langages dealing with case grammar, "la grammaire casuelle", and in Anderson's forthcoming book on quantification.

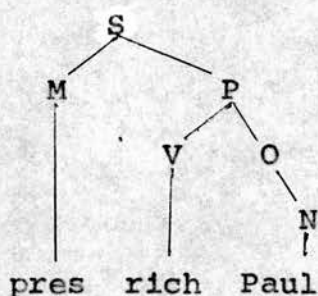
statement that

"the propositional core of a simple sentence consists of a 'predicator' (verb, adjective or noun) in construction with ... 'cases'."

This suggests that just as one derives

Paul is rich

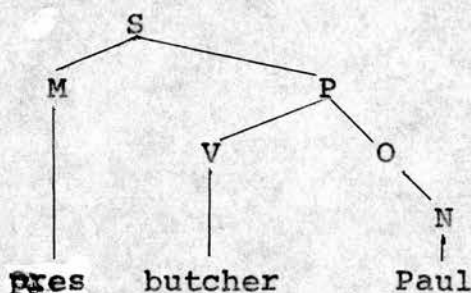
from a structure like



one could derive

Paul is a butcher

from a structure



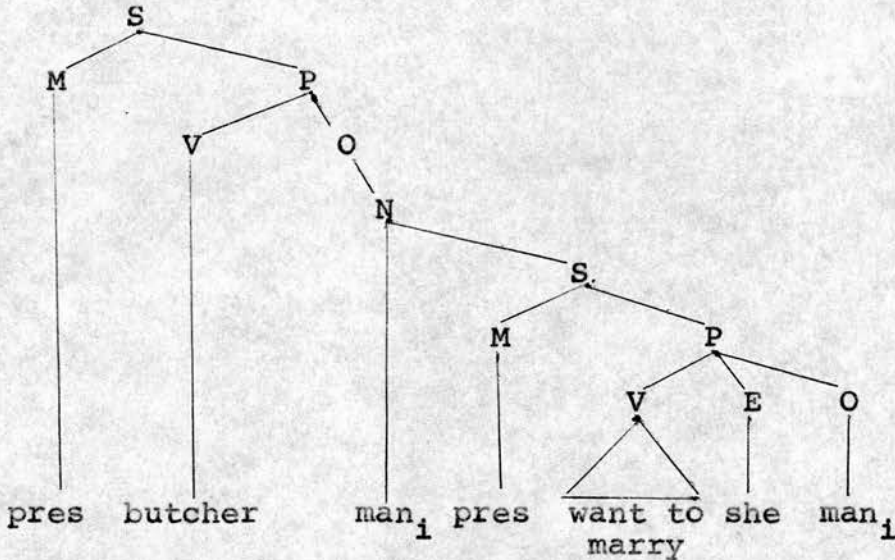
This seems all the more likely since, on the whole, the nature of the article appearing with the predicate noun is predictable from discourse rules. In some cases like the Hague it is lexically marked, but it is seldom semantically significant unless emphasised. Further, Bach (1968) argues that nouns are predicates, which would also appear to fit

with this derivation.

However, when we study this solution more carefully we find that it is not satisfactory. Consider the sentence

The man she wants to marry is the butcher who lives on our street.

Part of this the model could generate with no difficulty, thus:



The problems arise when we want to embed who lives on our street onto butcher. The model only allows an S to be embedded under an N, but there is no N governing butcher. To allow S to be recursive under V would add enormous (and undesirable) power to the grammar for very small reward. Since the grammar is probably already too powerful it is a very undesirable modification to make. The other alternative, to allow V to govern N directly as long as they co-

incide positionally is a very odd kind of restriction to make, and gives rise to the anomaly of an N not governed by a case node. If a case node is inserted, then at once we have to specify what case it is, and we are left with the original problem. It should be noted that this problem is not a feature of our transfer to a dependency grammar, but is just as real if we use Fillmore's original PS grammar. This solution is, in fact, totally impracticable.

Another way to preserve the stronger claim of there only being one occurrence of any case node per proposition in these equative sentences would be to find reasons for attributing one of the nouns to a different case. Although the very title 'equative' suggests that the two halves of these sentences should be identical, and that any such proposal is doomed to semantic failure, there is some evidence, semantic and cross-linguistic, that the second noun in such sentences should be a locative.

If we consider again a sentence like

This man is a butcher

we can see that a locative analysis for 'a butcher' can be quite easily motivated semantically in either of two ways: either 'this man is IN A STATE of being a butcher' or, a more convincing paraphrase, particularly in the light of any logical analysis of the sentence, 'this man is a member of the class of butchers', or 'is IN the class "butcher".' In

fact Anderson (1971:§11.62) suggests just this type of derivation.

Syntactic support for this analysis can be found not only in set theory and predicate calculus, but also, for example, in some of the Slav and Celtic languages. In Russian the instrumental case, which is frequently used with a locational sense, especially after prepositions such as ног 'underneath', за 'behind', над 'above', etc., can be used (in non-generic sentences) after the past and future tenses of the verb 'to be':

когда я был мальчиком
when I was boy-instr.

(Birkett, 1937:218), and a similar usage is found in Polish (van Wijk, 1956:37):

Dwa lata był żołnierzem
two years he-was soldier-instr,

while in Czech the instrumental is used after the present tense of the verb 'to be' as well. Parallel to this Slav use of the instrumental, Irish uses the preposition i, 'in' (D. Greene, 1966:44).

Using one locative and one objective, then, might prove a valid alternative to two objectives in equative sentences. However, Huddleston (1970:510) also queries whether two objectives might not be necessary to account for sentences like

Bill is similar to John

John is similar to Bill

which must be taken as synonymous, since the result of applying Quine's (1960:65) biconditional test (see also Lyons, 1968:§10.2.5) is an analytic statement:

Bill is similar to John if and only if John
is similar to Bill.

One also has to account for the further possible paraphrase with a conjoined NP:

John and Bill are similar.

There is a solution to this problem which does not require two identical case nodes. It is put forward by Anderson (1973d), and is a localist solution. First Anderson shows that the example with the conjoined NP (and similar structures) is less basic than the examples where the predicate is symmetrical. He then goes on to argue that

He	{	is like is similar to resembles	}	his brother
----	---	---------------------------------------	---	-------------

should be seen as 'non-spatial' instances of 'topological' sentences like

His house is near the park.

'Different from', 'differs' would correspond to the spatial

Edinburgh is far from London.

These, in turn, he argues, are cognate with

It is a short distance from his house to the park

The distance from London to Edinburgh is considerable

where prepositional marking typical of the ablative and allative (Anderson's loc) can be seen. In

He resembles his brother

he is thus abl, his brother loc; if the verb were 'differs from' then the cases would be inverted.

Although Anderson does not mention this, his solution might go some way toward explaining a range of cross-linguistic data, such as the French use of the directional preposition à after ressembler

Il ressemble à son frère

the fact that German gleich, ähn, 'to resemble' take a dative object

Er gleicht seinem Bruder

Er ähnelt seinem Bruder

and that in Russian there is a verb for 'resemble' containing an overt verb of motion, хожу, 'to go, to move', the construction being

нохожу на + acc

where на + acc means 'onto'. There is also the further fact that in a nominalisation of a 'resemble' sentence we find the preposition 'between' which is also used in 'topological' sentences:

There is a resemblance between him and his brother

There is a short distance between his house and the park.

We also find the allative marker 'to' occurring after the noun 'resemblance':

He bears a strong resemblance to his brother.

Although this solution is one which we feel to be very satisfactory, it is very definitely a localist solution, and as such does not really fit into a Fillmorean grammar. Fillmore also provides a solution which does not require that the same case node should occur twice. Looking at the examples with resemble, Fillmore (1970:262/3) suggests that they are really three part predicates with an Experiencer missing: the first argument is an Instrumental, since it stimulates the experience, the second is in the Objective case. Fillmore also touches briefly on this solution in a later paper (1971b:39). This however does not, without some elaboration, explain the situation with the conjoined NP subject.

Boagey (1973:§2.2.2) provides an analysis which might solve this problem. She considers sentences like

1. John joined A to B (with C)
2. John joined B to A (with C)
3. John joined A and B (with C).

In (1) and (2), she says, we clearly have a Neutral (her term for Objective) and a Goal. In (3), she suggests that A and B both have features of both Neutral and Goal: there is a neutralisation of the cases. She suggests that such a neutralisation is more easily comprehensible if one imagines the cases not as unanalysable wholes (see Fillmore, 1970:264)

but as bundles of features. One alternative analysis is to see (3) as the result of conjoining (1) and (2), so that (3) is a surface realisation of

4. John joined A to B and B to A

and since (3) is then a derived structure it is no longer limited to only one occurrence of each case node. A further alternative is put forward in Anderson (1973d:9) and is that (3) should be derived from

5. John joined A and B to each other

which may be seen as derivationally prior to (4).

Merging Fillmore's suggestion with one of these possibilities we can provide a solution to the resemble problem which does not require two occurrences of the same case node in one proposition; this is the solution we shall adopt in what follows. If we also allow the Objective - Locative analysis for equative sentences we have a model in which it is not necessary to allow for two occurrences of the same case node in one proposition, and we have conserved the strong limitation on the grammar. We leave it to Anderson to motivate his usage of two noms (Objectives).

It should, however, be pointed out that a change in these theoretical preliminaries, while it would obviously affect the details of the model we discuss later, would make no major theoretical difference to the discussion in Part

Two. We have merely provided here a framework in which we can carry out subsequent discussion.

1.2.4 We are still left with the problem of which cases to use in our modified Fillmorean grammar. This is not such a simple question as it might appear, because it is the point on which Fillmore himself has been most inconsistent and also because it has been one of the matters of greatest dispute, particularly when it comes to motivating the cases (see, for example, Huddleston, 1970:504 ; Dougherty, 1970: 529; Nilsen, 1972:2 et passim), and it has even been argued (Miller, lectures, University of Edinburgh) that Fillmore's cases can easily be reduced to a small number of localist cases without any loss of explanatory power -- indeed rather the opposite. The motivation for this is complex, but rests, for example, on the difficulty in distinguishing consistently between Agentive, Instrumental and Force, which have a great deal in common, and the fact that Fillmore allows -- or even encourages (1968:25) -- a proliferation of cases. The same argument can, of course, be brought against Anderson's erg and abl (as in fact is done in Anderson, 1971:§§11.2, 11.3). Boagey (1973:9) does not take such an extreme view but suggests that Fillmorean cases

might be 'nearer the surface' than Andersonian cases, and claims that the further distinctions provided by the Fillmorean cases proved necessary for her work on the absolute use of transitive verbs.

In "The Case for Case" (1968:24) Fillmore identifies six cases: Agentive, Instrumental, Dative, Factitive, Locative and Objective. In the article "Types of Lexical Information" (1971a:376) the number of cases has risen to eight. The earlier Factitive is now termed Result, the earlier Dative is termed Experiencer, Locative has been sub-divided into Source and Goal, and a new case, Counter-Agent, introduced. By the time of the paper "Some Problems for Case Grammar" (1971b:42 and 50) there are nine cases. Location has been re-introduced and there is a new case Time. Path is introduced to account for the along phrase in sentences like

He walked from the cemetery gate to the chapel along the canal.

He now claims that what he originally termed a Dative is now spread

"around among the other cases. Where there is a genuine psychological event or mental state verb, we have the Experiencer; where there is a non-psychological verb which indicates a change of state, such as one of dying or growing, we have the Object; where there is a transfer or

movement of something to a person, the receiver as destination is taken as the Goal."

The Result case is eliminated in this version:

"Since the Goal case is used to indicate the later state or end result of some action or change, it can absorb what I used to call 'Resultative' or 'Factitive'."

Boagey (1973:12) also eliminates Result, but says that it is a subcategory of Neutral (i.e. Objective). There seems to be little to choose between these two solutions.

It seems fairly clear that there are certain cases which are fundamental to Fillmore's concept of his grammar and which we must keep: the Agentive, Objective, Experiencer and Instrumental. The problem is which of the others we should adopt. Following Fillmore (1971b:42) and Boagey (loc.cit) we shall drop **Result**. Also we shall drop Time, since it would seem that however non-localist one might be the parallels between time and place are too strong to be ignored. The problem of sentences in which both are present can be overcome by putting the temporal locative in a higher predication. Path and Counter-Agent, whose nature appears doubtful anyway, will not be relevant to the work in hand, and we shall ignore them. We shall also ignore minor cases, mentioned only briefly by Fillmore, such as the Comitative (Fillmore, 1968:81) (which Buckingham, 1973 argues can only occur as a simultaneous case), Benefactive

(Fillmore, 1968:31) (which Boagey, 1973:11 classes as a sub-type of Goal) or Patient (Fillmore, 1970:265) (which seems indistinguishable from Objective on most occasions). This leaves us with the following list of cases:

- A Agentive
- E Experiencer
- I Instrumental
- O Objective
- S Source
- G Goal
- L Locative

which Fillmore (1971b:42) tells us occur in that order in the hierarchy. Definitions, if not intuitively evident, are as in the works of Fillmore.

1.2.5 To summarise our position, then, we have modified the basic Fillmorean grammar by making it a dependency grammar and by allowing for the possibility of neutralised case nodes; we have accepted seven cases: A, E, I, O, S, G and L.

As a caveat it may be noted that in discussing the grammars and the way in which compounding fits into them, we are using the facilities offered by the particular models and the argumentation provided by the supporters of a particular model, since our aim is to see how compounding can act as an evaluation criterion for these grammars. Our use of a particular solution to a problem within a given

framework should not necessarily be read as approval of that solution. An example might be Fillmore's analysis of resemble as taking an Instrumental and an Objective: the analysis seems weak, particularly when compared with the far more closely argued localistic alternative, but it is the solution which is offered by Fillmore, and is a viable solution within his framework. Indeed, not only is it a viable solution, but it is probably the best solution currently available within a Fillmorean framework, which is a necessary factor in making any evaluation of the system as realistic as possible.

CHAPTER II

REVIEW

2.1 INTRODUCTION.

2.1.1 When Kristensen (1930:71) wrote

"I danske grammatikker findes der som regel et kapitel om orddannelse ved sammensætning, men dette kapitel er så godt som altid kun behandlet ud fra rent formelle synspunkter, medens spørgsmålet om leddenes betydning i forhold til hinanden og til hele ordet bliver uberørt,"

↳ what he actually said was possibly correct -- indeed we shall see that by and large it still is -- but the implications of his statement are somewhat misleading: for Kristensen implies here that Danish grammarians at least spend some time considering the problem. In fact, most of them spend only a bare minimum of time on the subject, and give only the most superficial generalisations (see, for example, Spore, 1965:§141; Diderichsen, 1964:63/4). Indeed, one of the most surprising things about descriptions of the Danish compounds and compounding processes is how few of them there are. Although the Norwegians and, particularly, the Swedes (for example, Noreen, 1906; Söderbergh, 1968; Teleman, 1970) have been more prolific and much of what they say can be transferred wholesale or mutatis mutandis to Danish, there is a remarkable poverty of description of compounding in the Scandinavian languages, especially when

one considers how important a method of word-formation it is in these languages. Several authors claim that compounding is the most productive source of new words in the modern languages (e.g. Collinder, 1971:47; Söderbergh, 1968:29; cp. also Hansen¹, 1938:116). It is almost as if familiarity has bred, if not contempt, at least disinterest with respect to this part of the grammar.

The exception which proves this rule is a very interesting essay by Hjelmslev (1916). This essay was written by Hjelmslev, on a subject he himself had chosen, when he was still a sixteen year old schoolboy. Obviously then, one should not attempt to judge this work by the same standards as one would apply to Hjelmslev's more mature work. Yet in this essay -- Hjelmslev's first linguistic work -- we can see something of the great linguist Hjelmslev turned out to be. The paper does not contain a lot of new ideas (though there are some): that was not its purpose. But it does provide one of the clearest summaries of the field of compounding in Danish that can be found anywhere in the literature. It is self-evident that such a work must be limited very largely by the work that has gone

¹ Hansen, tout court, refers throughout to Aage Hansen.

before, but the clarity and conciseness of this essay must be stressed as being of great merit.

The area of word-formation in general and compounding in particular is far more fully described in other languages. For French we can mention Darmesteter's (1875) detailed discussion of compounds or Rohrer's (1967) transformationally biased account. For English we have the major works of Koziol (1937), Marchand (1960, 1969), Lees (1960) and Brekle (1970), written against different theoretical backgrounds, but providing, in their coverage, an excellent description of the material. We should also mention briefly Henzen's (1947) important book on German word-formation, although German will not concern us directly in what follows.

Quite apart from these major works in the field, we also find for these other languages a far more comprehensive account in the grammars of the phenomena involved in compounding -- in particular we can mention Jespersen (MEG), Fleischer (1969) and Nyrop (1936) for English, German and French respectively.

It is perhaps worthy of note, and it is certainly an ironic point, that there appears to be more discussion of compounding in French, a language in which it has been argued

that there are no compounds at all, than in Danish, a language which relies on compounding for a large proportion of its new words.

2.1.2 Although most of the works referred to deal with compounds which already exist in the languages (see, for example, Darmesteter, 1875; Iversen, 1924; Henzen, 1947; Lees, 1960; Brekle, 1970) there seems to be no disagreement about the productivity of compounding. Darmesteter (1875: 120) discussing French says

"La terminologie des arts et métiers, celle des sciences naturelles, la langue du commerce, de l'industrie, de la presse, fourmillent de composés ... créés spontanément suivant les nécessités du moment et disparaissent d'ordinaire avec la même facilité qui les a fait naître: preuve indéniable que cette composition est vraiment vivante et tout à fait dans le génie de la langue."

Rohrer (1967:§0.4) begins by explaining that he is looking for productive patterns in compounding and later (op.cit: §1.5.1) stresses again that compounding is productive.

Henzen (1947:63) tells us that

"die Möglichkeiten zur Bildung von Determinativkompositen aus zwei

Substantiven sind sozusagen unbegrenzt."

Jespersen (MEG:VI:§8.1.4) on English says that although "the illustrations given in the following pages will be mostly of compounds that have become established in the vocabulary of the English language ... wherever possible attention will be called to the types of compounds which are still productive."

Žepić (1970:9-11), working on German, extracts his examples from dictionaries, but nevertheless speaks (loc.cit) of the "unbegrenzte Anzahl von Zusammensetzungen" and thus implies that compounding is productive, even if he doesn't say so in as many words. Teleman (1970:18), on the other hand, does say so in as many words:

"Det är ... sant att inget lexikon förmår rymma alla tänkbara ordstammar i ett språk som vårt. Dette är omöjligt bara av det skälet att ordstammar av en vis typ kan bli hur långa som helst. Det finns sålunda ingen av språket satt gräns för hur långa sammansättningar av substantiv eller räkneord kan bli:

basfiolfodralsmakaregesälls-...

farfarsfarfarsfarfarsfarfarsfarfars-...

...-åttatusentrehundraåttioniokomma-...

Det är onödigt att ta upp sådana ord i lexikon, eftersom de är bildade med generella regler

precis som meningar -- vilka ju inte heller
förtacknas i lexikon."

Pennanen (1972:292ff) argues that competence (in the Chomskyan sense) has to cover word-formation as well as sentences, and that word-formation is part of the grammar rather than part of the lexis. Landmark (1969) deals entirely with new compound adjectives and Hansen (1967: 308 e.g.) gives lists of "tilfældige dannelser," while elsewhere (1938:113) he states that

"Mulighederne er udtømmelige, og også m.h.t. længden er der meget frit spil (man har set aviser starte konkurrencer, hvor det gjaldt om at skabe det længste ord!)."

Or again, Rask (1830:§55) tells us that

"the composition of words is very free,
and the chief source of the copiousness
of modern Danish."

2.2 DISTINCTIVE CRITERIA.

2.2.0 So far we have taken it for granted that there is, in any of the languages under consideration, an identifiable unit which can be termed a compound. Intuitively this is correct: one only has to say to the uninitiated that a compound noun is "something like" armchair, window-sill, skolegård, boghylde, poisson-lune, wagon-citerne, and immediately a fund of further examples is forthcoming. Evidently there is some way in which compounds "feel" alike.

For the moment we shall continue to use the term 'compound' in this purely pre-theoretical sense, and we shall look at some of the criteria which might be used to distinguish a compound from anything else. Then we shall return to the definitions of the compound that have been suggested, and see how they fit the facts.

These criteria fall roughly into three groups: the phonological, the morphological and the semantic. We shall deal with them in that order.

2.2.11 There are two major phonological criteria which distinguish a compound from a syntactic phrase in Danish.

"At første Led ikke længere føles som selvstændigt Ord, viser sig gerne i Udtalen, først og fremmest ved Sætnings-Tryk
Desuden viser første Led almindeligt Lydkortelse (og Stødtab) . . ."

(Andersen & Rehling, 1936:§80)

The compound stress, in Danish as in English (or German) is a heavy stress on the first element. Note, however, that when we have a compound of the form A/BC, although B would carry stress in a compound BC, it loses it, and it is C that carries the secondary stress (Juul-Jensen, 1934:10-11).

"Det er et almindeligt fænomen, der skyldes rytmiske (prosodiske) hensyn og gør sig gældende også ved hele ordforbindelser (række af ord)."

(ibid.)

However, wide as this criterion may be in its application, we soon find counter examples:

OverLUND (place name)	BjerringBRO (place name)
nordVEST	imELlem
underTIDen	rigsDALer.

Stress evidently does not provide a totally reliable criterion in Danish. Hansen (1943:72) further points out

that the Skånske and Fynske dialects have large numbers of compounds stressed on the second element.

The second possibility is the glottal stop (in Danish: stød). Generally a monosyllabic formative with a glottal stop which becomes the first element of a compound loses its glottal stop; if it becomes the second element it retains it. Thus, though

mor /moå/ mother

mord /moå'/ murder

provide a minimal pair, morhistorie and mordhistorie (constructed examples) are homophones, while dobbeltmord has a stød on the second element. In compounds of the type rådhuspladsen the hus element loses the glottal stop, thus underlining the fact that the first part (rådhus), though a compound in its own right, is the first part of a compound.

However, once again we find the situation being complicated by the fact that words like stationsbygning, mandsperson have a stød on the first element. This is not, in itself, a reliable criterion either. Hansen (1943) goes into the problem of the occurrence of the stød in compounds in some detail, and shows that the whole matter is much more complex than this generalisation might suggest. He points out, for example, (op.cit:78) that very short words like ø

and å keep their stød when they are the first element in compounds, in order to retain their identity; that very often new formations will keep the glottal stop on the first element while established compounds lose it (op.cit: 74/5); and that many loan words retain a glottal stop in the first element of a compound (loc.cit). He concludes that (op.cit:76)

"De ændringer vi har iagttaget ved
enstavelsesordenes overgang til første led
af sammensætninger, kan derfor kun betragtes
som et middel til yderligere at tydeliggøre
enhedens sammensætning"

and not as a defining characteristic at all. For Hansen, stress and a glide between the elements are the criteria which show a compound.

On the subject of the glottal stop, Juul-Jensen also points out (op.cit:11ff) that some compound verbs have a stød on the second element where that element in isolation would not have one, especially where the first element is an adverb or a preposition, and the same phenomenon can be observed in nominal compounds ending in -er, -(n)ing, etc..

"Tendensen til stød er atter her stærkest ved gamle ssg og navnlig ved saadanne hvor de enkelte leds betydning er udvisket."

There are also dialectal peculiarities in the phonological behaviour of compounds, as reported, for example, by Ejskjær (1969) who finds that in some island dialects the second element of a compound always takes a stød if it is polysyllabic, or Haugen & Markey (1972:30) who report that compounds in Jysk receive two stress units.

2.2.12 There is a compound stress pattern in English as well, with a heavy stress on the first element, and this is the primary defining feature of a compound taken by Lees (1960:120) and Marchand (1969:§2.1.15: though not consistently), while on the other hand Hatcher (1952, 1960) pays no attention to this criterion.

Whether one accepts the compound stress (or unity stress) pattern as a defining feature of a compound in English is going to have wide repercussions. If one does, then apple pie and apple cake (in most dialects of English at least) are two completely different patterns; if one wishes to consider these two as being part of the same grammatical phenomenon then one has to reject stress as a defining feature in noun + noun compounds in English. We shall return later (§3.6.4) to consider the ramifications

of this and the arguments on both sides; for the moment we shall just note that there is possibly a criterion available here, but that its acceptance is problematic.

2.2.13 French, being a syllable-timed language, has no parallel concomitant of compounding; maitre and coiffeur are pronounced in the same way in

J'ai vu le { maitre } hier
 { coiffeur }

as they are in

J'ai vu le maitre-coiffeur hier.

2.2.21 We now come to the morphological criteria which are rather more involved than the phonological.

If we look first at Danish and consider the case of adjective + noun compounds, we find that the adjective is not declinable and usually takes the form of the stem (i.e. the common gender form):

en stor by	en storby
den store by	storbyen
to store byer	to storbyer
et halvt år	et halvår.

There are a few exceptions to the latter part of this, for example

hvidtøl nytår intetkøn

have neuter form adjectives in the first element,

småbørn småting småkage

have plural form adjectives in the first element, and

storetå gulerod dummeperer

have adjectives in -e in the first element, whether this is originally from a definite form (storetå) or plural (gulerod) (see Hansen, 1967:310). In all these cases, however, it remains true that the first element is indeclinable. Thus

en lillebil to lillebiler

en småkage to småkager.

It is this lack of declination which allows us to say that we are dealing with compounds in these cases, and in every case we find that we have the phonological correlate of compound stress.

In noun + noun compounds the same general rule applies, but not completely without exception. Hansen (1967:296) claims that

"første led er normalt utilgængelig for
bøjningsmorfemer"

but this is, perhaps, to prejudge the issue of the linking elements in noun + noun compounds which we shall deal with

separately (§3.7). But there is no variation here linked with definiteness or plurality. As far as declination for the plural is concerned, there are only very few exceptions to the rule of indeclinability, and they are words like

barnebarn: børnebørn

bondegård: bøndergårde.

(Hansen, op.cit:107, claims that this type is now dying out in any case. Bondegård is sometimes heard with the plural bondegårde, but børnebørn remains fixed for the moment.) Even when the first element is semantically plural it is very often singular morphologically and remains unchangeable. Thus Bergman (1955:65):

"I sammansättningar av substantiv + substantiv eller substantiv + adjektiv kan förleden till betydelsen vara singular eller plural ... Det normala är at förleden, även om den i fri ställning skulle stå i plural, antar singular form i sammansättning."

Examples of this type of relationship are cigarmager (he makes several cigars), boghandel (has more than one book in it) and so on. An exceptional case with a morphologically plural first element is børnehave.

Although this situation is regular in Danish, Norwegian and Swedish, as well as (as we shall see below, §2.2.23) in

English, it is not a universal of compounding. In Icelandic the first element frequently declines for number: húsbúnaður but húsasmíður, and húspak can have as its plural húsaþök but is more usually húspök. Mannsnafn always has the plural mannanöfn. A barnaskóli has a lot of children in, and barnaskór are children's shoes, whilst barnsskór are the shoes of one child. Although these examples are fairly typical, this is not a rule in Icelandic -- as indeed the existence of húspök shows.

2.2.22 "Det er sidste led der modtager de morfemer der kræves, og sidste leds forhold er overalt hvor ordet har bevaret sin identitet de samme som det simple ords,"

says Hansen (1967:296). In other words it is the second element which is declined for number, definiteness and (where applicable) case, and the word as a whole takes the gender of the second element. This may be seen as a syntactic consequence of the second element's being the head of the construction, and the same phenomenon can be noted for French (see Togeby, 1965:§24) and German.

However, Juul-Jensen (1934:15ff) notes several exceptions to this. Exocentric compounds provide -- as might



be expected -- a major class of exceptions to this rule, often taking their gender from the unexpressed semantic head of the construction. Once again Togeby (loc.cit) points to the same phenomenon in French. Some Danish examples cited by Juul-Jensen are

graaben langøre hønsebær storkenab.

A mixed group which deviate in gender from the second element includes words like

maaltid vidnesbyrd bogstav
øllebrød sammenhang rørag.

There are also some words which have a different plural from that of the second element as an isolated word²:

husbønder dupskoer haandværk
paa- og tilstande køjer etc.

(see also Diderichsen, 1946:248).

2.2.23 In English we do not have the clear morphological criteria which are available to us in Danish. Black board and blackboard are inflectionally the same, although the stress criterion appears always to be present in adjective + noun compounds.

² There is in some speakers a tendency to regularise some of these plurals, particularly husbønder and dupsko.

We do find, though, that the first element of a compound tends to be singular even when referring to something plural, or, very often, even when the first element is obligatorily marked with a morphological plural form when the word occurs in isolation. Thus trouser-press but *trouser, scissor-sharpener but *scissor, pyjama-cord but *pyjama. This general rule is, however, by no means invariable. Mutt (1967:403) remarks that plural first elements are becoming more frequent, and quotes examples like Monopolies Commission and moors murder. In any case, the plural morph on the first element remains

a) when to remove it would cause confusion

goods train	≠	good train
games mistress	≠	game mistress
schools cup	≠	school cup
services transport	≠	service transport;

b) when the first element is or ends in man or woman and the second element is in apposition to the first: women doctors but woman haters;

c) occasionally when there is an invariable plural as the first element. Trousers pocket and trouser pocket are both found (though not necessarily in all speakers), though there may be felt to be a difference in emphasis between the two. Similarly with scissor-grinder and scissors-grinder (Zandvoort, 1957:§258). Neither bellows-mender nor alms-house has an alternative form (ibid);

d) in some cases where the first element of the compound is itself a compound and is semantically plural: compare the variant bracketing of ((British Council) jobs) file vs (British Council) (job file). This is rather interesting when one compares it with the linking -s in German and Danish (see §3.7).

Plurality is also the best morphological guide we have in English to show that the second element is the head of the compound, and even that is not totally reliable. As in Danish it is the second element of an English compound which determines the number and gender of the compound. Since gender plays such a minor morphological rôle in English, we shall concentrate on plurality. In most cases the plural marker is added only to the second element in an English compound:

one pyjama-top	two pyjama-tops
one services club	two services clubs
one footman	two footmen
one school dinner	two school dinners.

There are, however, innumerable exceptions, notably in the case of apposition with a first element in -man:

one gentleman-farmer	two gentlemen-farmers
one manservant	two menservants
one woman doctor	two women doctors

but note

one lady doctor	two lady doctors.
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The plurality in the first elements of courts martial, lords appellant etc., is not an exception to this rule, since it is the head noun which takes the plural morph, the construction being inverted because of its French provenance. It is interesting to note that the construction is evidently felt to be foreign, and a new plural is formed in the spoken language (if it hasn't already permeated through to the written language): court martials.

2.2.24 Let us now turn to consider French compounds. As we noted above (§2.2.22), Togeby(1965:§24) has pointed out that, in general, the French compound takes its number and gender from the head of the construction, which in most cases in French noun + noun compounds, though not invariably, is the first element of the compound, a contrast with Danish and English, because of the normal French order of noun and modifier. In bateau-mouche the first element is the head, in mère-patrie it is the second element which is the head. Darmesteter (1875:250) sums up like this:

"La question du genre est très-simple

Pour les juxtaposés, le genre est celui du déterminé, excepté rouge-gorge, rouge-aile, rouge-queue et quelques autres.

Pour les composés avec apposition (chou-fleur), avec adverbe (arrière-cour), ou avec génitif

(timbre-poste), le genre est aussi celui du déterminé.

Les composés avec préposition (à-compte) et avec impératif (porte-plume) sont essentiellement neutres."

In fact, the 'exceptions' of rouge-gorge etc. are scarcely exceptions at all, since the real semantic head of the construction is unexpressed, and compounds of this type can take their gender either from the expressed head or from the unexpressed one, as is pointed out by Togeby (loc.cit):

"Sammensætninger har køn efter deres overordnede led -- le bas bleu, la chauve souris. Undertiden er dette overordnede led underforstået, således oiseau i fuglenavne: le rouge-gorge."

Verb + noun compounds, he says, are always masculine, even perce-neige which was once feminine because it is une fleur (by analogy with rouge-gorge, etc.). One exception stands out: la garde-robe. Grévisse (1936:§270) also lists une croque-abeille, une perce-feuille, une perce-pierre. We can add to this list une garde-malade.

Now let us turn to consider the plural formation in these compounds. In the case of a compound formed of a noun and an adjective, whether the adjective precedes the noun or comes after it and whether the elements are written as one word or two, the adjective agrees with the noun for number

and gender in the written language in most cases, just as it would if they did not form a compound. The limitation "in the written language" is necessary because the plural morph on the noun is usually not pronounced in the spoken language. Thus we have

un bonhomme	des bonshommes	[bɔ̃zɔm]
une basse cour	des basses cours	
un petit pain	des petits pains	
un coffre-fort	des coffres-forts.	

Des haut parleurs is not a counter example since haut is an adverb in this phrase (cp. Danish højtaler), but des saint-bernard is, as are franc-maçonnerie and les bonjours, although there are good reasons in each individual case why they should take these forms. In cases where other parts of speech are conjoined and the two elements are written as one word, only the second element is marked for the plural.

In a noun + noun compound, both elements take plural morphs if they are in apposition, only the head takes a plural morph if the other noun is a determiner:

un chou-fleur	des choux-fleurs
un timbre-poste	des timbres-poste.

Wartburg & Zumthor (1947:§721) summarise the position thus:

"La règle générale est que chaque élément est soumis aux mêmes règles d'accord que s'il était séparé."

The difficulty with this statement is, of course, that poste would not be able to be in that position if it was separate.

In verb + noun compounds the verb is never marked for the plural. The exception to this is garde when it designates a person, thus

une garde-malades des gardes-malades

but

un garde-feu des garde-feu.

"Quant au substantif, son accord est exclusivement déterminé par le sens: il demeure invariable, soit dans la forme du singulier, soit dans celle du pluriel."

(Wartburg & Zumthor, 1947:§725)

Grévisse (1936:§293) lists a lot of exceptions to this generalisation, however; and whilst un couvre-lit, des couvre-lits may fit with the spirit if not the letter of Wartburg & Zumthor's "rule", the same can hardly be claimed for:

un tire-bouchon	des tire-bouchons
un cure-dent	des cure-dents
un couvre-feu	des couvre-feux
un perce-oreille	des perce-oreilles
un pèse-lettre	des pèse-lettres.

We can summarise these facts in tabular form as follows:

		GENDER	PLURAL MARKED	
			modifier	head
1.	A+N (endocentric)	of head (adj marked)	X	X
2.	A+N (exocentric)	of unexpressed head (usu.)	X	X
3.	N+N (apposition)	of head	X	X
4.	N+N (modifying)	of head		X
5.	Prep+N	of head		X
6.	Adv+N	masc		X
7.	V+N	masc		

Nyrop (1936:§554) classes our groups 1,3 and 6 together as those with "un rapport de co-ordination" and 4,5 and 7 as those with "un rapport de subordination" (as also does Grévisse, 1936:§§141/2) claiming, if we may anachronistically use the term in the sense defined by Botha (1968), that the semantic distinction is 'non-arbitrary' because "les deux groupes se comportent aussi différemment pour le pluriel et pour le genre." We can now see from our table that this distinction does not really hold true, however.

2.2.3 Opinions differ as to semantic criteria which distinguish a compound from a syntactic group. Carr, for

example, (1939:xxiii) claims that

"the meaning of a compound is not obtained by the addition of its parts: for instance, the meaning of the compound Grossvater is not the same as gross + Vater. Some other element enters into the meaning of the compound which is not contained in the parts which compose it,"

and Nyrop (1936:§555) criticises Darmesteter (1875:11) for saying that in the case of juxtaposition

"le nom composé n'offre pas plus d'idées à l'analyse que chacun des termes qui le composent."

Nyrop contends that vinaigre is in some sense more than vin + aigre. We may also quote Jespersen (MEG:VI:§8.1.3) who gives as part of his definition of a compound that

"the meaning of the whole cannot be logically deduced from the meaning of the elements separately."

Landmark (1969:159/60) takes a similar point of view, but a restricted one. According to him, it is the relation between the two elements which is not expressed:

"Disse språktegnene (komposita) er så knappe i uttrykket at relasjonene mellom de to ledd må underforstås av leseren selv. En sammensatt ord betyr altså noe mer enn summen av betydningene for hvert enkelt ledd."

Lees (1960), by giving a syntactic deep structure which

he later deletes, might be said to adhere to this principle, and Jespersen (MEG:VI:§8.1.4) equally states that

"Compounds express a relation between two objects or notions, but say nothing of the way in which the relation is to be understood."

Another facet of the same point can be seen in Bally's (1932:94) claim that one of the tests for a compound is that it describes an "idée unique". Henzen (1947:40/1) also points to this:

"Ein Hauptmerkmal der Zusammensetzung ist und bleibt die Isolierung des Bedeutungsinhaltes ... Grossvater (ist) nicht gleich gross + Vater, usw."

Andersen & Rehling (1936:§82) seem also to paraphrase Bally when they say

"Ofte staar Ordet i højere Grad for Tanken som et Hele"

but with this kind of statement one immediately runs into difficulties with knowing what the "thought as a whole" is, and the problem of whether a syntactic phrase like "the brown clock with one hand missing that stands on the mantle-piece in our front room" isn't as much a unity in thought as any single lexical item. Marty (1925:41) makes this same point, though for a different reason. Henzen (loc.cit) also points out that russische Eier or das Rote Meer are semantically 'isolated' without one wishing to say that they are

compounds. The criterion is obviously not hard and fast.

Berndt (1963:306) points out that Marchand (1960) contradicts himself on this point:

"Das sich der Verfasser selbst hier und da in Widersprüche verstickt (vgl. p. 18: 'a syntactic group is always analysable as the additive sum of its elements'; p. 80: 'any syntactic group may have a meaning that is not the mere additive result of its constituents') sei nur am Rande vermerkt" (stress by Berndt)

and thus partially suggests that the semantic distinction between a compound and a syntactic phrase is actually only a figment of the linguist's imagination. In any case, Söderbergh (1968:6) takes rather the opposite point of view when she says:

"I det ögonblick en sammansättning uppkommer, uppfattas dess delar av talaren (skribenten) och åhöraren (läsaren) naturligtvis som självständiga enheter inom sammansättningens helhet: allrum uppfattas som en kombination av all och rum."

2.2.4 Mikkelsen (1897:§37) gives a neat, if somewhat vague summary of all these differences as far as Danish is concerned:

"Forskellen mellem en Forbindelse af flere Ord, der udtales og skrives hver for sig, og en Sætningsord, der udtales og skrives i eet, kan ses ved en Sammenligning af Ordforbindelsen en stor Mand og det sammensatte Ord en Stormand. Disse to Udtryk skiller sig fra hinanden 1) i BETYDNING, idet det enkelte Ord i en stor Mand have bevaret deres særlige Betydning: a) en Mand, b) der er stor (i ligefrem eller overført Betydning), medens en Stormand betegner et enkelt, nyt Begreb; 2) i FORMEL HENSEENDE, idet i en stor Mand, Ordet stor bøjes: den store Mand, store Mænd, medens stor er ubøjeligt i en Stormand: Stormanden, Stormænd; 3) i UDTALEN, idet i en stor Mand begge Ord ere stærke, i en Stormand derimod Stavelsen Stor er stærk, Stavelsen mand kun halvstærk."

With the exception of the stress criterion for French, these can be applied mutatis mutandis to the other languages under consideration. However, we have to note that as soon as we try to use them to define a compound instead of listing them as features of compounds, we discover that no single criterion can provide a definition, and that the three criteria tend to define different groups, not one homogeneous group.

2.3 DEFINITIONS.

2.3.0 Before we begin to discuss the various definitions of the term 'compound' in the literature, there are two points which should be noted about compounds in French.

Firstly, the people who have spent most time discussing 'compounds' in French (by which they frequently mean compound phrases: see below) generally come from Germanic language backgrounds and seem to see compounds either because this is the way their native languages constrain them to consider the data or because of a translation type approach to the subject. In dealing with French, and in particular in dealing with French in comparison with a Germanic language like Danish, one must be careful to consider the material only from a French point of view before allowing oneself to make any cross-linguistic generalisations.

Also, we should note that there are at least three separate phenomena which have been termed compounding by various scholars of French. The first of these we shall ignore completely, the second we shall have comparatively little to do with, and the third will form the core of the portion of this study that is dedicated to French.

The first meaning of the term is the one used, for example, by Marouzeau (1957), Spence (1969) or by Benveniste

(1966) in the first part of his paper, where he considers the make up of the word microbe, pointing out that it is a French coined term. This particular type of composition, the hellenic-latin type, we shall consider as belonging to a separate field of scientific word-formation (a field which may not necessarily overlap with word-formation as it is normally understood). In what follows we shall not discuss the processes involved in this type of word-formation, nor shall we apply the term 'compound' to such forms.

The second type of composition Spence (1969:5) calls composé prépositionnel and we shall term compound phrase. The compound phrase is a phrase made up of two lexical items linked by a preposition, typically à or de, which acts in some way as a single lexical item. Examples would be pomme de terre, homme d'affaires, état d'ivresse, fer à repasser. Compound phrases can be further subdivided into those which are cases of synapsia (Benveniste, 1966: synapsie) and those which are not. Synapsia may be regarded as a primitive form of lexicalisation: "valet de chambre en est une, mais non coin de chambre" (ibid:92). The terms close(ly)-knit and loosely-knit compound phrases will also be used to refer to this distinction, a closely-knit compound phrase being a case of synapsia. There would seem to be a very real intuitive difference here: pomme de terre is felt by the native speaker much more as an idée

unique (see Bally, 1932:94), as a single word (in some pre-theoretical sense) than, say, morceau de gâteau. The problem is finding a way to formalise this intuitive distinction, especially as there is, inevitably, an unclear boundary between the two. This lack of clarity may mean that we have here two 'squishy' classes (in the sense of Ross), but if this is the case it is not clear what the criteria are in which the 'squishiness' can be seen.

The third type of composition is the one with which we shall be dealing most here, and the type to which we shall be referring by the unmodified use of the term 'compound' when applied to French. These resemble the Germanic compounds more closely in that they are made up of two recognisable and isolable elements, each of which can be allocated its own semantic interpretation. Rather than attempt a closer definition at this stage, which would be to preempt this section, we can list a few examples: haut parleur, sage-femme, coffre-fort, chou-fleur, boucher-charcutier, porte-avions.

2.3.1 There are basically two kinds of definition given of compounds -- the morphological and the semantic. The morphological definitions are usually variations on, for example, the definition given by Carr (1939:xxii):

"A compound is ... a combination of two independent words to a higher word-unit."

Compare, for example, Marchand (1955:§1.1):

"When two or more words are combined into a morphological unit we speak of a compound"

or Henzen (1947:36):

"Zusammensetzungen (Komposita) entstehen wenn Sprachelemente, die für sich als Wörter dienen können, zu neuer Wort-einheit verbunden werden."

Adams (1973:30) and Morciniec (1964:44) provide very similar definitions. Rohrer (1967:§6.2) defines a compound in French as

"Ein mit einfachen Monemen kommutierbares Syntagma der synchronischen Sprachtechnik, das nur global modifiziert werden kann, und dessen unmittelbare Bestandteile freie Moneme sind."

Giurescu (1970:§1.1) says that you have to be able to recognise two words to speak of a compound, whilst in another article (1972:§1.0) she gives a definition very reminiscent of Rohrer's:

"Definimos el nombre compuesto como una unidad léxico-grammatical nueva, que aparece entre pausas, puede conmutarse con una palabra simple, puede ser

determinada sólo globalmente y cuyos componentes se dan también fuera de dichos amalgamas."

Jespersen (MEG:VI:§8.1.1) gives a provisional definition of a compound as

"A combination of two or more words so as to function as one word, as a unit."

Unfortunately, as Noreen (1906:36-57) points out, such definitions are useless unless we previously have a definition of the concept 'word'. It is this factor which leads him to define a compound (ibid:20) thus:

"Ett sammansatt ord ... eller kompositum är ett sådant, som kan upplösas i delar, hvilka hvar för sig hänvisa på något i språket befintligt själfständigt morfem."

We can get round the problem -- though not solve it -- by following Landmark (1969:2) and saying that a word is a unit which can be written between two spaces on the page:

"'Ord' skal her brukes i den tradisjonelle betydning: språktegn som i skrift skilles ut med åpent rom foran og etter."

This is to take a pre-theoretical approach to the problem. For a complete discussion of the questions involved see Lyons (1968:§5.4). In the terminology used there, we might say that a compound is a lexeme which is made up of a merger of two (or more) lexemes.

However, even this does not provide us with a suitable

definition, as Hansen (1938:109) points out:

"Ved adskillelsen af kompositum og komplekst ord plejer man at sige, at den første består af to ord, der forekommer selvstændigt i sproget medens det sidste indeholder et ord og et element, der ikke forekommer selvstændigt. Men en sådan afgrænsning er ikke helt tilstrækkelig. Efter den vil nemlig fx. cigarmager blive en afledning, fordi -mager ikke forekommer som selvstændigt ord. En sammenstilling af cigarmager og fx. cigarfabrikant lader os føle uretfærdigheden i at adskille de to tilfælde."

Juul-Jensen (1934:18) and Söderbergh (1968:8) make the same point and give more examples, almost all of which are nominalisations of verbs:

Swedish	{	dörrknackare
		djurplågeri
Danish	{	raadspørgsel
		voldtægt
		stenbider
		skovrider

and examples of a similar type can be found in English, though they are less usual:

householder
doorknocker.

There are also words like jomfru and bomuld which one would

intuitively wish to class as compounds, and which in some circumstances act like compounds (consider uldkjole but bomuldskjole) but which would be ruled out as compounds by a definition of the type suggested by the fact that *bom and *jom are not words.

Hansen, however, goes on to argue that such elements are in fact words, in the same way as hip and hap ARE words, though they only appear in the idiomatic phrase hip som hap. In drawing this parallel, he takes no account of the fact that the whole idiom hip som hap could be 'a word' (equivalent, perhaps, to ligegyldigt), nor does he provide any argumentation to show that hip and hap are words. One is led to suspect that in fact he is making use of the same pre-theoretical definition of the word as Landmark, but without saying so. The problem, therefore, remains, though Hansen now ignores it and concludes (op.cit:111) by giving the following definition of a compound:

"Sammensætningen er en forbindelse af to led (som hvert for sig kan indeholde flere ord,) der syntaktisk og betydningsmæssigt står på lige fod med et af to (eller flere) ord bestående sætningsled, men morfologisk og (eller) lydligt (især trykmæssigt) viser andre egenskaber end dette."

Although Hansen here distinguishes between the morphological and the phonological correlates of the compound, not everyone does this as clearly. Marchand (1955:§2.4 quoted; 1969:§2.1.15) particularly is guilty of confusing the two:

"For a combination to be a compound there is one condition to be fulfilled: the compound must be morphologically isolated from a parallel syntactic group. However much the Holy Roman Catholic Church or the French Revolution may be semantic or psychological units, they are not morphologically isolated: they are stressed like syntactic groups."

The last clause in this passage suggests that Marchand has completely missed the point about morphological isolation. This is explained more clearly by Brekle (1966:19/20):

"Als entscheidendes Kriterium der Unterscheidbarkeit des Kompositumtyps (girlfriend) von der parallelen syntaktischen Gruppe black board muss die morphologische Isoliertheit der Ausdrücke des ersteren angenommen werden; d.h., bei syntaktischen Gruppen ist es grammatisch möglich, dass ihre Glieder linear expandiert werden können, z.B. 'a black wooden board' Bei Ausdrücken des Kompositionstypus (girlfriend)

besteht diese Möglichkeit nicht: die als Konstituenten des Kompositums fungierenden freien Morpheme bilden ein morphologisches Syntagma, das in der Regel nicht aufgespalten werden kann."

It may well be the case that unity stress and this morphological isolation go hand in hand in a large number of cases, but the two are not to be taken as the same criterion because of this.

This particular problem is perhaps peculiar to English, because, as we have noted above (§2.2.12) it is only in English that the stress variable can come into play to any appreciable degree, and this type of syntactico-morphological criterion would, in any case, have no place in a language like Danish where compounds can be interrupted:

jord- og betonarbejder.

In any case, as we also have seen above (§§2.2.21 - 2.2.23) Danish already isolates compounds morphologically more clearly than does English.

Rohrer (1967:§1.3.11) points out that if one takes the criterion of morphological isolation too seriously, then one must consider postmaster general, heir presumptive (queen regnant) as compounds, while plural forms such as consuls general would, he claims, tend to argue against this solution. In any case, it seems that we have a

problem in the analysis of phrases like

a specimen American mind

a school Homeric grammar

the head four boys

(all quoted by Jespersen, MEG:II:§13.34), or in the analysis of

a library comicbook

where library book has compound stress and comicbook has compound stress. It is not clear whether this can be said to be an interruption of the syntagm or not.

By and large, then, it appears that the criterion of morphological isolation is just as unsatisfactory for the definition of a compound as any other we have looked at.

2.3.2 We can see, therefore, that the morphological definitions of the compound are far from satisfactory, and we are left looking for a different criterion for a definition. Jespersen (MEG:VI:§8.1.3) finds himself in the same position:

"As formal criteria thus fail us in English, we must fall back on semantics, and we may perhaps say that we have a compound if the meaning of the whole cannot be logically

deduced from the meaning of the elements separately."

Kruisinga (1911:§1581) gives a similar definition:

"A compound may, therefore, be defined as a combination of two words forming a unit which is not identical with the combined forms or meanings of its elements."

We have already (§2.2.3) pointed out some of the difficulties in looking for semantic criteria for compounds. However, there is also a more serious one which we can see if we consider Jespersen's definition of the compound in comparison with various definitions of the idiom.

Webster's Collegiate Dictionary (1951: later editions have a revised definition) defines an idiom as

"An expression, in the usage of a language, that is peculiar to itself either in grammatical construction or in having a meaning which cannot be derived as a whole from the conjoined meanings of the elements."

Mounin (La machine à traduire, Mouton, The Hague, 1964: 138, quoted by Rohrer, 1967:§1.3.4) tells us that

"Un idiotisme ... a un sens qui ne peut être tiré, dans son ensemble, des sens additionnés des éléments."

If we accept these definitions of idioms -- which appear perfectly satisfactory at first glance -- then how are we to distinguish between a compound and an idiom? We are virtually forcing ourselves into the position where we have to say that any compound is an idiom. Weinreich (1963:145) does just this. First he defines an idiom as

"A grammatically complex expression A + B whose designatum is not completely expressible in terms of the designata of A and B respectively"

and then he continues by explicitly including compounds as idioms; his examples are Fingerhut and Handschuh. He goes on:

"For any language possessing idioms -- and this means every language -- the semantic description is not complete unless each idiom, whether a compound or a phrase or an incompletely productive 'quasi-transformation' ... appears in the appropriate semantic paradigms on a par with morphological simplicia and productive transformations. Thus rub belongs in a 'field' with scratch, abrade, etc.; nose with face, nostril, etc.; but rub noses with familiarity, intimacy, etc.."

That is to say that he would list compounds like Fingerhut or Handschuh in the lexicon in any case, because of

their privilege of occurrence, and because of the semantic fields in which they occur. This is a complete antithesis to the view of, for example, Lees, who would wish to generate as many compounds as possible, so excluding them from particular mention in the lexicon. As soon as we accept Weinreich's assessment of the situation, we are accepting that the compounding process is having a greater effect than can be accounted for in transformational terms, and thus that we cannot, or should not, generate compounds at all. But we have already pointed out (§2.1.2) that compounding is a productive process, and if this is so then one would expect one's grammar to be able to generate compounds. And the whole point about idioms is that they have to be specifically listed. In fact, Bar-Hillel (1955:188) suggests that

"A good rule of thumb would be to insist that the number of idioms should be rather less than the number of words"

which would not necessarily be the case if compounds were all idioms.

Rohrer (1967:§1.5.1) attempts to get over this problem by defining an idiom

"als eine Verbindung von zwei oder mehreren Wörtern, deren Gesamtinhalt weder aus der Bedeutung der Glieder noch, im Falle von Transformanten, aus der Bedeutung der

zugrundeliegenden Quellsätze erschiessbar ist" and assuming, with Lees (1960), that because compounds are productive they are derived from underlying sentences. First of all, this assumption should not be allowed to go unquestioned; we shall see later (§3.2.1) that there are reasons for doubting it to be the case. Further, though, even Rohrer's definition will classify rødstrømpe or grandmother as idioms rather than compounds.

Brekle (1966:21) also admits, speaking of compounds like blackbird, madman and White House that

"Mit Ausdrücken dieses Typus sind wir an der 'unteren' Grenze der Idiomatizität."

This confusion between compounds and idioms stems from the semantic definition of compounds, and is really only a problem as long as one insists on defining, or is forced to define, compounds in this way. Bearing this in mind, it is interesting to note that Jespersen felt that he had to "fall back on semantics", and that Krusinga, whatever he may give as a definition, uses phonological criteria as well as semantic criteria to decide when something is a compound. Thus he says (1911: §1586, fn 2):

"Townhouse is a compound because it has uneven stress; townhall is a compound

because of its meaning, although it has even stress."

2.3.3 We find then that despite a plethora of descriptions of compounding, despite a plethora of definitions of the compound, we have no satisfactory definition with which to work. We can perhaps attempt a provisional working definition, but it is likely to be prey to all the difficulties we have discussed above.

If we summarise the points we have discussed, we can see that a compound is a morphologically complex unit, made up of two words (?lexemes) acting as a single word (?lexeme). The words or (in most cases) potentially free formatives may themselves be further subdivided. The compound, it is claimed, shows a degree of phonological, morphological and semantic isolation. However, these points are better considered as tendencies than as rules, since we have found very few 'rules' in compounding that admit of no exceptions. We must conclude, then, that it is extremely difficult to provide a detailed definition working from an analysis, though we can, as we have hinted, consider likely tendencies. This again suggests a 'squishy' class. We shall return later (§6) to see what results can

be obtained in attempting a definition by synthesis, and to suggest why a definition should be so difficult.

2.4 EXPLANATIONS.

2.4.1 In traditional grammars -- where there is generally no attempt made to give an exhaustive description of compounding -- we find descriptions of compounds and compounding, how compounds are formed and interpreted, falling into two main categories: the descriptions based on syntax and those based on semantics, though some grammarians do mix the two approaches (see Lloyd, 1963:750). Jespersen (MEG:VI:§8.2.1) gives a semi-grammatical analysis in terms of modification, and in the next paragraph discusses the grammatical relations of subject and object in compounds. Hammer (1971:§717) gives a grammatical analysis based on the parts of speech. Henzen (1947:54) lists some semantic relationships, but his basic division is by the parts of speech involved, as is Darmesteter's (1875). Koziol (1937: §§87 - 108), on the other hand, gives long lists of possible semantic relationships between the elements of compounds, as do Noreen (1906:383ff), Duden (1959:§3715) and Fleischer (1969:§5.1.2.4).

This basic division persists in studies of compounding right up to the present day, though the advent of transformational grammar has changed the concept of syntax and though most of the modern descriptions attempt some kind of exhaustiveness. In the most modern studies, the syntax-based models can be divided into two main branches, those

based on sentence relations, and those based on prepositional relations.

The first group is typified by Lees (1960) and Rohrer (1967), who follows very closely in Lees' footsteps. They have a sentential source for their compounds, and characterise the elements of the compounds by the function they have in the underlying sentence: Subject - Predicate, Subject - Object, etc.. Lees later (1970a, 1970b) moved away from this point of view aligning himself more closely with the semantic approach.

The second group is exemplified by the work of Griève-Schumacher (1960) on French and that of Žepić (1970) on German, although Lees (1960) and Rohrer (1967) have recourse to it in a sense in their Subject/Object - Prepositional Object classes. According to this school of thought, the underlying source of a compound is not a complete sentence but a prepositional phrase. In French this particular view leads to the point where it is considered that noun + à/de + noun constructions either are compounds, as suggested by Lombard (1930:22) or Hachtmann (Die Vorherrschaft Substantivischer Konstruktionen im modernen französischen Prosastil, Berlin, 1912:32, quoted in Carlsson, 1966:59) or give rise to compounds diachronically, as suggested by Hatcher (1946).

As there seems to be no reason to dispute the claim made by Lyons (1968:§7.4.7), Fillmore (1968:15) and Anderson (1971:§1.1) that prepositions are equivalent to case markers, and if we consider cases -- either 'deep' or 'surface' cases, that is either case or case forms -- as expressing a relationship between elements, then there is virtually no difference between this second approach and what we here have termed the semantic approach: both deal with the relationships between the elements of compounds. Furthermore, since there is a tendency in some of the most recent developments in syntax towards a much more abstract and semantics-based deep structure, we can claim that the three approaches which we are separating out here are, at least in terms of modern linguistic theory, merely different views of the same thing: that they are notational variants. However true this may be, and in many cases the difficulty of drawing a firm line between one approach and another bears witness to the truth of this claim, there are reasons for dealing with the approaches separately for the moment. Firstly, the authors of the various studies are by and large ignorant of this truth, if only because linguistic theory had not developed to the point it has today at the time they were writing. Also, in many cases authors cause confusion rather than clarification by attempting to link these various aspects. Thus Teleman (1970) begins by giving a series of relative clause deep structures (op.cit:38ff),

then adds some possible semantic relationships between the elements, and finally states that his relative clauses can all be reduced to a phrase consisting of preposition + noun (ibid:42).

The modern continuation of the semantic approach can be seen, for example, in the work of Morciniec (1964:93ff) and, especially, Brekle (1970). Brekle attempts to give a strictly formal analysis of this approach, supposedly based on predicate logic (but see Bauer, 1974:16). The complexity of the system which he develops to do this is quite extraordinary and suggests in itself the difficulty of this type of approach.

In the next sections we shall go on to look in more detail at these various treatments of compounding, taking them in reverse order. Before we do that, however, it should be pointed out that criticism can be levelled at all these approaches -- or rather at all the exponents of them -- for their failure to note, or to account for if they do note, the special peculiarities of compounds: the fact, for example, that 60 students dancing in a back garden each with a drink in his hand does not constitute a 'garden party', though a garden party is a party that is held in a garden; the fact that one can talk of a green blackboard without there being any contradiction in the phrase; the fact that

a man who picks up something from a shop and delivers it to his sister's home for her does not ipso facto become a 'delivery man'; the fact that jokes like the following (taken from ISIRTA, 11/11-73, BBC, Radio 2) are possible:

-- Tomorrow is the royal garden party.

-- Oh, are you invited, sir?

-- No, but my garden is;

and so on. All these are facts which a comprehensive theory of compounding must take into account and explain.

2.4.2 We have already quoted Landmark (1969:160) as saying that compounds

"er så knappe i uttrykket at relasjonene mellom de to ledd må underforstås av leseren selv."

Briegleb (1935:6) is getting at the same thing when he calls the relationship something "transzendentes" and adds that

"Die Verbindung wird allein im Kopfe des Sprechenden und des Hörenden gebildet."

It is these relationships which the writers who give a semantic explanation of compounds are trying to characterise and list, whether they use only four as does Hatcher

(1960) or over a hundred as does Brekle (1970).

Hatcher's (1960) paper is particularly interesting in the light of recent developments in 'localistic' case grammar (see Anderson, 1971), since the four relations to which she attempts to reduce all, or at least most, compounds ("these (perhaps) comprehensive categories"; op.cit:366) are very clearly localistic in nature. In a compound of the form AB her possibilities are

- Ⓐ A is contained in B
- Ⓑ B is contained in A
- A → B A is the source of B
- A ← B A is the destination of B

and these are exemplified by seed orange, orange seed, cane sugar and sugar cane respectively. This system is, however, possibly not as exhaustive as Hatcher may have wished or believed. There are compounds which it is difficult to assign to any group, and equally, a large number of compounds which appear to fit in to more than one group. On the one hand we have examples like windmill: is the mill the destination (or the source) of the wind here? is the steam contained in the ship in steamship? is the thief contained in the car, or is the car the destination of the thief in carthief? can one say that the fire in fire alarm is the source of the alarm, particularly if the alarm is never used? and so on. On the other hand we have examples like 2hr discussion, which Hatcher classes as Ⓐ ,

a solution which we gloss as "the discussion comprised two hours". But it would appear equally possible to claim that this type of compound belongs to group (B) and that the discussion filled two hours or took up two hours. Or again sugar cane which is given as the exemple-type of $A \leftarrow B$ might equally well be (A): the sugar is contained in the cane.

Noreen (1905:383-5) lists 45 possible relationships which occur in 'adjunktiva' compounds alone, i.e. those where

"den ena leden fungerar som biglosa ...
til den andra,"

and says that these are only the most usual relationships.

His 'cases' and some examples are listed below:

lokal inessiv	: hemlif, lundastudent
temporal inessiv	: måndagsföreläsning, vårvindar
lokal interessiv	: Uddevalla-Lelången-banan
lokal adessiv	: Lafsstrand, väggskåp
circumessiv	: lifbälte
supraessiv	: golvmatta
subessiv	: byggnadsgrund
obessiv	: västfasaden
lokal ablativ	: Stockholmståget, takdropp
temporal elativ	: barndomsminne
lokal oblativ	: Vaksalagatan

lokal allativ	: Rom-resa, Stockholmståget
lokal illativ	: kyrkogång, himmelfärd
mensura	: fotsdjup, handsbredd, manshöjd
pretii	: femkroneseddel, tiörecigar
intervalli	: dagorder, nattlogi, treårsperiod
komitativ	: gröttallrik
attributiv	: ringfingret, skogstrakt
principatus	: båtsegel, tafvelram
partitiv	: föreningsmedlem, stol(s)benet
definitiv	: flickebarn, änkefru
interferentia	: negerslaf, änkedrottning
materia	: guldring, hårlock, stenus
kvalitativ	: adelsperson, världsman
prebentis	: kvinnoskönhet, mannamod
respektiv	: latiningrammatik, liffsstraff
limitativ	: kortfattning, vattendrickande
kausativ	: glädjetårar, sjösjuka
konsekutiv	: dödsfara, sorgebud
kommodi	: barnbiljett, penningpung
inkommodi	: fluggift, stormhake
instrumenti	: kortspel, stenkast
fungentis	: fadersvilja, moderskärlek
agentis	: häxdans, kvinnoarbete
objektiv	: urkundspublikation, latinstudium
resultativ	: boktryckare, doktorspromotion

prokreatoris	: brorson, dotterdotter, kaninunge
auktoris	: snillefoster
originis	: getmjölk, schweizerost
produkti	: akvarellmålare, kongungamoder
reciprocitatis	: bondhustru, professorsänka
possessionis	: husägare
ekvativ	: gullgul, stenhård
similitativ	: järnvilja, änglabarn
analogiæ	: barnasinne, löksmak.

Western (1929:50ff) divides what he calls "egentlige tatpurusa" compounds (more or less the same group) into eight main groups:

1. Subjektsforhold
2. Objektsforhold
3. Stedsforhold
4. Tidsforhold
5. Hensynsforhold
6. Årsaksforhold
7. Sammenhængsforhold
8. Friere forhold.

"Disse forskjellige forhold må naturligvis opfattes i videste betydning."

But even though he inserts this warning, he has to include his type (8), which he explains by saying (op.cit:62):

"I mange tilfelle er det umulig å angi et bestemt logisk forhold mellem de to ledd,

idet enten sammensætningen kan være en analogi-dannelse efter ett eller andet mønster, eller den kan bero på en tanke-ellipse, eller begge disse årsaker kan være forenet."

Hansen (1967:304ff) runs into similar kinds of difficulties, though he leaves behind the purely semantic explanation and uses something of a grammatical approach in places.

- "a) Et kompositum ... kan svare til de forskellige arter af genitiv (which are listed: LJB).
- b) Første sammensætningsled kan svare til et prädikativ (med eller uden som) eller et appositionelt led.
- c) Førsteleddet kan rumme noget hvormed andetleddet sammenlignes.
- d) ... Sammensætning kan svare til en kombination af to led (dvandvasammensætning).
- e) Sammensætning kan svare til en såkaldt mængdelighed.
- f) Førsteleddet angiver hvad andetleddet består af, er lavet af, rummer.
- g) ... Sammensætningen svarer til en forbindelse af et substantiv ... og et præpositionsled.
- h) Mere komplekse udtryk kan danne basis for sammensætningerne.

- i) Endlig har vi sammensætninger som der ikke synes at ligge noget bestemt sprogligt udtryk bag."

Almost all the authors who have adopted this semantic approach to compounds have come up against this problem: not all the compounds fit the categories provided. Thus Jespersen (MEG:VI:§8.1.4) says that

"the analysis of the possible sense relations can never be exhaustive."

Koziol (1937:§87) admits this too, though he thinks that the attempt is still of value:

"Eine vollständige, erschöpfende Uebersicht über die Beziehungsmöglichkeiten ist wohl nie zu erreichen Dennoch ist eine -- wenn auch unvollkommene -- Gliederung nach begrifflichen Verhältnissen von Wert, weil sie zu einer Betrachtung der bestehenden lebensvollen Fülle führt."

Carr (1939:319), in slightly milder tone, adds a further condition which we have already discussed in relation to Hatcher's (1960) paper, and which is also true of Brekle's (1970) book (see Bauer, 1974:15):

"Although an attempt may be made to classify the compounds from a semantic point of view, it would be impossible to state all the relationships which do occur, and to assign each compound to a particular class."

2.4.3 Hatcher (1946) argues for French that if we ignore compounds which are the result of 'calques' from the Germanic languages we can consider compounds as reductions of compound phrases (see §2.3.0 for this terminology) where the native speaker has to hesitate between two (or more) possible prepositions; especially between à and de, between de and en or between de and pour. She cites (op.cit:219):

"... 'boîte à lait' mais 'boîte de violon';
 'parc à bestiaux' mais 'parc pour chevaux --
 et 'poste d'avions'! Et il y a nombre de
 composés enregistrés dans les dictionnaires
 avec les deux prépositions à et de: cheval à
(de) main, wagon à (de) marchandises, gaz à l'
(d')eau, boîte à (de) outils, poche à (d') huile.
 Il n'est guère étonnant que, dans les catégories
 d'A à B on ait fini par trancher le noeud
 gordien en omettant la préposition, plutôt
 que d'avoir à choisir entre deux (ou trois)
 possibilités. (L'individu parlant qui veut
 lancer un composé ne doit pas ~~d~~avoir hésiter!)"

In fact, the examples Hatcher uses are not terribly convincing. There is a very clear semantic difference between boîte à and boîte de. The difference may be summarised thus: boîte à means 'box meant to contain', 'box for' when and only when this can usefully be contrasted with

'box full of,' 'box containing,' 'box of.' In most cases this means only when the noun following is a mass noun. Thus in boîte à lait there is a useful contrast with boîte de lait, but boîte de violon cannot be given any quantitative interpretation (how much violin do you have? I have a box of violin) and so the à construction is not appropriate. De is the unmarked form. The same explanation is probably true for wagon à marchandises, boîte à outils, though we have not found these "enregistrés dans les dictionnaires." Nor have we managed to trace gaz d'eau. In the case of poche à huile vs poche d'huile the two are completely different objects, the former being a tray in a workshop for catching oil from a motor, the latter a geological formation, and though the same distinction as in boîte à/de can be seen to be applying here, it is equally possible that the change of preposition is primarily to mark the semantic difference. This only leaves us with parc à bestiaux but parc pour chevaux and cheval à/de main. It is unfortunate that Hatcher does not cite sources for these phrases, as they are not all traceable in the main French dictionaries. In particular parc pour chevaux sounds very much like an idiosyncratic nonce formation rather than a usual form. But even if they all exist as regular forms, it is not clear whether these examples are sufficient to support the weight of Hatcher's theory; we shall give the most generous interpretation to the data and assume provisionally that they do.

Darmesteter (1875:117), in a different context, also points out this difficulty, though looking at it from the other side, as it were:

"Timbre-poste est-il timbre de poste, ou timbre à poste, ou timbre pour poste? Papier-tenture est-il papier de, à tenture, ou papier qui est une tenture?"

But Hatcher's theory can hardly explain all the compounds of the type timbre-poste. If we consider the more modern formations équipement-vacances, leçon-cuisine, message-vacances, guide-raisin (quoted by Etiemble, 1964:161/2) there seems to be no hesitation in the choice of preposition: leçon-cuisine has to be 'leçon de cuisine', message-vacances 'message de vacances', though this is not to say that all modern compounds lack this vagueness. As Etiemble puts it (loc.cit):

"Un certain nombre de mots ainsi composés gardent l'ordre des mots en français et se bornent à supprimer la préposition."

Griève-Schumacher (1960) takes over the ideas of Hatcher (1946) and tries to enlarge upon them and relate the largest portion of compounding in French to the deletion of the preposition in compound phrases. In doing this, however, she fails to rely upon the hesitation pointed out

by Hatcher and freely deletes all prepositions (de, à, pour, contre, par). Once a preposition has been deleted she has thus no way of recovering it (without appealing to the competence of the native speaker) and yet it is surely of importance whether actualité-enquêtes are enquêtes d'actualité or enquêtes sur l'actualité (example from Etienne, loc.cit). More importantly, however, she has no way of predicting when a preposition may be deleted. Rohrer (1967:§2.7) brings an argument against this type of process:

"Würde man im Französischen eine transformationelle Studie über die Nominalkonstruktionen schreiben, so liessen sich allgemeine Regeln nur bis zu Stufe der artikellosen Präpositionalverbindungen formulieren. Die letzte Stufe, die zum Beispiel im Englischen und Deutschen meistens erreicht wird, ist im Französischen fast immer ungrammatisch. Deshalb wäre es sicher einfacher, mit Ausnahme des Typs sujet-attribut, die wenig geläufigen Substantiv + Substantiv-Komposita global ins Lexikon aufzunehmen, als ein Vielzahl von syntaktischen, morphologischen und semantischen Restriktionen einzubauen, um die Erzeugung von Formen wie *briseur-grève, *enseignement-sciences zu vermeiden."

Even though Griève-Schumacher's study is not strictly transformational in approach, the point would seem to remain valid. Her study loses force, moreover, as it would appear that a significant number, if not the majority, of French compounds fall outwith her main field of Ellipse, many of them being classified in very unsatisfactory sub-groups. Farbbezeichnungen, for example, become a whole category, Auto-, Radio-Typen provides another. Again, whilst one can sympathise with her introduction of a category Historische Bildungen, it seems a pity that she did not see the further implications of this group (see our discussion of lexicalisation, §3.3). On a different level, it is not easy to see why, in a synchronic grammar, thé-vente should be classed as Neubenennung and thé-bridge as a Fremdbildung.

Söderbergh (1968:23ff) also uses a prepositional analysis, though more as a reflection of the semantic relationship between the compound elements than as a deep structure. However, her analysis points clearly to the weakness in this theory. She lists eleven different semantic relationships, most of which are linked to several prepositions. Almost all of the prepositions, in turn, are linked to more than one of the semantic relationships. Thus, for example, the preposition för is linked to the semantic relationships where the first element is

1. ändamålet, avsikten, syftet
6. någon eller något som det som uttryckes genom huvudleden är till fördel för eller skydd mot
9. ägare till något, eller bärare av viss egenskap.

Again the prepositional relationship of av is linked to the semantic relationships where the first element is

2. material eller innehåll
5. föremålet för eller resultatet av en verksamhet
7. subjekt till en verksamhet eller ett skeende som uttryckes genom huvudleden.

There is, therefore, a many to many relationship between the prepositional markers and the semantic relationships. Until this problem can be solved any analysis based on prepositional phrases is going to have an irretrievable deep structure.

Abraham (1969) makes this point in relation to Žepić's (1970) analysis of German, which uses a similar system (though Žepić attempts to be more explicit and is rather more transformational in his approach than is Söderbergh).

Abraham points out that Žepić analyses Landschaftsbild as BAgensg,

"d.h. Bild einer Landschaft, aber nicht Bild von einer Landschaft, Bild mit einer Landschaft -- oder wird das unter Gensg verstanden?"

Theoretically, according to Žepić's model, Hausfrau might come from any of

die Frau für das Haus	die Frau des Hauses
die Frau aus dem Haus	die Frau mit dem Haus
die Frau im Haus	die Frau auf dem Haus
die Frau am Haus	die Frau vom Haus
or even die Frau wie ein Haus!	

and there is no way of telling which of these it has come from. Clearly, this is semantically absurd, but it does underline the problem of having an irretrievable deep structure.

2.4.4 Before the development of generative grammar, the only linguists even to suggest something that might, in retrospect, be interpreted as a syntactic deep structure are those who, like Western (1929:51; quoted above) use a Subjektsforhold and Objektsforhold. These two relationships are the only syntactic ones used by Jespersen (MEG:VI:§8.2) in describing the compounds of English.

Lees' (1960) major transformational work on compounding changed all this, however, and no study of compounding after the appearance of that monograph has been able to ignore either it or its implications. Lees sets out the aims of his work in his preface (1960:xxvi):

"In the following study we shall give an analysis of English nominalizations, including nominal compounds. By 'analysis', however, we do not mean a taxonomy of nominals, nor a taxonomy of the fragments left after some segmentation of nominals. Neither do we mean a more or less philosophical discussion of the various meanings with which nominals happen to be used by English-speaking people. Rather, we shall attempt to characterize various nominal expressions by giving simple grammatical rules to enumerate them. In the course of developing such rules we shall bring out certain formal regularities in these expressions."

In this passage, Lees makes a clean break with his predecessors in the field. One can compare this book with Marchand's book on English word-formation which appeared in the same year and which does attempt some kind of taxonomy. But the important words here are 'formal' and 'rules'. Lees is developing one of the first major applications of the theories of Chomsky (esp. 1957) on transformational grammar, and it is in this historical context that the book is seen most favourably. Of course, the book is not without faults: any pioneering work of this kind that were would be an extraordinary work. Some of the faults of the book may be discovered by reading the many reviews it gave rise to,

for example Householder (1962), Matthews (1961) and Rohrer (1966). As a pioneer in the field of transformational grammar, Lees rather tends to over-stress the formal explicitness of his system at the expense of some of the "more or less philosophical discussion" of traditional grammar which might have shown some of the rules to be over-dogmatic, and might have counselled greater attention to meaning.

We shall have cause later (§§3.2.1, 3.3.1, 3.4.1, etc.) to present some criticisms of Lees' book. For the moment we shall merely point out that Lees was the first to provide a genuine syntactic deep structure for his compounds, deriving each compound from a full underlying sentence. It is arguable whether this is justifiable or not, but it is certain that the concept in this explicit form -- though it had possibly been implicit in the works of many grammarians and linguists for a long time -- has a revolutionary effect on descriptions of compounding.

Rohrer (1967) follows Lees very closely in most ways. He assumes a sentential source for compounds, a syntactic deep structure, and many of his categories are similar to or the same as Lees'. But he admits (1967:§0.5) that

"Anderseits ist unsere Dissertation für eine transformationelle Arbeit nicht explizit genug. Wir geben zwar die

Tiefenstrukturen an, auf die unsere Komposita zurückgehen könnten, ohne sie jedoch immer genau zu motivieren, und ohne zu beschreiben, durch welche Regeln diese Strukturen in Komposita verwandelt werden."

Landmark, in his study of compound adjectives in Norwegian, though apparently slightly unsure of his ground, follows the general trend here and claims (1969:161) that

"Det er rimelig å anta at de adjektiv som kan omskrives med et analytisk uttrykk som følger av de ovennevnte dypstrukturmønstre, også er dannet på grunnlag av vedkommende analytisk uttrykk."

In fact, of course, it is only "rimelig" to presume this (a) within the framework of a transformational generative grammar, (b) if the analytical paraphrase has not undergone unnecessary transformations, or transformations that come later in the cycle, and so on. One might compare Botha (1968:122ff) who discusses whether the Afrikaans compound familiekat should be derived from an underlying structure corresponding to die familie het n kat ('the family has a cat') or die kat is van die familie ('the cat is of the family'). Botha assumes that these two sentences have completely separate deep structures, and argues on this basis -- albeit not very convincingly --

that familiekat can only be derived from the second, although both sentences are analytical expressions showing the relationships between the elements of the compound. If, however, we were to assume a case grammar such that the two sentences above had the same underlying structure (for example as outlined by Fillmore, 1968, or Anderson, 1971) then it would only be that expression which had undergone the lowest number of transformations which it would be "rimelig" to take as the basic analytical expression. In either case Landmark's presumption is seen to be too facile as it stands. However, one can clearly see the influence of Chomskyan thought on Landmark in the passage quoted.

Teleman (1970:37), as was suggested by Hjelmslev (1916: 4) and Lees (1960) before him, takes a relative clause as the deep structure of his compounds:

"Betydelseförhållandet mellan förled och efterled ska vi uttrycka med hjälp av relativsatser, som har efterleden till korrelerat och i vilka förleden ingår som (icke-relativiserad) satsdel."

However, Teleman's analysis suffers from the same weakness as other analyses of the same type (including Lees, 1960, Brekle, 1970, etc.): it is purely uni-directional. If we consider Teleman's (op.cit:41) types 17 and 18, for example:

17 (Sb 2 är avsedd (Sb 2 orsakar Sb 1))

tårgas, sömpulver, glassmaskin

18 (Sb 2 är avsedd (Sb 2 förhindrar Sb 1))

malkula, brandkår, strejklag

we can see that whilst the formulae can explain how the various compounds are produced, or alternatively produce a taxonomy of compound types (see Bauer, 1974:18), it cannot explain how such compounds are understood, since there is nothing inherent in the form of the compound to prevent sömpulver, for example, being interpreted under pattern 18 as a powder for preventing sleep! If a taxonomy is all that is attempted, this does not matter, but if a full generative system (i.e. one in which the unique recoverability requirement is met globally) is required, then it is a fatal flaw.

Carr (1939:319) has another very serious argument against this type of deep structure:

"Although the logical relationship between the parts of the compound may be defined and stated by a syntactic phrase, such a definition will not always give the meaning of the compound as a whole. It would, for instance, be impossible to define the meaning of the compound Johannis-würmchen by stating the logical relation of Johannis to würmchen, and even if the meaning of a primary compound can be defined by a syntactic phrase, the

compound cannot be identified with it and certainly has not arisen from it."

Even though the phrase "arisen from it" is to be interpreted historically rather than transformationally in this quotation, this remains a very serious criticism of theories which provide a syntactic deep structure for compounds.

2.5 CONCLUSION.

In this chapter we have attempted to review the main tendencies in former discussions of compounding, to show up the weaknesses of the definitions proposed, and to point out some of the problems which a discussion of compounding gives rise to. In a sense it is inevitable that this chapter should have been predominantly negative and critical in tone.

In the next chapter we go on to build a foundation for our own theory, which will be discussed in Part Two. We shall first take up some points we have mentioned for greater discussion, and look at some new problems arising from these discussions or necessary for the building up of a new theory. In Part Two we shall go on to expound that theory, a theory which it is hoped will avoid all the pitfalls we have discussed above.

CHAPTER III

DISCUSSION

3.1 DVANDVA AND APPOSITIONAL COMPOUNDS.

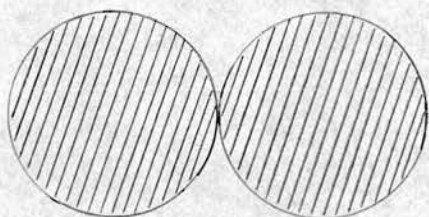
3.1.1 Jespersen (MEG:VI:§8.2.1) distinguishes copulative compounds

"AB means A plus B: Schleswig-Holstein consists of two districts, Schleswig and Holstein "

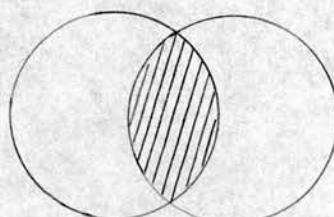
from appositional compounds:

"AB means: at the same time A and B, the two combined in one individual: maid servant¹, servant girl."

Rohrer (1967:§1.2.7) makes the same distinction, distinguishing on the one hand Alsace-Lorraine, Oesterreich-Ungarn, bleu-blanc-rouge which are A & B, and on the other hand forms like maitre-coiffeur which are less than A & B. In terms of Venn diagrams we might show the difference thus:



Alsace-Lorraine
Schleswig-Holstein



maid servant
maitre-coiffeur

¹ The example is perhaps unfortunate in that a maid servant is not necessarily a maid who is a servant so much as a servant who is not a manservant; i.e. maid is merely a sex-marker, cp. she-wolf etc.. However, this does not appear to have any effect on the argumentation, and we shall let the example stand.

The first of these groups is traditionally called by the Sanskrit name of dvandva compounds. The second belongs to the karmadhāraya. Carr (1939:xxvi) distinguishes between them thus:

"(In the case of dvandva compounds) the parts of the compound are simply added together and one part is not limited by the other These compounds denote, therefore, two distinct ideas which are loosely correlated in the compound. The karmadhāraya, on the other hand, are compounds of which one part, usually the first, denotes an attribute of the other (e.g. Grossvater), or stands in apposition to the other (e.g. OE winedrihten, a lord who is a friend). The distinction between the two types is perfectly clear; the karmadhāraya are determinatives in which one part is limited by the other, whilst in the Dvandva class the two parts of the compound are simply correlated. Nevertheless, some authorities such as Storch consider compounds as G. Werwolf as Dvandva, although the majority ... have clearly recognised that these are limiting compounds, and hence karmadhāraya. The compound Werwolf does not mean 'a man and a wolf,' and the relation is not parallel to OLG gisunfader (son and father), but is identical in type with compounds as G. Enigin-

mutter, Prinzregent, Schafbock. In these compounds, which even Storch recognises as determinatives, the semantically dominant idea is expressed by one member and is limited by the other, whilst in the true Dvandva each member has equal value."

However, it is not obvious that this distinction is so "perfectly clear". In the case of queen-mother, for example, do we have a person who is both a queen and a mother with equal weight on each part, or a mother who happens to be a queen? Similarly with prince-consort. Is he a consort who, incidentally, is also a prince, or a prince-and-consort? How is one to decide? Yet for Carr and Henzen (1947:83) these are obviously appositional compounds. Henzen explains thus:

"Der Unterschied dieser 'appositionellen Komposita' (prince-consort, etc.) von den eigentlichen Dvandva -- mag er auch nicht immer so 'perfectly clear' daliegen, wie Carr glaubt -- besteht darin, dass nicht wie bei letztern selbständige Dinge addiert erscheinen. Ein Hosenrock ist ein Rock, der als Ganzes zugleich Hose ist, bzw. eine Hose, die zugleich Rock ist, das echte Dvandva Hemd hose ist jedoch an sich weder eine Hose noch ein Hemd, sondern eben eine 'Combinaison'. A. Tobler würde hier von eine Summe, dort von einem Produkt reden."

But this does not appear to allow us to progress at all. We still do not know why queen-mother or prince-consort should be a product rather than a sum.

The problem is further complicated by the fact that, as Jespersen distinguished between copulative and appositional compounds, so we can distinguish between either of these and a third type (this was pointed out to me by John Anderson). In the case of the copulative compound we had the two halves listed to designate the whole; the sum was a new unit, larger than either of the two previous units. In the appositional group, the total was a hyponym of the head: a maître-coiffeur is a type of coiffeur, a maid servant is a type of servant. But whilst a maître-coiffeur is only a maître qua coiffeur (he is not a maître as a husband, say, or a schoolteacher) a maid servant is both a maid and a servant all the time: she is not only a maid qua servant. Similarly, to take a French example, a boucher-charcutier is a boucher all the time, and he is a charcutier all the time. The listed parts are two facets of the same item. Yet, unlike the case we found with copulative compounds, we are not given an exhaustive list of the parts; the total compound is not a new unit larger than either of the listed elements, rather it is a hyponym of both elements from which it is made up. This is where it differs from maître-coiffeur which is a hyponym only of coiffeur.

It seems to be the case that this new type is a sub-type of appositional compound. We can distinguish between the sub-types with the labels simultaneous appositional where the compound is a hyponym of both elements (boucher-charcutier) and non-simultaneous appositional where the compound is only a hyponym of one element (maitre-coiffeur).

In retrospect we can now see that the Venn diagrams at the head of this section show the dvandva (copulative) and simultaneous appositional compounds, but not the non-simultaneous appositional. There is in these a degree of modification (as there is in other noun + noun compounds) and this cannot be shown in a ~~diagram~~ of this type.

In fact, of course, it is clear that if we take simultaneous appositional compounds as the primary group and use this definition of being a hyponym of both elements instead of that offered by Carr, and then say that a dvandva must be the sum of its parts but must not fit the criterion for simultaneous appositional compounds, we are going to have very few cases of genuine dvandva compounds at all: the geographical names will be one of the few groups to be found. In English there are very few of these, since the first element rather tends to be replaced by an allomorph ending in -o. Thus while German has Oesterreich-Ungarn, English has Austro-Hungary. These compounds are also rare

in French and Danish, but they are fairly common in Japanese (McCawley, 1971:32/3), and Bengali, for example.

Generally, it is suggested in the literature that compound adjectives like bitter-sweet are dvandvas. But these are not a true addition of the parts, but a hyponym of both elements again. Noreen (1906:382) calls this type adversativa in contrast with dvandva or kopulativa. He also separates out forms like blå-gul as a separate category, divisiva because they have a semantic structure 'partly ... partly'. This contrasts with Rohrer's view reported above. So it would seem that dvandvas are rather rarer than has been thought.

There is a point about true dvandvas which suggests, in any case, that they are not generated in the same free way as other compounds, but rather accepted as lexical items: the order of the elements, though logically not limited by the form of the compound, is firmly fixed. *Holstein-Schleswig or *Lorraine-Alsace are unacceptable, though they would denote exactly the same areas as the forms found. This seems to tie in with the fact that most dvandvas are either names or semi-names which might have arisen through the deletion of the word and: Rank-Xerox, vodka-Martini, whisky-soda, Shell-BP and in Danish øllebød, saftevand,

smørrebrød, in French Schweppes-citron.

3.1.2 Hatcher (1952:4, 10) also includes species-genus compounds like pumice stone, elm tree, poodle dog, tuna fish as appositional compounds, but these do not fit our double hyponymy definition: a tuna fish is a type of fish, but it is not a type of tuna. These tautological compounds are rather synonymous with the first element: the second element gives no further information unless used contrastively. It is not clear whether these should be grouped with appositional compounds or not; if they should it would have to be as non-simultaneous ones, unless we assume that an item can be a hyponym of itself, which is an extension of the usual meaning of the term; then this type might be considered to be simultaneous appositional compounds.

Although she apparently accepts Jespersen's definition of an appositional compound, and does not give any wider definition herself, Hatcher (op.cit) includes a lot of words in her discussion which do not seem to fit this definition. A chrysalis stage, for example, is not a chrysalis and a stage, "the two combined in one individual," as Jespersen's definition would require. Still less does it fit our double hyponymy definition. And whilst one can see what

she is getting at by including scalpel wit, lightning decisions under appositional compounds in that a metaphor is present and one is, in some sense, saying that the wit is a scalpel, the decisions are lightning, the presence of the concept of metaphor is crucial, and the more traditional view of these as similial constructions with a deleted 'like' is much more satisfactory, particularly when one considers examples like Hatcher's bread-and-butter kiss: any generative model in particular will have a much simpler deep structure if it considers these to be derived as similes. Hatcher, then, seems to include far too much under the heading of appositional compound.

3.2 THE HIP FEATURE.

3.2.1 There are two readings for the copula in English: one which is limited to the present (or to the time defined by an adverbial modifier) and one which we can call the inherent, permanent or habitual reading which is not so limited. We can exemplify the first of these readings with

1. He is angry

which is read as 'now' unless a modifier such as 'every Friday when he lectures in Linguistics' is added, and the second with

2. An elephant is big

which shows an inherent state. We must point out that this is not a feature of the adjective, since a sentence like

3. Humpty Dumpty was grumpy

has the second reading unless a restricting context is added, nor is it entirely a matter of the form of the subject NP in the above sentences, although this can have some bearing (see below, §3.2.2). In Spanish the two copulas ser and estar show this difference, and a similar phenomenon of two copulas is found in Portuguese and Manx. We shall return to this point later.

Now, if we consider a series of adjective + noun compounds like madman, blackbird, gentleman we can see that the relationship between the two elements is the same as that expressed by the second reading of the copula, not the first. That we are dealing with the habitual/inherent/

permanent reading is easily seen if we consider the following sentences which would have to be synonymous if this were not the case:

4. The man is mad at the moment, but he'll get better

5. *He's a madman at the moment, but he'll get better

which is less acceptable than the at first sight stronger

6. ?He's a raving lunatic at the moment, but he'll get better.

(Some speakers accept (5), but they appear to do so because they interpret it as 'he's acting as though he were a madman ...' and not at face value. This shows an interesting tendency, but one which is irrelevant to our discussion, to impose an interpretation upon an utterance whenever possible, even when it means adding to or ruling out information provided in the utterance.) That the man is mad and the madman are not fully synonymous can further be seen by the non-analytic quality of the result of applying Quine's biconditional test (Quine, 1960:65):

7. John is mad if and only if John is a madman.

This distinction would appear to be what Brekle (1970:31) is getting at when he says:

"So kommt z.B. beim Typ madman in Vergleich zu der syntaktischen Gruppe mad man regelmässig das Merkmal 'Habituell' als Prädikat dem jeweiligen determinans-Glied zu."

We should note that this semantic distinction between

compounds and the corresponding syntactic phrase is an argument against the derivation provided by Lees (1960: 128ff) where the compound is derived from the syntactic phrase, or, in fact, against any model which derives compounds from tensed sentences, if one accepts the ruling that transformations cannot change meaning.

3.2.2 If we consider a sentence like

8. Men are (male chauvinist) pigs

we see that we have the habitual/inherent/permanent reading of the copula occurring, and if we translate this sentence into Spanish, we have to use ser. Yet the occurrence here is not exactly the same as it has been in the other cases we have considered, firstly because we here have a noun after the copula and not an adjective, and secondly because (8) fits in to a series of sentences like

9. Elephants eat peanuts

10. Cats climb trees

11. Men in the peak of condition think nothing of a two mile run before breakfast

and so on. This is what has normally been termed genericness (see Chafe, 1970:189; Chomsky, 1972:89; etc.). Apart from the fact that we have, up to now, been dealing with the copula only, and that genericness appears most often with verbs

other than the copula, these seem, on the surface, to be part and parcel of the same phenomenon, particularly as Chafe (loc.cit) argues convincingly that, on grounds of simplicity, genericness must be explained in the model as a feature of the verb and that

"a nondefinite noun is generic if it accompanies a generic verb, but non-generic otherwise."

Yet even if this is true, and it seems rather to go against the intuitions of most native speakers if it is, it does not mean that genericness is to be confused with habituality/inherence/permanence, which does not require any particular form of the noun phrase. In fact we shall conclude that habituality/inherence/permanence is purely a feature of the verb (see §4.1.2). This being the case, sentence (2) should perhaps be replaced by

2a. This elephant is big

which has an inherent reading without a generic one, so as to avoid any confusion.

We shall not discuss whether we should make any distinction between habitual, inherent and permanent in this context. The use of one rather than the other appears to depend largely on the lexical items in any sentence. Obviously, we can distinguish at surface level between

- 12. He is habitually lazy
- 13. He is inherently lazy
- 14. He is permanently lazy

but this is not to say, if we may for a moment, foresee the results of our investigation, that the aspectual marker underlying them is separate in the three cases.

The three seem to be able to co-occur with the same elements: they seem to be paradigmatically related. For the sake of brevity in what follows we shall often quote this habitual/inherent/permanent feature simply as INHERENT in block letters and the appropriate part of speech, or HIP when we require a shorter term still in features on a verb, etc..

3.2.3 Bolinger (1967) points out that there are a number of adjectives which change their meaning depending on their position in the NP with regard to the noun. Thus, for most speakers, when read with unmarked intonation,

- 15. The responsible man
- is by no means the same as
- 16. The man responsible.

The proviso about unmarked intonation applies throughout this section, as intonation can overrule the information

provided in the syntax. Of course, this phenomenon is not restricted to the case in hand, and will have to be dealt with elsewhere in the grammar, anyway, although it is not clear how this is to be done. Thus an interrogative form like

17. Will you open the door?

can be turned into a command by the use of intonation, or a declarative form like

18. He came yesterday

turned into a question in a similar way. It is for this reason that we shall not deal with this problem any more fully here.

Returning to adjective position and its influence on meaning we might quote further examples like

19. The only apparent mistake

20. The only mistake apparent.

Here there is a distinct semantic shift, apparently due to the position of the adjective, between 'seeming' and 'obvious'. However, there is also a group of adjectives which, though they do not change their meaning to this extent when they change their position with regard to the noun, do have a slightly different semantic value.

Bolinger quotes cases like

21. The only river navigable

which, he says, implies at a given time (the present unless

otherwise specified) as against

22. The only navigable river where the river is seen as INHERENTLY navigable. We can find proof of this in the oddness of

23. The only navigable river in January.

If we consider examples (15), (16), (19), (20) in the light of this, we can see that, whatever other semantic shifts may be going on at the same time, this one is present as well. Bolinger describes this state of affairs by saying that before such adjectives may be preposed, they have to be germane with the noun in question. We can describe it in terms of INHERENCE.²

The importance of this is that we appear to have the same semantic limitation occurring both in compounding and in the preposing of adjectives of the navigable class, a class which includes possible, soluble, passable, named, ready, etc..

² To say that preposing results in or is a result of marking for INHERENCE is something of a simplification, though it is a sufficient statement for our purposes. However, if we consider

a) I saw the nude woman

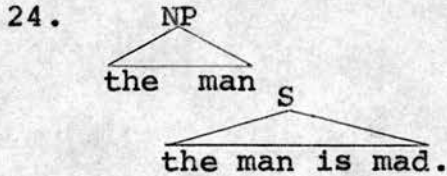
b) I saw the woman nude

we can see that a) is unmarked for INHERENCE while b) is marked as NON-INHERENT. The true state of affairs, then, would seem rather to be a three point scale, or possibly a cline,

INHERENT |—————| NON-INHERENT
 UNMARKED

such that preposing moves the reading one to the left on the scale.

3.2.4 The traditional transformational approach to adjectives has been to generate them from the appropriate embedded predicative sentence (see, for example, Chomsky, 1957:72, Jacobs & Rosenbaum, 1968:211, etc.) so that the mad man is derived from



This is also the way in which Lees (1960:126) wants to derive adjective + noun compounds, an approach we have criticised above since (4) and (5) would have to be synonymous if this solution were to be accepted. If we consider restrictive relative clauses of this type we find that the majority of them are not specified as to the INHERENT or NON-INHERENT reading of the copula. Thus

25. The only river which is navigable
is a neutralisation of (21) and (22), and

26. The man who is responsible
is a neutralisation of (15) and (16) as can be seen by
completing it with either (26a) or (26b):

26a. ...is the one who pulled the trigger

26b. ...is the one who looks after his family.

Although the facts are slightly less clear in the case of non-restrictive relative clauses, it seems that they are unspecified in the same way. Consider

27a. Fred, who is responsible, only directed Joe
to pull the trigger

27b. Fred, who is responsible, is always here on time.

In the few cases where it is not true that both the INHERENT and the NON-INHERENT readings are applicable to the relative clause, both the restrictive and non-restrictive relatives are governed by the generalisation. Thus

28. The mistake which is apparent....

29. The mistake, which is apparent,

are both related to (20), the NON-INHERENT reading, rather than (19). Ready is another adjective which works in the same way, and one would seem to be able to make the generalisation that when only one of the readings is possible in the relative clause, it is the NON-INHERENT reading which obtains.

If relative clauses are either unspecified for INHERENCE or NON-INHERENT, and compounds are always INHERENT, then this is another reason for not deriving compounds from underlying relatives, or embedded sentences.

3.2.5 There is some evidence, even apart from that mentioned in the last paragraph, that the NON-INHERENT reading is the unmarked one: semantically the NON-

INHERENT reading may be said to include the INHERENT one in that there is a relationship of unilateral implication between them.

It is also the case that, to a certain extent at least, context determines the reading of the verb which obtains. If, for example, one were visiting a hospital, and were told by the doctor acting as a guide

30. This is ward six; the men in here are mad
one would probably take the INHERENT reading; but if the whole scene were shifted to the local school, and one were told

31. This is class six; the kids in here are mad
the NON-INHERENT reading would apply. In the same way different readings apply in the second half of

32. I've just poured ink over it so

33. You must be colour-blind! It's not brown;

} the

bird is black.

And unless one knows Joe, (34) is ambiguous:

34. Don't ask Joe: he's grumpy.

3.2.6 The argumentation above has been based entirely on English and entirely on adjective + noun compounds. We have therefore two problems: we have to know whether this

argumentation can be extended to other languages, and we have to know whether it can be extended to other syntactic configurations.

At first glance the derivation would not appear to be applicable to Danish, because despite the claims for a distinction between rød vin and rødvin made by Koefoed (1958:§601) on the grounds that the compound means a particular type of red wine, namely claret, the two appear to be used interchangeably in the modern language. Unlike the examples like Stormand quoted by Mikkelsen (1897:§37) and others there is here no change of meaning connected with the change to compound status. Examples of this kind are rare, but they do occur.

However, we find in this case that there is a syntactic difference. We can say

35. Rødvinen er lilla

but not

36. Den røde vin er lilla.

The co-occurrence of an incompatible adjective is only permissible in the case of the compound. We can compare this with the situation in English, where an albino could be

37. A white blackbird

but never

38. *A white black bird

or French where

39. Une chaise longue courte

40. Un énorme petit pain

41. Du vinaigre doux

42. Un petit grand homme

are all acceptable. It seems to be the case that the first element of a compound is no longer just an extra information carrier, but an inherent part of the object being described, to the extent that it cannot be ruled out of the information content even by an overt contradiction. We shall return to this point again in §3.4.4. For the moment we shall merely point out that once more we are talking in terms of a marking for INHERENCE.

It is easier to show that noun + noun compounds also have some such feature. If we consider words like postman, coalman we see that the men have a habitual, permanent relationship to the item they deliver: one does not become a coalman by delivering a single load of coal to one's own home. A wall map is inherently designed to go on a wall, a fire engine is inherently and habitually used for helping when there is a fire, and so on. Of course, there are problems.

43. I was only a postman for one day
is a perfectly acceptable sentence, but this is because the word, which happens to be a compound, is the name of a

profession. It is perhaps difficult to see why there should be any idea of inherence, habituality or permanence in car thief, particularly if we are dealing with a first offence! We seem to have a case of a lexically (or sociologically) condoned generalisation from a single event. One might equally well ask if a person is a thief after stealing one object.

The same INHERENCE link can be shown for Danish, *mutatis mutandis*, and for French, where we find examples like videnskabsmand and homme-orchestre respectively. So we find Barbaud (1971:90) telling us that the transformation which creates a compound in French

"est une opération qui 'présuppose' au départ que le terme déterminant soit interprété comme étant une qualité ou une propriété 'inhérente' au terme déterminé."

We shall return to this to explain why it should be in §3.4.4.

It is interesting to note, in conclusion, that Landmark (1969:201) points to a similar phenomenon in adjectival compounding in Norwegian:

"'Bilfull' synes nærmest å uttrykke en tilstand (av biltetthet, sterk trafikk), mens 'full av biler' virker som et öyeblikksbilde av en

situasjon (jfr.: Oslo er en bilfull by
-- det er svært så fullt av biler det var
i gata i dag)"

3.3 LEXICALISATION.

3.3.1 It would seem that one of Lees' biggest mistakes lies in biting off more than he can chew -- or more than is even digestible. We can see this if we consider his lists of the various types of compound, and in particular we shall look at his compounds of the form adjective + noun in his first group: Subject-Predicate. He begins (1960:128) with a résumé of his position:

"We have already decided to take adjectival compounds like MADMAN from prenominal transforms of post-nominal modifier constructions, themselves transforms of relative clause constructions."

In other words, he wants a derivation something like

the man, the man is mad
 the man who is mad
 the man that is mad
 the man mad
 the mad man
 the madman.

If we ignore the problem of INHERENCE, which Lees does not note, this seems fair enough, until we look at the other examples Lees gives of derivations by this means. We shall consider some of these briefly.

If we take just three of Lees' examples, blackmail, easychair and shortbread, it immediately becomes obvious that the derivations Lees gives are not suitable for current English; for while

The mail which is black

The chair which is easy

The bread which is short

are acceptable, they are not paraphrases of the compounds.

The etymology of blackmail is interesting. Originally it was a sum of money you paid to a cattle thief in the borders to stop him taking your cows. Black meant 'illicit' and mail 'coin,' 'revenue.' We still have black in the sense of 'illicit' in black market, blackleg and blacklist but on the whole this sense of the word has died out: one does not find

*He was mixed up in some black transactions

*Lynching is black

though some speakers find

This ship is black

in the sense that it has been 'blackened' by a trade union acceptable, and one certainly does not find mail meaning 'coin'. But it seems likely that at the time when the English were trying to deal with their Scottish attackers (and vice versa) these were acceptable (although the OED lists no example with black in this sense used predicatively),

so that it was quite legitimate for the compound to be formed at the time.

Similarly, if the Danes were to leave home today, as they did in the ninth century, and take over East Anglia and start demanding an annual tribute from the local populace, it is unlikely that it would be called Danegeld (unless harking back to the ninth century invasion) simply because the word geld no longer exists in standard English. It would probably be called Scanditax or DPT (Dane Pacification Tax) instead.

Historical transformational grammar allows the principle that different T-rules apply at different times in the development of a language, and traditional philology tells us that words come into and are lost from the language over time. These two factors should make it fairly clear that there is no a priori reason why a compound formed in the 16th century should be explicable in terms of the same set of rules and the same set of lexical items as explain currently produced compounds. That is, a synchronic grammar may no longer be able to produce compounds which were first generated several hundred years ago and have, as a result of the rules operating at that date, become fixtures in the language.

Easy as in easychair certainly could be used predicatively in the appropriate sense at an earlier period in English, though the OED lists no examples of its being used predicatively and qualifying chair. Here we have a clear case of a lost meaning of one of the elements becoming atrophied in the compound.

Tall story is not one of the compounds listed by Lees (1960:130) since it does not have unity stress, but it would appear otherwise to fit into his framework -- better in fact than highway which he does list and which has been a compound since at least 859 A.D., and for which the OED lists no predicative use of the adjective in the appropriate sense. The OED gives examples of tall applied to stories but in predicative usage for 1846 and 1902. It also lists an example where tall story appears to be a fixed locution for 1897. Yet today, for most if not all speakers,

This story is tall
is unacceptable. The particular meaning of tall involved here seems to have become fossilised, applicable only to stories and orders, or occurring in the phrase

That's a bit tall.

As a final example of the same phenomenon we can take shortbread, which is listed by Lees, and for which the OED lists a predicative usage -- today unacceptable -- as late

as 1888. The phrase or compound short(-)bread first appears in 1801. Evidently, then, the type of derivation provided by Lees was permissible in 1801 when the form was coined, but it is no longer permissible in a synchronic grammar for 1960.

This process applies, of course, not only to compounding, but also to derivation. A few brief examples should suffice to illustrate the point. A president is no longer merely 'one who presides': the total word is made up of more than the sum of its parts. Uhyggelig (eerie, scary, nasty) is no longer the true opposite of hyggelig (cosy, comfortable, pleasant, easy to get on with) in most contexts; illegitimate is no longer the true opposite of legitimate; improper is no longer the true opposite of proper. Dearth no longer has any connection with dear.

3.3.2 The practical conclusion to be drawn from this for a study of the procedures involved in the generation of compounds is that a discussion of compounding should be concerned only with new formations. We have limited our corpus to these as far as possible in Part Two by using two sources: nonce formations and dictionaries of new words.

We agree, then, with Brekle (1973:2) when he says:

"Begreift man ... Komposition als echten grammatischen Prozess, so kommt man zu dem Schluss, dass gerade die 'Augenblickskomposita' die Komposita par excellence sind, die 'festen' Komposita dagegen -- wegen der Idiosynkrasien ihrer semantische Struktur, die eine Auseinanderlegung in eine wörtlichen Paraphrase verbieten, als meist hochgradig lexikalisierte Pseudokomposita anzusehen sind."

This is not to say, of course, that it may not be possible to generate many of the already existing compounds by the same processes as one would use to generate these 'new' compounds. Indeed, one would expect to find that a fair proportion of extant compounds could be generated by exactly these procedures. However, one can never assume that any given extant compound can still be generated by a productive process. In a synchronic study we have first to test the processes to verify that they are still productive. After the event, one can then return to look at established compounds to discover which of them can still be generated by these processes. Compounds which can no longer be generated by the productive processes of the grammar we shall term lexicalised compounds. These compounds, we assume, are

listed in the lexicon like any other lexical item.

Saussure (1915:172) says that

"Mots composés, dérivés, membres de phrase, phrases entières (peuvent très bien être des) locutions toutes faites, auxquelles l'usage interdit de rien changer, même si l'on peut y distinguer, à la réflexion, des parties significatives."

These, he says, belong to langue rather than to parole. He is saying the same as we are, but differently phrased and in a wider context. If we accept this statement of Saussure's -- and it seems a very fair statement, and one which reflects our point of view here -- we have more or less come round to Weinreich's point of view (1963:145, see above §2.3.2) that idioms and compounds are dealt with by the grammar in essentially the same way. The difference is that while Weinreich concludes from this that compounds are idioms, we are merely claiming that lexicalised compounds, like idioms, have to be listed in the lexicon and cannot be generated.

Our solution has an intuitively satisfying result in that it appears to mirror actual language use. Many compounds undergo either phonetic or semantic modification in the course of their life, and thus cease to be transparent. We might consider French aubépine from Latin alba

spina, English waistcoat which for a time became /weskit/, German Nachbar from nächgebür and Danish faster from Old Norse fǫður-systir. On the semantic side we can consider the compounds discussed in detail above. The point at which a compound becomes opaque (German verdunkelt) may well be related to the point at which it becomes lexicalised in our sense of the term.

However, even this view may be too generous to the transformationalists, for, if one is to judge by performance, native speakers of a language seem to lexicalise compounds before this point. In order for a compound to undergo a phonetic change by which it loses its transparency, or to remain in the language after one of its elements has ceased to be an identifiably independent word of the language (aubépine and blackmail respectively), it must have become lexicalised before this point. In other words, although a phonetic change might be the first sign we have that a compound has become lexicalised, it must, in fact, have been lexicalised for some time and be accepted as a lexical item in its own right for the phonetic change to take place. Thus it is that compounds which are familiar to a speaker are never analysed. Few English speakers would seem to be consciously aware of a hedgehog as 'a pig which lives in hedges'. This has received further confirmation in the course of our study by native speakers' reactions to Danish

compounds: several Danes mentioned spontaneously that they had not realised for a very long time that a word like farmor meant the mother of one's father, accepting it merely as a name for an individual, or said, when presented with a ~~f~~amiliar compound, that they did not usually analyse it into its constituent parts, knowing the meaning as a whole, although they could provide such an analysis to explain the word to a foreigner.

Furthermore, this explains the great amount of stress put on unity of idea in discussions of compounding. Bally (1932:94) provides a typical example:

"Nous appelons composé un syntagme virtuel caractérisé qui désigne, en la motivant, une idée unique."

Söderbergh (1968:6) remarks that

"Orden bostad, handduk, riksdag och värnplikt ser vi som helheter, även om vi vid närmare eftertanke kan analysera dem i deras beståndsdelar."

Rohrer (1967:§1.2.2) notes the point of the unity of idea in a compound, but passes over it, stating that

"Für den Sprecher von heute ist Bahnhof ein einfaches Wort, wie die Neubildung Omnibusbahnhof und nicht Omnibushof zeigt."

The assumption in this sentence might perhaps be queried,

but the statement that Bahnhof is a single word is categorically made, and would doubtless find support from most Germans. This also explains Householder's (1962:343/4) complaint in his review of Lees (1960) that

"The vast majority of the compounds discussed by Lees are in fact lexemes or idioms, i.e. items learned as a whole by the native speaker and never consciously analyzed."

However, there would appear to be many compounds which are never consciously analysed by the native speaker and yet can be generated by the rules of the synchronic grammar: many well established compounds in still productive series would fall into this category. We have already reserved the term lexicalised for those compounds which the grammar cannot generate; for this other group of compounds which can be generated by the grammar, but which are generally felt as having one precise meaning and as being "one word", we shall use the term received or frozen, the latter term being taken from Gleitman & Gleitman (1970:90).

A frozen compound can occasionally be "thawed out" for explanatory purposes. Thus we find conversations like the actually recorded one reproduced below:

- Do we have a cake-tin?
- Yes, under the table in the corner.

-- No, I don't mean a tin for keeping cakes
in, I mean a tin for making them in.

Lexicalised compounds cannot always be so satisfactorily explained in this way. Mousehunt can, it is true, be explained as a man who hunts mice or a hunter of mice (in which case the lexeme has been changed) and pickpocket as a man who picks pockets; but if we return to our original example, blackmail cannot be explained in terms of the lexical items it itself contains unless one first glosses the lexical items. For this reason we cannot agree with the viewpoint taken by Giurescu (1970:§2.1) when she says

"Sul piano sincronico, troviamo parole del tipo:

rom. floarea-soare^ul_i
fr. chien-loup
it. boccadilupo

che fanno parte anch'esse dalla struttura profonda del romeno, francese o italiano, che vengono considerati da noi come i composti veri e propri indifferentemente dell'epoca quando furono conati, se i loro elementi componenti continuano ad esistere in modo indipendente."

Even with this final conditional, Giurescu cannot account for non-productive patterns whose elements are recognisable, such as mousehunt, pickpocket and even blackmail, and so she loses an important distinction.

There appears to be no clear way of deciding at what stage an item becomes frozen or even lexicalised, since usage varies throughout a speech community and since we are dealing with psychological imponderables here. However, it does seem fair to say that the majority of compounds dealt with in the literature are at least frozen (see §2.1.2). This makes a difference to the semantic criteria for a compound discussed in the literature, since the compound, once frozen, comes to be the name for a particular (type of) object which has characteristics other than those spelt out in the compound: this would seem to account very largely for claims that a compound contains semantically more than the sum of its elements (see §2.2.3). We shall be returning to this point below (§3.4.4).

3.3.3 We have here developed a concept of lexicalisation which could have far-reaching implications in all parts of linguistic theory, not merely in the field of word-formation. Yet the possibility of such a concept appears to have been almost entirely overlooked, particularly outside word-formation, possibly because its implications contradict some of the assumptions implicitly made in most of the writings on, for example, Generative Semantics and Generative Phonology.

To summarise our claims about lexicalisation, we have argued that derivations which are historically justified may no longer be justified in a contemporary synchronic grammar because of changes through time in the grammar and/or the lexicon. Items derived by rules which have become invalid for whatever reason should rather, in a contemporary synchronic grammar, be listed in the lexicon, i.e. marked as exceptions to synchronic rules.

We shall illustrate this by looking at Generative Phonology. In Generative Phonology the search for rules which will account for all morpho-phonemic variations has led in many cases (usually, it is claimed, purely coincidentally) to a reproduction of historical processes: the phonetic history of the formatives is implicit in the synchronic rules for generating the correct phonetic surface realisation in a significantly large number of cases. The implication is that any speaker who is aware that morpho-phonemic variation provides a phonetic variant of the same formative, who knows, for example, that divine and divinity are related words, must use the rules which happen to reflect the history of the language. Yet these processes are not always synchronically productive, as can be seen in two ways. Firstly, loan words often have forms which would not be possible if the rules were still productive. This is particularly noticeable in botanical Latin

(this was pointed out to me by Roger Lass, personal communication). Secondly we have the evidence (although it is not clear exactly how much weight can be given to this) of the experiments carried out by Ohala (1973). Ohala asked his subjects to pronounce non-existent derivations from known words. Some of these gave rise to forms in which, if the independent phonological rules of Chomsky & Halle (1968) were available to speakers, one would predict phonological changes (vowel laxing, vowel tensing, s-voicing, velar softening, etc.) to have taken place. The result was that, by and large, these predicted phonological changes were not observed. Ohala (op.cit: 12b) concludes from his results that

"Only in the minority of cases is there the possibility that phonetic mutation of the stem in derivations is due to the application of independent phonological rules." (My stress. LJB.)

Instead Ohala suggests that "one of the prime determinants of phonological creativity" is analogy, and that pairs such as divine, divinity; critic, criticise; etc. are listed in the lexicon. He says (op.cit:12):

"I doubt that the addition of those derived forms which involve a phonetic change in the stem would increase this number (of basic vocabulary items excluding derived forms) by very much --

certainly not an order of magnitude."

That these items should be listed separately in the lexicon is exactly what we would predict from the concept of lexicalisation we have provided.

There is, in fact, a division here between two opposing views of what a linguistic theory is. The first view, held by Chomsky in his earlier writings, and by Chomsky & Halle (1968), is that a linguistic theory should provide no more than a model, and need not make any claims about that model, specifically no psychological claims. If the model works then it has ipso facto provided a valid linguistic theory. The other view, held by Ohala, is that a linguistic theory is only valid insofar as it is a psychologically (i.e. empirically) justifiable model. Obviously this statement is a simplification and gives only the extreme views on either side. Equally obviously, the two approaches are not always kept completely separate, and indeed much of the criticism that has been levelled against Chomsky and transformational linguistics becomes invalid if this dichotomy is upheld, even though the linguists themselves may not have been aware of the dichotomy. Also, it is clear that once a model of the first type is set up, it is of great interest to try and test it empirically to see if it is also a model of the second type, and that any psychological verification that may be found -- although

in our present state of ignorance on how to elicit underlying structures from informants this is not likely to be any large amount -- will be seen as adding to the kudos of a model of the first type. It is for these reasons that the two views of linguistic theory have become so embroiled in each other. Occasionally, however, it is important to ask oneself to what extent one is dealing with the first view, and to what extent with the second.

If we take a concrete example we can see the implications of this. The Generative Semantics school is committed to a policy of lexical decomposition; the Chomskyan school is equally committed to a lexicalist policy. This means that while Generative Semanticists have to derive hunter, shooter, superintendent, inspector, president and presumably author, poet, etc. from an underlying form of 'person who --s', Chomskyans have to list all these as separate items. Either model will work, so both are presumably sufficient for a model of the first type.

However, in this particular case, we have some semantic evidence to consider as well: an inspector is a person who inspects in the term fruit inspector, but not in the term police inspector. In the latter, inspector is much more a statement of rank than of activity. Similarly with superintendent, and in the case of president, one rarely considers

president to mean 'person who presides'. It seems unlikely, then, that the Generative Semantics approach can, in this instance, be completely justified from a psychological point of view. On the other hand, the Chomskyan formulation will lose the generalisation that almost any verb which takes an agentive subject can be turned into a nominal of this kind quite productively. Having coined the verb to napalm from the noun, we can quite easily create a new term and say of someone that

He has been voted best napalmer of 1969.

So it seems unlikely that the Chomskyan position can be fully justified psychologically. The position that seems most likely to be psychologically justifiable is a compromise one where some of the terms (president, inspector = rank) are listed in the lexicon, and others are generated in a productive system. This is the system we are proposing here for compounds as well.

It may be that this concept of lexicalisation has implications for syntax as well, but this seems to be far more problematical.

3.3.4 On a much more practical level, it should be noted that this concept of lexicalisation frees us very

largely from the restrictions imposed by the "exceptions" to generalisations we mentioned in Chapter II. Irregular plurals or genders of lexicalised compounds no longer have to be explained by the synchronic grammar: the various historical accidents that caused these apparent aberrations are no doubt of great interest, and deserve more study than they have so far had, but they have no part in a generative grammar for the present day. Although the concept of lexicalisation has occasionally, though very rarely, been brought up by other workers in the field (e.g. Briegleb, 1935:7; Brekle, 1973:1) its full value in a synchronic description of the language seems never to have been appreciated. As far as we are concerned here, it means that if applied only to nonce formations (and possibly frozen compounds, too) a definition of a compound as a morphologically complex unit composed of two or more lexemes and showing phonological and morphological isolation is a much better definition than we were willing to allow above (§2.3.3) when we were considering lexicalised examples as well.

3.4 STRUCTURAL AMBIGUITY.

3.4.1 Lees (1960) finds himself rather out of his depth on several occasions when he realises that there is apparently more than one deep structure permissible in his grammar for some compounds. Thus, for example, he says (op.cit: 122) that

"It will happen then that different speakers will interpret certain compounds, in their ordinary use, as having some grammatical analysis other than the one we shall give them. Far from being an anomaly or a defect, this phenomenon is to be greeted as is any 'exception which proves the rule'."

Later (ibid:143), whilst considering his group of Subject-Object compounds, he points out that the verb in these compounds has been deleted. He suggests that a very small number of causative verbs might make up the paradigm of deletable verbs, but concludes that

"Unfortunately, however, it seems quite unlikely that all the members of one large, productive class of subject-object compounds can be so treated in terms of just a few specified verbs."

The implication, then, is that we have a series of verbs being deleted which do not fit neatly into any paradigm.

Vendler (1968:92) makes a similar point, but claims that the co-occurrence of the nouns in question defines a fairly limited set of verbs:

"Take the compound noun: milkman. Its analysis can be represented as follows:

milkman -- man	sells	milk
	delivers	
	handles	
	&c	

Here, again, if the co-occurrence of two nouns fails to pick out relevant verbs the compound becomes incomprehensible: milkplanet, fatherman. The intelligibility of milkcow, fireman, on the other hand, is clearly due to the availability of fairly narrow verb-classes."

There are two points to be made about this. First of all, we can contest Vendler's statement that milkplanet and fatherman are incomprehensible. Milkplanet could mean a planet which in some way resembles milk, or a planet on which milk is habitually drunk, or a planet which produces a lot of milk for export (with certain provisos about such definitions made below, §3.4.4) and the literal equivalent of fatherman actually exists in Danish as a term of endearment. Secondly, Vendler is still left with a non-decidable deep structure in so far as he cannot non-arbitrarily decide which of his list of verbs is being used.

We might add, parenthetically, that fairly narrow verb-classes are only available because we already know what the words mean: in Ray Bradbury's Fahrenheit 451, 'firemen' are people who light fires.

Lees (1970a) suggests on the basis of criticisms made by Rohrer (1966) of his use of the term 'subject', that a Fillmorean framework, in which there is no underlying subject, might provide a better solution to the problem of compounding than he was able to do earlier. On this point, however, the Fillmorean grammar is just as weak as Lees' is. If we look at Lees' (1960:143) example of police dog, which he says might be either dog which serves the police or dog which the police use, we find in a Fillmorean grammar the same ambiguities arising, and, in fact, the two sentences would require different case frames (unlike Vendler's example of milkman).

We have already (§§2.4.3, 2.4.4) pointed out some of the difficulties which can arise when a model of compounding has a non-recoverable deep structure. This is exactly what we have here, and we can trace the root of the matter back to Lees' decision (1960:117) to derive some compounds from NVN sentences. On the other hand, it is not easy to see what other solution is open to him. His reasons for proposing a verb in the underlying structure -- that it is

the only way to account for precisely the semantic variation we find occurring -- appear to be cogent. Furthermore, he has to have a certain area of indecision to allow for the various possible interpretations of a compound like snake poison which, as he points out (op.cit:122/3), might be the venom from a snake's glands, or poison laid to kill snakes.³ We shall return to this point later in this section.

Nonetheless, we cannot totally ignore Householder's comment (1962:344) on Lees' statement (quoted above) that "this phenomenon is to be greeted as is any 'exception which proves the rule'":

"I am afraid I cannot share his attitude.

I think that this fact casts doubts on the whole procedure",

or Rohrer's (1966:165) claim that Lees'

"Regel zur Eliderung des transitiven Verbes in den Komposita vom Typ Subjekt-Objekt ist folglich falsch und muss neu formuliert werden."

Certainly this problem provides a major stumbling block to

³ This interpretation, which is theoretically possible, might well be blocked because of the dominance of the received interpretation. This does not affect the validity of the general point.

extant theories of compounding, particularly in the light of Fiengo & Lasnik's (1972) non-squib which summarises the current feeling in linguistics that there is no such thing as non-recoverable deletion in syntax. While this point had not received any particular stress at the time Lees was writing it now seems very likely that a non-recoverable deep structure is not permissible in the framework of a generative grammar, if for no other reason than that it leads to a non-decidable system. We shall return to this point in Part Two, when we shall suggest a solution to it.

3.4.2 As we mentioned in the last paragraph in relation to Lees' example of snake poison, there is a certain amount of ambiguity inherent in compounds. We can illustrate this from the following lists of Danish and English compounds:

gast~~a~~nder, cigart~~a~~nder, lommet~~a~~nder, lynt~~a~~nder
 gaslighter, firelighter, petrol lighter.

In each case the first compound is ambiguous, and can either signify an instrument with which one lights the gas⁴, or an

⁴ Although this meaning is apparently no longer current in Danish.

instrument which functions by gas and lights other things, or, conceivably, a person who lights the gas, provided this is his normal occupation. In the second compound in the lists the first element is, in each case, the item which is lit by the lighter (which is normally understood to be inanimate, but there is no reason to suppose that an animate interpretation is impossible). In lommelænder, the first element shows the place where the lighter is kept (with implications of miniature size), and a lyntænder is an instrument which lights with the speed of a flash of lightning. What formal indications have we that these different logical connections hold between the two elements of the different compounds? The answer is: none. One can invent a context where a different interpretation would have to be applied. Consider:

Zeus was very annoyed that he could not throw his thunderbolts on that particular day, but he knew that if he himself lit the blue touchpaper he would have an immediate demarcation dispute on his hands and all of Hephaestus' minions would stage a walk-out. Men lyntænderen var på ferie, og det var der ikke noget, han kunne sige til.

Or alternatively:

Bill Sykes had invented a new way of stealing.

"It's very simple," he explained. "You use fire."

You set fire to their pockets with this special machine, and all the money falls out. They are so worried about being on fire that they hardly notice. Lommetanderen bliver meget praktisk." He tried out his invention, and was very successful. The guineas rolled in. Politiet ville fange lommetanderen, inden han brændte nogen alvorligt.

This illustrates one of the most interesting facets of the compound. It appears to be a surface neutralisation of a number of different logical/semantic/underlying representations. The result of this is that any given compound is structurally ambiguous. Lees (1960:117) points this out with reference to the pair flour mill and windmill, Rohrer (1967:§1.3) with reference to call girl and cry baby. Similarly, most of the compounds in English that end in -trap indicate an apparatus for catching the creature mentioned in the first element: mantrap, badger trap, heffalump trap. But the title of the Women's Lib book The Baby Trap is not intended to indicate an apparatus for catching babies, but rather a trap which is best symbolised by a baby.

It is not the case, as might at first glance appear to be true, that the different possible interpretations here are parallel to the different interpretations given to

the arguments in

The key opened the door

John opened the door.

The different interpretations assigned to the subject NPs in these sentences can be explained in terms of Fillmorean cases. Similarly, it might appear, the difference between the two readings of lyntander can be explained by the case allocation of the elements. While it is true that the cases present must be different in the two interpretations, there is a further point which distinguishes this difference from the one in the 'opened the door' sentences. It is the presence of the verb in the sentential examples, since the explicit verb automatically limits the cases possible: with OPEN and two arguments the subject NP must be either Agentive or Instrumental, and since Agents are "typically animate" and Instruments "inanimate" (Fillmore, 1968:24) only one interpretation is possible in each sentence. This is not true for the compounds, although we shall see later (§4.5.3) that there is some limitation which can be applied.

Let us now consider the following verse by Rasmussen (1964:74):

Alle anemonemænd
 med stilk og blomsterkrone
 har en lille sød og venlig
 anemonekone.

Når de drikker morgendugg
 med deres grønne tunger,
 får de mange tusind frække
 anemoneunger.

De har ingen bukser på.
 Og når de går og fjumser,
 kan man se de våde, bare
 anemonenumser.

How can we explain that when we come across the word anemonekone here, we interpret it as meaning a wife who is an anemone (on the pattern of kineserdreng, *ibid*:52) and not as a wife made from an anemone (cp. uldtrøje), a wife who resembles an anemone, possibly in her beauty (cp. lyntænder), a wife who lives on an anemone (cp. karruselmakrel, *ibid*:148), a wife who looks after or cultivates anemones (cp. havemand), a wife who uses anemones as part of her job (cp. tømmermand) or a wife who sells anemones (cp. mælke-mand)? There appear to be two factors at play here which we shall consider separately: the lexical items involved, and the context in which the word occurs.

It is probably fairly obvious in some intuitive way that some nouns express basic relationships or states of various kinds: they are paradigm instances of a particular state or relationship. Thus the nouns time and place are

virtually unmarked forms showing location, man is minimally marked for human being, thing for an object, and so on. It would seem to be the case that this notion can be extended somewhat so as to include other, more marked, nouns. Building, for example, tends to express some kind of location, machine is a more sophisticated object, etc.. This is the type of information which one might expect to find reflected in a componential analysis of the vocabulary, or which a case grammar might use.

Of course, as stated this is too simplistic. The word building refers to an object as well as to a location, even in a sentence like

Is there a doctor in the building?

Similarly, in the sentence

The oil in the machine lets it run smoothly
machine is a location as well as an object.

What we would seem to be dealing with here is something connected with the semantic make-up of the lexical items. We know, because of the very nature of the articles denoted by the words, that a building is an object in which one might find people, and we know that doctors are people. We know that a machine is an object which is likely to contain oil but which is not likely to resemble oil. Thus, when we come across a compound like ma chine oil, something in the

nature of the articles allows us to make a hypothesis that it is likely to be oil which is put into machines rather than oil which resembles machines (contrast with needle fish or jelly fish and gold finch). In this hypothesising we are aided by the knowledge that, for English or Danish, it is the second element that is the head of the construction and that the whole is a hyponym of the second element (see §1.1.3).

Morciniec (1964:96) draws attention to this phenomenon under the title of Sachsteuerung. We find, he points out,

"Keine Formfaktoren, welche die Beziehungsarten 'den man in ... trägt,' 'für,' 'den man am ... trägt,' 'aus' bezeichnen würden. Dennoch sind diese Beziehungsarten nicht willkürlich, es würde niemandem in den Sinn kommen, unter Sommeranzug z.B. einen 'Anzug aus Sommer,' unter Knabenanzug einen 'Anzug, den man im Knaben trägt' usw. zu verstehen. Solche Beziehungsarten lassen die Bedeutungen 'Sommer' und 'Anzug', 'Knaben' und 'Anzug' gar nicht zu."

And later he adds (op.cit:100):

"Es dürfte sichtbar geworden sein, dass die Beziehungsart in erster Linie nicht vom Kontext abhängig ist, sondern durch die bezeichneten Gegenstände, Prozesse, usw.

sachgesteuert wird. Kurz, die Beziehungsart ist das Ergebnis der Sachkenntnis, wird von den bezeichneten Sachen aus gelenkt."

We shall return to this again in the next section.

Sometimes one of the elements can exercise so strong an influence of this type that the sense of the originally intended relationship is washed out, and this fact can be used stylistically to gain (usually a humorous) effect. Consider, for example, the following three examples, the first taken from Politiken, "At tænke sig" (9/10-73), the other two both taken from The Observer (21/10-73), the first from the Sayings of the Week column, the second from John Crosby's column where it is attributed to Alan King:

"Miss Malice forstår ikke, hvad borgmester Wassard kan have imod gadehandlerne, da de jo rent faktisk ikke handler med hans gader."

"I try very carefully to avoid saying the word 'housewife' because I think it is very insulting -- it makes it sound as if a woman is married to a house."

"My wife is a great shopper. One time she went out window shopping and brought back several windows."

In this final example, however, we have our second factor beginning to emerge: the factor of context. Context can be of two kinds (though it is not always easy to draw a clear distinction between them): linguistic and non-linguistic. The linguistic context is easier to illustrate. We can see it operating in the following poem by Rasmussen (1964:90) where the poet deliberately destroys the frozen meaning of the compounds by playing on the structural ambiguity of compounds and creating a linguistic context where only a non-received interpretation is possible:

Rygebordet stod og røg.
 Hostesaften hostede.
 Sygesengen blev så sløj
 og faldt om og pustede.
 Huggeblokken huggede.
 Dikkedaren dikkede.
 Sukkerskålen sukkede.
 Mekanikken nikkede.
 Klodsmajoren tog på klods.
 Slåmaskinen ville slås.
 Og det gamle skrivebord
 skrev et vers til Lillebror.

The non-linguistic context is partly the same as Morciniec's Sachsteuerung (see above), but it can also be deictic. Thus, if one has a money-box beside one's telephone

at home to collect money for calls as the phone is used,
one might well say

I must remember to put some money in the
telephone-box

where the situational context makes it clear to the inter-
locutor that the received sense of telephone-box is not
intended. Lees (1960:117) argues that

"If the well known and dangerous explosive
property of flour dust is (sic) utilized to
power a mill of some sort, we should call
such an installation a 'flour mill' in the
sense of our former windmill. Thus, to
explain these various ways in which compounds
are understood, we cannot simply allude to the
speaker's and hearer's common knowledge of
their material culture."

Yet it would seem that it is precisely this "common
knowledge of ... material culture" to which one is alluding
in the example given by Lees, or possibly, even wider than
this, the common knowledge of possible worlds held by
speaker and hearer.

3.4.3 Before following up the implications of this we shall consider the state of affairs in French. Our examples in the last two paragraphs have all been drawn from English and Danish. We could equally well have drawn them from German, Swedish or Dutch, for the same points hold true in all these (Germanic) languages. In French, however, the situation is not quite the same.

We can see this if we compare the Danish lynlås with its French equivalent (and element-by-element translation) fermeture éclair. In the same way as we saw that lyntænder was multiply ambiguous, we can show that lynlås is. There is nothing inherent in the word to prevent its being used to mean, for example, a lock which is opened by lightning, perhaps under the control of Thor or a wizard. In French, however, such an object could not be a fermeture éclair, but would rather become something like 'une fermeture dont la clé est un éclair.' Or consider the Danish frømand, English frogman, French homme grenouille. The Danish and English words could, on the pattern of mælkemand, milkman, be interpreted as 'a man who sells frogs' given the appropriate context. But this in French would have to be un vendeur de grenouilles whilst homme grenouille is restricted to the swimmer.

This apparent lack of ambiguity in compounds in French seems to suggest that although compounds might exist in French the language cannot or does not exploit them to the same extent that the Germanic languages do. This conclusion is supported intuitively by the relatively low number of compounds there are in French. It is also supported in a negative kind of way by an article by Boyer (1968). In this article, which is on the creation of new words and the puns used by four of the greatest linguistic innovators of modern French literature -- Prévert, Queneau, Boris Vian and Ionesco -- Boyer does not list a single pun relying on the misinterpretation of a compound (compare this with Rasmussen, 1964:90, quoted above). Indeed, most of the examples he gives of lexical creations are derivational rather than composite. So that while there are many examples of the type dékodaker (enlever son kodak), pernoter (boire du pernod), ératépiste (employé de la R.A.T.P.), languistique (science du baiser), there are very few compounds at all, and those we do find are by and large firmly based on existing compounds: for example, we find tord-intestins (for tord-boyaux), adultenapigne (on kidnapping written à la Queneau).

Yet Etiemble (1964:161/2) claims that this ambiguity does exist, at least in the most modern formations:

"On observera ... que rien, le plus souvent, ne permet de préciser le rapport logique des deux mots accolés ... actualité-enquêtes pouvant signifier enquêtes d'actualité, ou sur l'actualité."

But this would appear to be an exception, although it is certainly true that in French compounds, as in Germanic compounds, there is nothing to show the logical/semantic relationship between the two parts. Thus, if we consider bateau mouche, bateau pompe and bateau remorqueur we can see that we have three different logical relationships obtaining between the elements: bateau qui ressemble à une mouche, bateau qui contient une pompe and bateau qui est un remorqueur. It is this type of thing which Barbaud (1971) is referring to when he talks of the "ambiguïté structurale du composé binominal" rather than any ambiguity in a given word, as can be seen when he says (op.cit:75):

"L'ambiguïté de la structure de surface du C(omposé) B(inominal) réside dans le fait qu'il existe un choix de relations susceptibles de s'établir entre le premier et le deuxième terme. Ces diverses relations déterminent chacun une structure profonde distincte."

We must conclude then that while the French compound, like the Germanic one, appears to be a surface neutralisation

of a number of underlying logical/semantic relationships, the state of affairs in French contrasts with that in Germanic in that a given compound in French tends to be interpretable in only one way. That is, it is harder to interpret a French compound in a way which does not coincide with its received interpretation than it is to do this in the Germanic languages: lexicalisation takes a firmer grip in French. Marouzeau (1955:151) goes so far as to imply that only lexicalised (or at least received) compounds can exist in French:

"L'union de deux substantifs demande une consécration de l'usage."

Whilst this is something of an exaggeration, there would seem to be a core of truth in it.

French seems to make up for this lack of ambiguity in other ways, particularly by richer derivational processes and in the use of compound phrases which can be ambiguous in the same way as Germanic compounds: consider, for example, Prévert (1949:165/6):

Dieu est aussi un prêteur sur gage
 un vieil usurier
 il se cache dans une bicoque
 tout en haut de son mont-de-piété
 et il prête à la petite semaine
 au mois au siècle et à l'éternité

et ceux qui redescendent avec un peu d'argent
 en bas dans la vallée le diable les attend
 il leur fauche leur fric
 il leur fout une volée
 et s'en va chantant la pluie et le beau temps.

3.4.4 Given the structural ambiguity of compounds -- particularly in the wider sense in which we have used the term with application to the Germanic languages, but even in the more limited sense in which we have applied it to French -- and given the non-recoverable deep structure which most models seem to provide for compounds, especially cases like police dog (see above, §3.4.1) where the possible deep structures have different case frames or (in a Chomskyan model) a different linear ordering, one might despair of ever finding any way of generalising the relationship which holds between the two elements of a compound. Such despair would, however, be premature, for there is one generalisation to be made.

We have noted (§1.1.3) that an endocentric compound is a hyponym of the head noun. The modifying element in an endocentric nominal compound (in Marchand's terminology, the determinant) is in all cases the primary distinguishing

characteristic of the subgroup defined by the compound. If we consider the example of police dog we can paraphrase this by saying that the most notable feature of the subgroup of dogs with which we are dealing is their connection with the police. Note that this remains true in any of the readings of a structurally ambiguous compound. In the case of lommelander, it makes no difference whether it is something kept in the pocket, a machine for lighting pockets, or a person who lights pockets, the primary defining characteristic is in each case the connection with pockets. We claimed above (§3.4.1) that Vendler's example of milkplanet could mean a planet where milk was drunk or produced. But this would only be the case if this was the primary defining characteristic of such a planet, if, for example, all planets could be divided up according to whether their occupants drank milk or rum, whether they produced milk or beef.

The problem with which we are now faced is how to formalise this feature of compounds. We shall take up this problem in Part Two.

Once we have noted this feature of compounds we are in a position to explain some of the other features which we have been discussing.

First of all, we have said that the determinant is the primary characteristic of the subgroup denoted by the compound, but this is not to deny that the subgroup has other characteristics; rather the contrary in fact. Thus although the primary defining characteristic of a frogman may be his physical resemblance to a frog because of his feet, he has other noteworthy features such as his ability to swim under water, his use of snorkel and/or aqualung, his rubber suit and so on. The primary defining characteristic of an armchair may well have been seen, at the time of the compound's formation, as its arms, but this is not to deny that it is usually soft and upholstered. This, then, is presumably what has led people to characterise a compound as being more than the sum of its constituent elements (see above, §2.2.3): all items denoted by compounds have more features than are specifically mentioned in the compounds.

If the determinant in a compound is always the primary defining characteristic of the subgroup concerned, this explains why there is an INHERENT link between it and the head: the terms 'primary defining characteristic' and 'INHERENT link' are virtually synonymous in this context.

Since, by the definition we have given above, an endocentric compound defines a subgroup, it is obviously

an ideal way to classify. Thus, if we look at the exemplet type of adjective + noun compounds in English, blackbird, and contrast it with the phrase black bird, we find that while the second tells us something about the bird it does not provide any subclassification of birds, as blackbird does. The most obvious characteristic of blackbirds is their colour, and hence the compound. Similarly we can look at two recent additions to the Danish language: lilleskole and storkommune. A lilleskole is a school which allows individual contact between the staff and the student. The easiest way to allow this is strictly to limit the size of the school, so that the individual student does not feel that he is a cog in some impersonal machine, but a person reacting within a community. The language has accepted the size of such institutions as being the defining characteristic, though, of course, not every school that is little is necessarily a lilleskole. Similarly, since this has now become a classification, there is nothing tautological in talking about de små lilleskoler. A storkommune is a new administrative area formed by merging a lot of little kommuner. But there is no reason why an ordinary kommune should not be as big, in absolute terms, as one of these storkommuner. The determinant is not only an inherent defining feature of the subgroup, it is also a classification, and it is as a classificatory label that it can be supported or contradicted on the surface without any real tautology or

contradiction arising. This is only true in the case of lexicalised or received compounds. So an albino blackbird becomes a white blackbird and not a whitebird; a big taxi becomes a stor lillebil and not a storbil, and so on.

Finally, we can point out that if it is true that the determinant is always the primary defining characteristic of the subgroup denoted by the compound, then we would expect it to be the case that there would not be any compounds where the determinant is implicit in the head. This we find is actually the case. There are no compounds with forms like *humanman, *animalhorse, *buildinghouse (where building is an object rather than an action), *placemoor⁵, though the opposite state of affairs -- where the head is implicit in the determinant -- is found in the so-called tautological compounds like beech tree, cod fish. Vegetable marrow, which might appear to be a counter-example, is in fact not one, since we have to be able to distinguish between it and bone marrow.

Before leaving this topic, there is one thing which we must point out about the analysis which we have provided here. We have been consistently forced into such clumsy

⁵ Marchand (1969:§2.2.9.4.3.2) also points out that there are no genus-species compounds, but does not explain why.

circumlocutions as "the primary defining characteristic of the subgroup denoted by the compound". This, like Morciniec's Sachsteuerung discussed above (§3.4.2), implies the influence of the real world outside the purely linguistic framework. It is the nature of the object which determines its linguistic realisation and the nature of the non-linguistic context which determines the interpretation of the compound. It is the rôle played by our knowledge of the world and the problems involved in trying to formalise this which we shall go on to study now.

3.5 PRAGMATICS.

3.5.1 We shall use the term pragmatics in a wide sense to include the entire influence of our knowledge of the world, "the speaker's and hearer's common knowledge of their material culture," the 'real world,' on the language and the interpretation of language. This contrasts with, for example, Weinreich's (1963:120) use of the term, where 'pragmatics' is taken to include

"attitudes to the content of the discourse,
insofar as they are coded"

and categories such as assertion, question and demand. We have shown above that pragmatic considerations appear to play a large part in the generation and interpretation of compounds. What we have to decide now, if possible, is how this can be built into the grammar.

3.5.2 Under various names and titles, pragmatics has enjoyed a long and successful career in linguistics. Gilliéron's pupils discovered the value of illustrations for their linguistic atlases, the first to use them being Jaberg and Jud in the AIS (Sprach- und Sachatlas Italiens und der Südschweiz, Zofingen, 1928 - 1960) and the whole Wörter und Sachen school insisted that language change, at least, could not be explained without reference to the

objects denoted by the changing words. Firth, although he may not have been able to provide us with a comprehensive theory of semantics (see Lyons, 1966:293/4), did stress (Firth, 1935:7) that:

"The complete meaning of a word is always contextual, and no study of meaning apart from a complete context can be taken seriously."

For Firth

"An utterance or part of an utterance is 'meaningful' if, and only if, it can be used appropriately in some actual context."

(Lyons, op.cit:290).

More modern linguistic theory also shows some reliance on pragmatics. Thus Johansson (1958:8) says that

"För både gamla och nya ord gäller, att sammenhanget har ett avgörande inflytande på begripligheten."

Halliday (1961:§1.5) mentions "context" as a primary level at which linguistic events should be accounted for, context being

"The relation of the form to non-linguistic features of the situations in which language operates."

Leech (1974:76ff) also uses this term for what we are calling

pragmatic aspects of language. Marchand (1969:§2.2.16.4) says that

"In general we can thus say that the semantic content of the constituent morphemes largely predicts the syntactic relation in an underlying sentence. I insist upon the word 'largely' because there is no absolute predictability. The possibility of a different, often jocular analysis is not excluded. In itself there is nothing in the word water-rat to exclude an analysis such as 'water producing rat.' With this meaning the word would be quite possible as the name of a toy, for instance. But as a serious word it does not exist in the norm of the language, because there is no denotatum for it in the extralingual world. The norm of our language selects only certain patterns from the system of possible realizations according to the denotata of the extralingual world. To a certain extent, therefore, the extralingual denotatum must also be known if our analysis is to be correct."

Or again Adams (1973:63) criticises Lees (1960) because his "Classification necessarily ignores much of the 'knowledge of the world' which we bring to the interpretation of compounds. Most nominal compounds require a knowledge of their

referents before they can be fully understood."

But it is not only in the field of word-formation that pragmatic considerations are necessary. Dreike (1974) shows that the German prepositions vor and hinter cannot be understood without a pragmatic knowledge of the situation in which they occur. J. Greene (1972:74), discussing Bolinger's critique of Katz & Fodor's semantic component, points out that there is the

"Difficulty of explaining why, if one did say The apple is blue one would mean that it had been artificially coloured in some way."

She then goes on to conclude that

"It will be seen how difficult it is to draw a line between linguistic and 'real life' knowledge."

McCawley (1968:129/30) claims that

"The disambiguation of the sentence

11. The landlord knocked the priest up
in favour of the reading 'the landlord
awakened the priest by knocking on his door,'
is based on factual information (as to who
current regulations allow to be priests)
rather than purely on meaning"

and makes further reference to non-linguistic knowledge throughout his paper. Winograd discovers that his computer system has to have a 'world' for language to make any

sense, however limited that world might be. He says (1972:28):

"A sentence in natural language is never interpreted in isolation. A semantic theory must describe how the meaning of a sentence depends upon its context. It must deal with the linguistic setting (the context within the discourse) and the real-world setting (the interaction with knowledge of non-linguistic facts)."

Voegelin & Voegelin (1972) list a series of ways in which pragmatic considerations are required in linguistic theory, and despite the title of their paper ("On the Rejection of Pragmatic Considerations ...") they provide no reason why this should not be the case, rather the contrary in fact. Chafe (1971) argues for the belief (op.cit:57)

"That there is good reason to regard semantic structure as a formalization of human knowledge -- if not all human knowledge, at least of that much of it which can be talked about, which is certainly a great deal."

This is probably one of the more extreme statements of the need to consider pragmatic factors in linguistics. Let us also consider the following two, rather lengthy, quotations from Ross (1970:fn 20) and Chomsky (1971:186 fn) respectively.

"I might remark in passing that it is not at all clear to me that sentences like *as for the students, hydrogen is the first element in the periodic table can be excluded on purely linguistic grounds -- I suspect that the requirement that there be some connection between the NP of the as for phrase and the following phrase can be satisfied if there is a real-world connection. Thus while the sentence As for Paris, the Eiffel tower is really spectacular is acceptable, it becomes unacceptable if Albuquerque is substituted for Paris. And since the knowledge that the Eiffel Tower is not in Albuquerque is not represented in the semantics of English, I conclude that this unacceptability is not linguistic."

"Consider such phrases as John's picture. In addition to the readings picture of John and picture that John has, the phrase might be interpreted as picture that John created, picture that John commissioned, and no doubt in other ways. On the other hand John's puppy is not subject to the latter two interpretations, though it might mean puppy to which John (my misnamed pet) gave birth. On the other hand, it is hardly clear that it is a fact of language

that people cannot create or commission the creation of puppies in the way in which they can pictures. Correspondingly, it is unclear whether one can assign to these phrases, by rules of grammar, a set of readings that determine how they figure in, say, correct inference. Or consider such a sentence as I'm not against my FATHER, only against the LABOR MINISTER spoken recently by a radical Brazilian student. Knowing further that the speaker is the son of the labor minister, we would assign to this utterance a reading in which the (capitalized) phrases are coreferential. On one reading, the sentence is contradictory, but knowing the facts just cited a more natural interpretation would be that the speaker is opposed to what his father does in his capacity as labor minister, and would be accurately paraphrased in this more elaborate way. It is hardly obvious that what we 'read into' sentences in such ways as these -- no doubt in a fairly systematic way -- can either be sharply disassociated from grammatically determined readings, on the one hand, or from considerations of fact and belief on the other."

Communicative competence,

"The ability to produce or understand utterances

which are not so much grammatical but,
 more important, appropriate to the context
in which they are made"

(Campbell & Wales, 1970:247)

is equally a part of the pragmatic considerations necessary to a complete linguistic theory. Though Lyons (1970:287) may have doubts as to the possibility of accounting for all this within a theory of generative grammar, it is interesting to see that Bar-Hillel (1971: v/vi), summing up the results of the International Working Symposium on Pragmatics of Natural Languages held in Jerusalem in June, 1970, says:

"It is probably not exaggerated to state that it was, at the end of the meeting, the consensus of the participants that the pragmatic aspects, or at least some of them, of communication through natural languages have to be treated by linguistic theory proper, just like its syntactic and semantic aspects, and that this treatment can only be delegated to some other field with a considerable loss to linguistics itself." (My stress. LJB.)

3.5.3 Counter claims tend to involve not a denial of the rôle of pragmatics in language, but a denial of the place

of pragmatics in linguistic theory. Thus we may quote Hjelmslev (1943:19):

"Idet sprogteorien undgaar det hidtil herskende transcendente synspunkt og søger en immanent erkendelse af sproget som en i sig selv hvilende, specifik struktur (1), og idet den søger en konstans i sproget selv, ikke uden for det (2), foretager den i første instans en indkredsning af sit emneomraade, der vel paatvinger sig med nødvendighed, men som kun er en midlertidig foranstaltning. I indkredsning ligger ingen indskrænkning af synsfeltet i form af bortskæren af væsentlige momenter i den globale totalitet som sprogets verden er."

Chomsky (1957:17) claims that

"We are forced to conclude that grammar is autonomous and independent of meaning"

or again (ibid:106):

"Grammar is best formulated as a self-contained study independent of semantics"

where "meaning" and "semantics" can presumably be read as including any pragmatic information. Even in "Aspects ..."

Chomsky has no place for any pragmatic content:

"The semantic component determines the semantic interpretation of a sentence. That is, it relates a structure generated by the

syntactic component to a certain semantic representation. Both the phonological and the semantic components are therefore purely interpretive. Each utilizes information provided by the syntactic component concerning formatives, their inherent properties, and their interrelations in any given sentence," he says (1965:16), and no semantic system which is purely interpretive in this sense can possibly take into account any 'real life' knowledge. Starosta (lecture, University of Edinburgh, summer term, 1974) claims that the grammar should not have to deal with ambiguities of the type Chomsky (1971, quoted above) mentions, since these have no syntactic reflex. The grammar, he says, should be concerned only with giving such semantic interpretations as are common to all possible readings.

One cannot, however, make a claim about such pragmatic factors to parallel McCawley's (1970a:168) claim about selectional restrictions. McCawley argues that if someone were to say

My toothbrush is alive and is trying to kill me
one would not recommend a course in remedial English, but rather a course of psychiatric treatment. Hence, he says, the features that decide this belong not within the grammar but in some psychological area outwith the grammar. But his

exemplificatory sentence does have a unique interpretation. The point we are making about compounds is that they have no such interpretation without the intervention of a pragmatic component of some type.

3.5.4 So it seems clear that we must have some kind of pragmatic component, and that there is some support for the existence of such a component in the literature. What is not clear is how such a component would function, and how it would be built into the grammar. One of the few concrete proposals to have been made on this point is Farch's (1974). Farch allows pragmatically specified areas of the grammar in all of the components of the grammar, but in particular suggests that pragmatic functions take up a large part of the semantic interpretation component. Unfortunately, however, he does not really illustrate how this would function in enough detail for us to see how it could apply to the problem in hand. It does, however, seem correct to include a pragmatic section at least in the semantic interpretation component (to account for the various readings of compounds dependent upon context) and the lexicon (to account for the Sachsteuerung and lexically dependent ambiguity) and in the semantico-syntactic component (to account for the generation of correct forms despite apparent

ambiguity). The pragmatic parts of the universal and phonological components do not seem to affect the grammar of compounding to any great degree -- and indeed one might wish to query the existence of a universal component.

Another possible solution might be to see semantics and syntax as sub-components of a pragmatic component, which would presumably have similar effects. Winograd's (1972) system does not really help us here at all, since his 'real world' can be accounted for entirely in terms of three-dimensional co-ordinates and relative position within these co-ordinates, all of which may be defined numerically (see op.cit:119).

But none of this tells us how the pragmatic component functions. This would appear to be the \$64,000 question, and to answer it -- if indeed any answer is possible -- would be outwith the frame of reference of this work. We shall thus have to limit ourselves to affirming the existence of such a component without explaining its functioning. In a sense, this would seem to be an inevitable conclusion given the present state of our knowledge. The type of pragmatic component envisaged here would presuppose a theory of knowledge and an accurate model of psychological functions at the very least, and science cannot offer us these at the moment. Because of this, pragmatics

is rather the blank wall up against which linguistics runs at the moment. All we can do is look for a way over this wall.

3.6 ADJECTIVES OR NOUNS?

3.6.1 There are in French a number of nouns which are formally indistinguishable from adjectives. These are nouns which are inflected for natural gender such as fermier, fermière; gérant, gérante; fumeur, fumeuse; etc; or those which are unmarked for gender, as stockiste, cycliste, garagiste. There are also a number of adjectives in French which are not formally marked for masculine or feminine, nor phonetically -- though this is marked orthographically -- for plurality. An example of this type of adjective is jaune. There is also a smaller group of adjectives which are completely invariable, such as bleu clair, bleu ciel, bleu horizon, or, until recently, marron (if indeed that is an adjective). With all these examples there may be in many cases no formal way of distinguishing between nouns and adjectives, and so of saying whether we are dealing with an adjective + noun group or a noun + noun compound.

The problem in English is similar. It is a generally accepted fact about English that words can change word-class with relative ease (Marchand, 1960, 1969:§§5.1 - 5.7; Vinje, 1970:§3.2.3; Adams, 1973:16). The new word napalm very quickly gives rise to to napalm, natural gives a natural (Foster, 1968:23), nonsense, a nonsense (ibid:82), to count down, a countdown (ibid:127) and so on. Therefore, when we

find something that we have always considered to be a noun modifying another noun, we have to ask ourselves whether we have a nominal group made up of two nouns, or whether one of the nouns has changed its word-class. Whether, in fact, we have a case of what Marchand (1969:§2.1.4.2) terms transposition or Adams (1973:16) terms conversion. It may be argued that since the group exists a discussion of this type is merely a discussion of terminology and, as such, irrelevant. But a decision here is going to have far-reaching repercussions on the grammar of the language: the privilege of occurrence of nouns, the grammar and make-up of compounds and, in French, the agreement of adjectives are all points which will be influenced by a decision here, and therefore we would wish to argue that the point is non-trivial.

3.6.2 We have thus to consider what it is that makes us think of an item as a noun or as an adjective. Nouns are distinguished in English

- i by taking a plural inflection
- ii by being preceded by an article/determiner
- iii by being used as the subject of a verb
- iv by being used as the object of a preposition

but in French only by the last three of these criteria, since

adjectives are also marked for the plural in French.

Adjectives are distinguished in English

- i by allowing both attributive and predicative use
- ii by allowing adverbial modification with so, quite, very etc.
- iii by allowing comparison (-er, -est or more, most)
- iv by yielding adverbs through the suffixation of -ly.

The first two of these criteria are not reliable in French since nouns can occur in predicative position (as they can less frequently in English)

Que cela est Judas (Molière)

Il est médecin

and in some constructions nouns can take adverbial modifiers

Ça fait très président de Gaulle.

There are also extra problems in French since adjectives can occur with articles

Le rouge et le noir

Oh, le pauvre!

Les misérables

etc.

but in French adjectives agree in number and gender with the noun they modify.

Unfortunately, not all nouns or adjectives fit all these criteria. Mass nouns in English do not normally show plurality except when they are used to mean 'types of'.

Adjectives like late (in the sense of 'dead') and former cannot be used predicatively. Adjectives like mere, principal (English or French), hépatique do not allow adverbial modification. Adjectives like mere, late ('dead'), former do not allow comparison (though merest does exist), as neither do adjectives like dead, alive, male, female, which do not yield adverbs by the suffixation of -ly either. Polar adjectives such as dead, alive, married, single do however often allow a pseudo-comparative of the type

He's more dead than alive

or constructions with 'as --- as' which other adjectives which do not allow comparison do not permit.

Whilst there is a small group of adjectives, recognised as aberrant, which may not fit all these criteria, adjectives like late ('dead'), former, utmost, mere (all adjectives with which we shall have no cause to deal in what follows)⁶, it would seem to be a plausible working hypothesis to say that any item which fits two or more of the criteria

⁶ Levi (1973) discusses these adjectives briefly, and assumes them to be nonpredicate adjectives derived from adverbials. We shall accept this derivation without any discussion, since it makes no difference to our point here. Note, however, that it fits in very well with the rest of the theory we adopt below (see §3.6.5).

mentioned above is ipso facto an adjective, and anything that does not, is not.

The trouble with even this analysis is that there is nothing to say that a noun which changes its word-class and becomes an adjective must take over all the behaviour of the new part of speech. Although this is the case for the examples like natural, countdown and nonsense quoted above, this does not per se indicate that corduroy in corduroy trousers is not an adjective because you cannot say

*These trousers are $\left. \begin{array}{l} \text{so} \\ \text{very} \\ \text{quite} \end{array} \right\}$ corduroy

*These trousers are more corduroy than those are

*These trousers are corduroyly made.

There are also many adjectives which do not fit two of the criteria given, and yet are felt to be perfectly ordinary adjectives: to exclude them from the group would be misleading. Consider, for example,

*This is a $\left. \begin{array}{l} \text{so} \\ \text{very} \\ \text{quite} \end{array} \right\}$ principal idea

*This idea is more principal than that one

*This point is principal.

It would seem that the only solution is to modify our generalisation/hypothesis to say that any item which fits

even ONE of our criteria for an adjective is classified as such. Thus, because we can say

These are corduroy trousers

These trousers are corduroy

corduroy is an adjective in these sentences. Similarly, words like silk, iron, copper, zinc, nylon will all be considered adjectives in certain sentences. Note that in making this point we have also solved a large portion of the problem of aberrant adjectives, though late is still outwith our classification. Note also that if we take this as our definition of an adjective, steel production, wood alcohol, silk worm, etc., are still made up of two nouns, not an adjective and a noun. But again the same argument can be applied as at the head of this paragraph: how do we know that these are not adjectives simply because they occur in these phrases in attributive position? We shall return to this below.

We can point out that the procedures Dawkins (1964: 37) tries to use to distinguish adjectives from nouns are not effective for the simple reason that they do not cover all the data.

"... We can now observe that the formal and positional differences already given become even more precise when the roles of adjectives and nouns as modifiers are contrasted. First, only adjectives take qualifiers:

34. very nice home (but *very city home).

Second, nouns and adjectives have a definite positional relationship in nominalizations:

35. nice city home (but *city nice home).

The same relationship holds up in expanded sequences:

36. all the ten fine old stone houses.

In these sentences the noun is more intimately tied to the head than is the adjective; the two cannot switch positions."

Whilst it may be true that only adjectives take qualifiers, the converse that if something does not take a qualifier it is not an adjective is patently false:

*The very principal work

*The very former president.

Secondly, the type of example given by Dawkins in his sentence (35) is mirrored by sentences of the type

The big black house

*The black big house

so again the converse does not hold true. What all this boils down to is that although we can see clear examples of adjectives we cannot state with any degree of certainty at what point an item stops being a noun.

Gove (1964:166) underlines the difficulties in our definition when he says

"Virtually anything that is attributive can also be predicative provided that (a) oral usage is involved, (b) the context is familiar to the speaker and interlocutor, and (c) the style is quick and informal. (To the linguist some verbs are weak and some are ablaut; to the civil service employee dealing with tax returns all day, some are income, some are profits, some are sales; to the cook one soup is asparagus, another is chicken.)"

What we need to be able to say in these cases is that for such and such a speaker chicken/profits/ablaut is an adjective in these sentences, but not for others. Another way of looking at the problem is to say that we have here set up two classes, and though it may not be entirely clear where the boundary between the two lies, we know it must exist. In the last resort items may perhaps be arbitrarily assigned to one or the other of the two classes without this having any effect on the grammatical description of the language.

The lexicographical solution to this problem is the introduction of a label often attributive (see Gove, 1964).

"The label often attrib ... at a main entry indicates that the noun is often used as an adjective equivalent in attributive position

before a substantive (as in air passage, cabbage soup). While any noun is likely to get used attributively sometimes, the label often attrib is confined to those having such a widespread general frequent attributive use that they could be entered and defined as adjectives or adjectival elements. The label is not used when there is an entered adjective homograph."

(Websters Third International Dictionary, explanatory note 6, quoted in Gove, 1964 and Dawkins, 1964.)

This quotation indicates two things: firstly that the possible argument mentioned above of taking a word to be an adjective simply because it appears in attributive position has been taken up, although it is not put to practical use here; secondly, the point is specifically made that all nouns can be expected to be used attributively.

This solution, discussed at length by Gove, is in essence a practical one, aimed not so much at producing a cohesive linguistic theory as at providing a rule by which elements may be assigned to one category or another in the dictionary (hence often attrib rather than attributive as a separate category). Thus, while we can say that an attributive is an element normally used as a noun, that in

its own right fits the criteria given for a noun above, but not those for an adjective, and that is used to modify another noun, such a solution is of no great interest in a linguistic theory, and we may just as well avoid a plethora of terms and call such an element a noun.

At this point we can look at the extra criteria provided by Jespersen (MEG:II:§§13.3/4) of co-ordination and the use of 'one'. Jespersen argues that if an item can co-ordinate using and, or or nor (op.cit:§13.31), or simply co-occur in a syntagmatic relationship (op.cit: §13.32) with an accepted adjective, then it is being used as an adjective. Thus in Coleridge's

In a hot and copper sky

copper is an adjective, and similarly so is Devonshire in

In the soft, Devonshire drawl.

If the modified noun element can be replaced by one, then this is also a sign that the modifying element is being used adjectivally. Jespersen quotes Shaw:

I never knew that my house was a glass one

Sweet:

Between the glottis stoppage and the mouth one

Ward:

The American girls, even the country ones
and others.

The difficulty with these criteria is that, if one can judge by the examples Jespersen gives, acceptability judgements are so variable in this area.

Both the quack theory and the allegory one (Carlyle)

White and taper hands (Brontë)

Its (the bell's) hoarse and iron tongue (Shelley)

Such ferret and such fiery eyes (Shakespeare)

A red and cipher face (Tennyson)

Secret, black and midnight hags (Shakespeare)

as well as the example from Sweet quoted above appear to be of very dubious acceptability, particularly considered in isolation, and particularly when not considered as pieces of verse (where applicable). For this reason these criteria are probably best kept as subsidiary ones if they are to be considered at all.

The other approach, which we have rejected above without motivating the rejection, is to consider that all attributives are functional adjectives; are nouns which are, by virtue of their position, adjectives, even though they display none of the usual features of adjectives. Extending this idea would lead us to conclude that all compounds are made up of an adjective and a noun, and those which are traditionally considered to be noun + noun or verb + noun are in fact functional adjective + noun. Although this does not necessarily follow from what we have said, since the

compounding process itself might be bound up with the difference, it is worth bearing in mind as a possible generalisation to be gained from this approach. However, we would have to gain this generalisation at the expense of another, more important, one, because noun + noun and adjective + noun compounds differ from each other in a very important way.

We have shown above (§3.2) that an adjective + noun compound is separated from an adjective + noun nominal group not only by a difference of stress, but also by a semantic difference of INHERENCE. But the same is not true in noun + noun compounds: there, as we shall see (§3.6.43), the feature of INHERENCE is present whether or not there is unity stress. The difference between, for example, cóncrete fáctory and cóncrete fàctory or héad stóne and héadstòne (see Jespersen, MEG:VI:§8.1.2) cannot be accounted for in the same terms as the difference between black board and blackboard, and to account for this distinction we have to keep nouns and adjectives as separate categories in attributive position.

We are thus left in a position where we wish to keep adjectives and nouns separate in attributive position, but lack adequate criteria to do this.

3.6.3 "Un altro elemento che ci interessa è l'esistenza negli ultimi anni, in francese, italiano e romeno, di alcune serie di composti ottenuti per tramite de due elementi, dai quali l'uno si repete, come per esempio

fr position-clef
 mot-clef
 industrie-clef
 problème-clef."

(Giurescu, 1970:§1.3).

Giurescu quotes Dubois (1962:71) and Dimitrescu (1969:5) who argue that this type of construction is no longer proper composition, but a kind of 'pseudosuffixation', since there is "une perte progressive de la valeur primitive du deuxième élément" (Dubois, loc.cit) and one ought to be able to say that "les mots composés sont en quelque sorte uniques" (Dimitrescu, loc.cit). This argument would appear to be so weak as to be scarcely worth putting forward. One could argue the same way for adjectives in -venlig in Danish (arbejdsvenlig, kropsvenlig, menneskevenlig, miljøvenlig) or nouns in chok- (chokpris, chokrabat, chokresultat) which can only with the greatest use of the imagination be separated from other compounds: indeed to refuse to accept them as compounds would almost be to query the very existence of compounds. It seems rather self-defeating to say that these elements do not form real compounds because

they form too many of them. Dansk Sprognavn (1972:11) appears to take the very view of compounds that these authors seem to be insisting leads to something other than a compound when they list new words in two categories: those with "produktivt førsteled" and those with "produktivt andetled."

Rohrer (1967:§2.10) spends some time considering the question of whether these second elements (clef, modèle, pilote, limite, miracle) are in fact nouns at all, or whether they are adjectives. He concludes on positional grounds that they are adjectives. Again this seems to be self-defeating, because to conclude this is equally to conclude that loup in chien-loup is an adjective, and this soon calls into question the very existence of compounds in French. On the grounds of the criteria we have discussed above we may allow vierge (laine vierge) as an adjective, but otherwise these elements appear to give rise to perfectly normal compounds. Indeed, Rohrer goes on (op.cit:§2.11.3) to point out that such productivity is also found in first elements like idée (idée vacances, idée cuisine) and assurance (assurance vie, assurance voiture) and to generalise that

"Wenn jedoch ein Substantiv als
determinierendes Glied durch das
Gebrauch sanktioniert ist, wird es

immer und immer wieder verwendet

Das gilt nicht nur für das bestimmende
Glied, sondern auch für das bestimmte."

Although, as we shall see, this is truer of the written than of the spoken language, we may say that this use of analogy is one of the strongest forces in the generation of compounds in modern French, and Lewicka (1963:142) goes so far as to call it "le ressort principal du mécanisme même de la composition."

3.6.41 In English, nominal groups made up of noun + noun may be divided into two groups according to one phonological criterion: whether there is one main stress or two in the syntagm. It is by this criterion that Lees (1960:120) distinguishes between compounds and nominal phrases. Hatcher (1952, 1960), on the other hand, makes no distinction, and terms syntagms of both types compounds. In French there is no such stress difference and no two groups of this kind can be distinguished. In Danish all groups of this type (if we once except cases of close apposition -- see Lee, 1952, for the term used with application to English -- which can, in any case, be distinguished on purely morphological grounds by the presence of the definite particle, and certain constructions

of quantity such as et pund smør) have single stress and so fall together. What we therefore have to decide, for English at any rate, is whether the two groups of noun + noun syntagms are distinguishable: whether, in fact, there is in English a type of phrase half way between an adjective + noun nominal phrase and a compound. We shall argue that this is not the case for three reasons: because the stress criterion is inconsistent; because there are no syntactic correlates; and because there are no semantic correlates.

3.6.42 Vos (1952:1 - 10) reviews much of the literature on the subject of the distinction between phrases and compounds and concludes, with Kruisinga (1911:II:1582) that "any rigid separation between syntactic groups and compounds is impossible." He then goes on (op.cit:13) to list many noun + noun syntagms that he has heard on the BBC pronounced inconsistently with one or two stresses. This list includes such words as fairytale, armchair, weekend, jazz band, cost price, and shows, if nothing else, that it is dangerous to be dogmatic about the placing of stress in noun + noun collocations. In his Appendix I, Vos lists the stress patterns given by a variety of dictionaries for a sample list of such collocations. Even leaving older dictionaries out of consideration and looking at his entries for NED (OED),

Chambers, Daniel Jones (9th edition), SOED and COD there is an astonishing amount of variety. Consider, for example, his entry churchwarden, listed by OED as '---,--, Chambers as --'---, Daniel Jones as '---'--- and COD as --'---. We can add that Hamlyn lists this word as --'--- and Penguin as '--- ---. Whilst not all of Vos' entries show quite so much variation, the moral is drawn.

This vacillation of stress in compounds has been remarked upon by various writers. Bolinger (1955:201) notes that

"My normal stress for còttage chéese is as marked, but in a locution like 'now don't forget when you go to the store -- I want some còttage chéese' I have found myself saying HcotDtage Dchee/se (H high pitch, D downskip, / rise)."

He concludes (op.cit:202) that

"Certain ... forms show dialectal wavering (cottage cheese, fountain pen ... ice cream, bean soup ...) but are still uncertain enough in any one idiolect to produce a wavering there, too, due to intonation."

Lutsdorf (The Stressing of Compounds in Modern English. A study in experimental phonetics, dissertation, Bern,

1960:146ff, quoted in Brekle, 1966:18 fn 34 and 20 fn 39) tries to explain this vacillation in terms of the meaning of the compound:

"Vacillation of the stress pattern in a compound is only permitted when it does not influence the meaning. As soon as a compound with a certain stress pattern becomes functionalized (i.e. lexicalised: LJB.), i.e. as soon as its meaning becomes different when the stress pattern changes, there must be no vacillation and the stress pattern must be firm."

Jespersen (MEG:VI:§8.1.2) gives some examples of this:

"A 'glass-case (to keep glass in), but a 'glass 'case (made of glass); a 'bookcase (with shelves for books), but a 'book 'case 'case or cover for holding a single volume'; a 'headstone 'upright stone at the head of a grave'. a 'head 'stone 'chief stone in a foundation, corner stone'."

Unfortunately for Lutsdorf we can report that on the BBC radio news of 6/12-73 cóncrete fáctory was read as cóncrete fáctory, so it would seem that even here vacillation is not impossible, though, of course, a lapsus linguae cannot be ruled out. Jespersen (loc.cit) feels that such vacillation argues against excluding double stressed groups from the category of compounds. Berndt

(1963:306) evidently feels the same, as is shown by his critique of Marchand (1960):

"Will man beispielsweise allein auf Grund geringfügiger Unterschiede in der Akzentgebung ópera dirèctor der Gruppe der Komposita, cóllege prèsidènt dagegen den syntaktischer Verbindung zuordnen (s.p.18), so muss man zugeben, dass die Grenzen zwischen beiden (vgl. etwa milk sháke (mílk shake), rádio lócation, rádio-télegram u.ä.m. (zit. nach Jones, 1957)) doch sehr fliessend sind, was auch in starken Schwankungen der Akzentbezeichnungen verschiedener Wörterbücher zum Ausdruck kommt."

On grounds of stress alone, it would seem, then, that there is no really good reason for making a distinction between a compound and a nominal phrase.

3.6.43 Lees (1960:120) suggests that

"It is possible that some transformation rules in the grammar differ solely in the kind of unitary stress pattern which they confer ... upon the transforms, for there are many cases of composites which seem to differ only in this

one respect, as for example, Mádison Strèet vs. Mádison Ávenùe, or ápple càke vs. ápple píe.

Perhaps each individual morpheme is characterised by always taking in composition some one of a small number of (syntactic) junctures introduced into the sequence by the transformation itself and yielding then, ... the appropriate stresses. This view is supported by the fact that, at least in the author's speech, all composites in -street and -cake are compounds, while all in -avenue and -pie are invariably nominal phrases."

Chomsky & Halle (1968:93) also suggest this as a solution, noting that their way of assigning stress to compounds is completely ad hoc. However, this does not seem to be enough, though there may be some generalisation to be gained here. It seems insufficient, not because of the existence of words such as ice-cream, peanut butter or bean soup which can be pronounced either way, either by different speakers or by the same speaker in free variation or in different registers, for this would only show that the border between the two groups was unclear, but because of words like

teacup

pint cup

birthday party

Christmas party

physics master

headmaster

troop leader

world leader

face cream	coffee cream
newspaper	waste paper
snowball	rubber ball
coffee table	plastic table
firebird	origami bird
town house	country house

which, though they form a minority, do provide direct counter-examples to Lees' suggestion. They would also seem to show that it is not the case that superordinates take single stress while hyponyms take double stress, or, to phrase the same thing another way, that the more general the second element, the less likely it is to bear stress.

Marchand (1969:§2.1.26) attempts to draw a distinction between collocations of two nouns with a $\acute{/}$ stress pattern and those with a $\acute{/}\grave{}$ stress pattern on the grounds that the former merely expresses a syntactic relation, while the latter expresses "a permanent lexical relation". He points to the semantic distinction between Christmas trèe and Christmas tráffic. (He also discusses súmmer hòuse as opposed to súmmer résidence, but the meaning he attributes to summer house is marked as "now rare" in the SOED, though it is in common usage in German and Danish. His argument is thus irrelevant in regard to these two examples.) However, the very examples upon which Lees based his

suggestion (see above) would seem to afford ample proof that this position is untenable: in what way is apple pie or Madison Avenue based on less of a "permanent lexical relation" than apple cake or Madison Street?

Marchand's claim (op.cit:§2.1.20) that

"In many cases forestress is tied up with the semantic structure underlying a compound.

A certain semantic relation calls for or rather is connected with the compound stress pattern `/\`"

or again (ibid:§2.1.26):

"The rule in English is the two stressed syntactic group while forestress is tied up with special grammatical or semantic conditions"

is on the whole unconvincing. Apparently the only place where he tries to justify this statement is §2.2.12.6 where he claims that double stressed syntactic groups in the family "B consisting, made up of A" "are not analysable as 'A takes on the shape of B'." Thus, to use his examples, snówbáll is analysable as 'snow takes on the form of a ball' but rúbber báll is not analysable as 'rubber takes on the form of a ball'. This distinction seems, at the very best, dubious.

But if we cannot claim that double stressed noun + noun collocations and single stressed ones are lexically conditioned variants of the same process, and cannot claim, on the other hand, that the two are separated semantically, have we anything more than random production? Lexicalisation (see above, §3.2) might be expected to play a rôle here, but it does not seem to. Not only are apple cake, cherry cake, rice cake, oatcake stressed unitarily, but also nonce formations which may be totally unfamiliar: cinnamon cake, nut cake, peach cake, graduation cake. The same effect may be seen in other series. Thus Sweet's (1900:§899) suggestion that newly coined compounds have double stress while "traditional" compounds (lexicalised ones) have single stress is seen to be false, although the converse -- that familiar collocations of elements tend eventually to receive unitary stress -- does seem to be true. There is also a problem here in that it is difficult to rule out the possibility of this being due to some analogy. But Vos (1952:34) comments on a once-only compound used with single stress by Richard Dimbleby in his commentary on the lying-in-state of George VI: "the twilight of his death has dimmed the whole world-sky". Here it is difficult to see what analogy could have played a part.

On this subject, Marchand (1969:§2.1.21) says

"There are ... quite external factors

conducive to forestress. The frequent occurrence of a word as a second constituent is apt to give compound character to combinations with such words. The most frequent word is probably man The forestress of such combinations is thus due to implicit contrast."

But again, apart from the example of world-sky, we have the examples listed above as counter-examples to Lees' suggestion to explain. It may be noted, en passant, that this statement of Marchand's would seem to conflict with his claims (1969:§§2.1.20, 2.1.26) quoted above.

Another possible factor linked with lexicalisation is the frequency of occurrence of any given collocation, but this cannot be a decisive factor in the assignment of stress either. This is seen from the variety of stress heard in most compounds (see above, §3.6.42) as well as in the basic double stress of a common word like world war.

All this would seem to point to there being no distinction whatsoever, and certainly no semantic difference, between a noun + noun compound and a syntactic phrase, yet a native speaker of English is reluctant to admit this, and very often we find commentators (Sweet, 1900:§893; Kruisinga, 1911:§§1581, 1586 fn 2; Jespersen, MEG:VI:§8.1.3)

trying to use the idea of the compound as a single semantic unit. We have already criticised this view above (§§2.2.3, 2.3.2); here we can also point out that Bloomfield (1933: 227) has criticised this view as well, for somewhat different reasons:

"It is a very common mistake to try and use this (semantic) difference as a criterion (for distinguishing compounds). We cannot gauge meanings accurately enough. Moreover, many a phrase is as specialised in meaning as any compound."

§3.6.44/ Yet all this is not to say that some degree of generalisation is not possible. Vos (1952:37) points out that

"Bahuvrihi-compounds seem to favour first-element stress, appositional compounds even stress"

an observation borne out to some extent by Hatcher's (1952) article on appositional compounds (although it is not clear that she is, in fact, dealing only with appositional compounds in this article: gimlet eyes and pincer attack (p.8) are open to question, for example, as is the type invasion shoe ('the invasion shoe is on the other foot', p.9).

See also above, §3.1.2.) Marchand (1969:§2.1.22) also notes the double stress of many appositional compounds. Sweet (1900:§§900 - 906) attempts to give a description of the occurrence of stress in terms of the logical relationships between the elements of the collocations, but is obliged (§903) to speak of a "variety of other relations" to gain any kind of overview. Nevertheless, it may well be the case that agentive compounds (bookseller, stockbroker) do fall into the single stress category (see §902) and many of the examples Sweet quotes (§904(c)) with double stress -- brick house, straw hat, silver spoon -- we can perhaps explain as adjectives.

3.6.44 Morciniec (1964:44) distinguishes between a compound and a nominal phrase, a 'group', by three criteria: Wortklassezugehörigkeit, Glieder untrennbar and Reihenfolge bedeutungsrelevant. These should all be present in a compound but not in a group. However, if we consider the last one first, we can see that it is important in a noun + noun collocation, whether or not there is unity stress: back tooth is not the same as tooth back, government policy is not the same as policy government, just as armchair and chair arm are not the same. Similarly, there would not seem to be any difference in the Wortklassezugehörigkeit of the two types of collocation: both types can replace a single noun paradigmatically, however many parts one can

analyse within them. Moreover, derivatives can be made from either group, so that

statesmanship, science-teacher-ish
 headmastership, government-official-ish

are all perfectly acceptable in different registers, and further compounds can be made from either group, witness the different possible pronunciations of ice cream cornet.

This leaves only Morciniec's criterion of uninterruptedness of the elements, and here the facts are not so clear cut. Consider

Political world map

World political map

Inconsistent government policy

*Government inconsistent policy

Large office desk

*Office large desk

Director's office desk

(Office)(director's desk) (as bracketed).

What seems to be happening here is that a double stressed phrase can be interrupted only if the interrupting element then forms with the final element a new collocation which can be modified as a whole by the first element: that is, by inserting another element the original semantic collocation is broken and a new one created; unless the new semantic group is created no interruption is possible. However, this evidence neither supports nor contradicts Morciniec's

principle, until we apply it to single stressed noun + noun groups and discover that exactly the same thing happens there. Thus whilst

Library green book
is unacceptable,

Library comicbook
is perfectly all right since comicbook is a new semantic unit. We conclude, therefore, that Morciniec's criteria do not distinguish syntactically between single and double stressed noun + noun groups.

3.6.45 On the whole, then, there would seem to be very little evidence for considering single and double stressed noun + noun groups as different syntactic phenomena. The main argument in favour of a differentiation would seem to be the native speaker's intuition, reflected in the decision taken by Lees (1960:120), Marchand (1969:§2.1.15), Bloomfield (1933:228) and others to treat them as separate phenomena. This intuition could, in turn, rest on the difference in stress which appears to be accidental.

This, however, does not account for the fact that in certain cases there is a difference of meaning reflected solely in the change from single to double stress. Thus

Josephine Bolton, writing in the Observer magazine for 30/12-73 was able to use birth day in two words, meaning 'day of birth', in opposition to birthday in one word meaning 'date of birth' (my birthday is 9th August, and not Thursday). Similarly, at least in British English, not every girl friend is a girlfriend (contrast attested in conversation). Other similar examples are quoted above (§3.6.42). Yet we have stated that there is no observable difference between such pairs. We shall return to this problem in the next section, suggesting how it may be solved in a grammar, and suggesting what the mechanism underlying these various facts and irregularities may be.

3.6.5 Levi suggests that in fact the category compound in English can be extended quite considerably to include many groups which are traditionally viewed as adjective + noun. She claims (1973:334)

"That compound initial nouns, in English at least, are converted into adjectives in just those cases where an adjective is available in the English lexicon."

Rather than looking at the modifier in a noun + noun group as an adjective, she considers the adjective in some adjective + noun groups to be derived from a noun.

Let us turn again briefly to Jespersen's (MEG:II:§13.3) criteria for an adjective. Jespersen claims that when a modifier is co-ordinated with an adjective then it is being used as an adjective, even if it is usually taken to be a noun. We have already pointed out (§3.6.2) that some of these collocations seem to be only marginally acceptable. But let us for a moment consider those which are acceptable. They include

Provincial and country turns of wit (Swift)

Mercantile and commonplace exactness (Shelley)

(A word's) legal or business acceptation (Dickens)

Christian and family name (Poe)

Commercial and Custom-House life (Hawthorne)

Postal and telephone services (Wells)

The personal and family history of scientific men (Kidd)

The London and American publishers (Shaw)

A great pulpit and parliamentary orator (McCarthy)

County and municipal offices (Lecky)

and so on. If we now consider the nature of the adjective rather than the fact of co-ordination, we discover that we are dealing with a restricted class of adjectives. In the terms of Østergaard (1974:7) we have an E4 epithet:

"Disse adjektiver har samme funktion som nominatorer (i.e. attributive nouns. LJB.), dvs de klassificerer, de begrænser heads reference, men beskriver ikke head og kan som følge deraf

ikke gradbøjes eller modificeres med very. Typiske endelser for E4 adjektiver er -ish, -ch, -al, -en, og typiske betydninger er geografisk herkomst, fag og stof."

As well as not being able to take adverbial modifiers, these adjectives have another formal marker: they cannot generally be used predicatively. It is this criterion which Levi takes as primary, terming these adjectives nonpredicate adjectives, and it is these she wishes to derive from nouns.

Levi has several arguments, both syntactic and semantic, for assuming that this might be the case. Firstly, though 'true' adjectives can co-occur with quite, very, etc., neither nonpredicate adjectives or nouns can; secondly, nonpredicate adjectives can only co-ordinate with other nonpredicate adjectives or nouns (see the examples from Jespersen, above), but not with 'true' adjectives; prefixes like mono-, bi-, multi- can be attached to nonpredicate adjectives and nouns, but not to 'true' adjectives (though adjectives thus prefixed become 'true'); nonpredicate adjectives like nouns can be distinguished by features [+def], [+concrete], [+animate], [+human], [+common] and, she claims, the implicational relationships between them still hold; finally, nonpredicate adjectives

can show case relations: Levi quotes among other examples

Agentive	presidential refusal
Objective	oceanic studies
Locative	marginal notes
Dative	feline agility
Instrumental	electric calculator
	manual labour.

Electric calculator would seem to be a bad example, because you do not use electricity to calculate, nor do you calculate with electricity, rather the calculator runs on electricity, but otherwise this seems to hold quite well. Her penultimate argument, however, does not hold.

One of the examples she gives in support of her thesis is

lla intuition of women/*Boston
feminine/*Bostonian intuition.

While it is true that Bostonian intuition is non-occurrent as a fixed phrase, it would not seem to be true that it is unacceptable: compare, for example, Irish logic or French logic. Multi-coloured would appear to be a counter-example to her third criterion, but this may be because coloured is a past participle, and they do not always act in the same way as ordinary adjectives, or it may be that this form is to be analysed as (multi-colour) + ed and is thus a completely different type of construction. Despite these minor objections, Levi would seem to have a fairly strong case in her favour.

This case becomes even stronger if we consider some of Levi's residual problems (1973:343) in connection with the present work. Firstly she asks

"Although the adjectives in an electrical engineer and the American refusal are both nonpredicate and denominal, the first NP is a compound (sic) in a way the second is not.

How may this difference be formally characterized?"

We have seen that this problem can be solved by the concept of lexicalisation. Electrical engineer is a lexicalised compound, learned and employed as a unit. American refusal is not so lexicalised, but has to be generated afresh each time it is used. Secondly, Levi (loc.cit) asks whether the semantic material deleted from compounds can be predicted (i.e. recovered). This question will be answered affirmatively in Part Two. Thirdly, she asks how the permanence of association in compounds and also in nonpredicate adjective + noun groups like subterranean explorer can be formally characterised. We have already answered this partially with our HIP feature, and we shall return to the point in Part Two. It is of interest that the problems which we have had to consider for other reasons, and which we have resolved with reference to compounds, have to be brought to bear to resolve problems in what have traditionally been considered adjective + noun groups.

It is also interesting to note that Vendler (1968:112ff) offers a virtually identical derivation for such adjectives. He derives metallic surface, canine tooth, feline mammal, tonal music, theatrical effect, Turkish coffee, Portuguese ship etc. from

N wh ... is P N

adding (op.cit:112) that

"In most cases we could recover a 'lost' verb, e.g.:

Punic War -- war (fought) against Puns (sic!)

Wagnerian opera -- opera (written) by Wagner."

The parallel between this and Žepić's (1970) derivation of compounds from prepositional phrases or Lees' (1960) derivation with a deleted verb is too striking to need any further comment.

Levi herself realises that her initial claim (quoted above) is too strong. She quotes counter-examples like

*pictorial book	picture book
*paternal figure	father figure
*ocular infection	eye infection
*bloody poisoning	blood poisoning.

But even her counter-examples give indirect support to her claim. We shall see below (§3.7.5) that a general rule in compounding can be over-ridden when to follow that rule would be to cause confusion (see also above §2.2.23). Now,

we can quarrel with Levi's assignment of asterisks in the above examples: a pictorial book is not unacceptable, but it does not mean the same thing as a picture book. Bloody poisoning does not mean the same as blood poisoning. The language or the language user is free to use the strategies provided by the language for semantic as well as for purely grammatical effect. However, despite this, her generalisation is still too strong, for Levi would predict linguistic community where language community is equally possible and apparently synonymous, atomic bomb where atom bomb is quite possible and again synonymous, and familial history where we find family history. It may be that the language permits a certain amount of free variation, but that is immediately a much weaker claim to make.

This analysis deriving nonpredicate adjectives from nouns has some interesting results. First of all, it explains why we never get compound groups (i.e. adjective + noun groups with unity stress) containing these adjectives. It delimits one group of adjectives outside the groups we have dealt with above in §3.2. Secondly, it explains why phrases like

White and taper hands

are unusual: we are linking a 'true' adjective with a noun rather than a denominal adjective. Thirdly, it solves our problem about the status of attributives, since now

all the forms about which there was doubt will be derived from nouns or, in the case of former etc., from adverbs.

In the light of this discussion it is of interest to look at Bally's (1932:96/7) discussion of phrases like chaleur solaire.

"Un groupe formé d'un substantif et d'un adjectif est un composé quand l'adjectif apparaît étroitement lié au substantif par le fait qu'il repousse la syntaxe de l'adjectif ordinaire. Ainsi dans chaleur solaire, solaire ne peut pas se placer devant le substantif (solaire chaleur est impossible), il ne peut recevoir les adverbes propres à l'adjectif: on ne peut pas dire chaleur très solaire; enfin et surtout, il ne peut fonctionner comme prédicat: cette chaleur est solaire serait inintelligible."

Spence (1969) points out that if one follows Bally in this, then one has to accept as a compound any NP containing an adjective in the same class as solaire, a class which includes lunaire, spatial, rénal, etc.. This has the effect that one has to accept as different structures grand adversaire and principal adversaire, which, says Spence (op.cit:8) is undesirable and counter-intuitive. But the grammar must somehow capture the fact that these adjectives

cannot be modified and are much more limited than 'true' adjectives, and besides, the compound nature of such phrases is only stressed if we consider Walter's (1969:58) criterion for distinguishing adjective + noun compounds from ordinary groups:

"Une grande sage-femme désigne une accoucheuse de grande taille ou de grande valeur, l'adjectif grande modifiant l'ensemble sage-femme; s'il s'agissait du syntagme sage femme = 'une femme sage', il faudrait coordonner les deux adjectifs et dire une grande et sage femme."

In des paysages lunaires froids, froids modifies the whole, whereas if we were to add the conjunction et and get des paysages lunaires et froids then lunaires would at once mean 'like those of the moon' rather than 'of the moon'. Levi (1973:340) points to the same phenomenon in English, quoting Nixonian policies as being ambiguous between those of Nixon and ones like those of Nixon. In the second case the adjective can take adverbial modification (cp.

15b The acrobat's agility was more feline than human) and hence, by implication, no longer belongs to the same group.

Wandruszka (1972) stresses the parallels between compounds and noun + adjective groups of this type in French, showing how both groups appear to cover largely the same

set of (unexpressed) semantic relationships: robe nuptiale (dress worn for a wedding) would appear to have a similar underlying semantic relationship to robe grossesse (dress worn for pregnancy). These adjectival constructions have even been attacked on much the same grounds as those on which Etienne, for example, attacks compounds, as when Le Bidois ("L'Adjectivité' et ses méfaits," Le Monde 25/11-59, p.9, quoted in Wandruszka, 1972:240), discussing phrases like 'débat agricole' and 'prix agricoles', says

"Nous sommes obligés de 'traduire' pour voir qu'il s'agit d'un débat sur l'agriculture et des prix des produits agricoles"

and later

"Mais un accouplement comme 'prévention routière' est choquant et constitue même, si l'on y réfléchit, un véritable rébus."

Of course, no native speaker of French would consider these phrases to be unclear, any more than an English speaker would worry about farm prices or traffic safety, so Le Bidois ought not to be taken too seriously here. Nevertheless, it is interesting to see these phrases being attacked for this reason.

But if Levi's thesis, that adjectives are used in just those cases where one exists, is tenable for English, it would appear not to be so for French, as can be seen from a

a point made by Wandruszka (op.cit:159):

"In verschiedenen Fällen sind substantivisches und adjektivisches Determinans gegenseitig austauschbar, ohne dass inhaltliche Modifikationen zu beobachten wären, descente-femmes/descente féminine, messages touristes /mes^sages touristiques, panneau-réclame/panneau publicitaire, mode-hommes/mode masculine, impermeable-femmes/lingerie féminine."

Obviously, then, it will be more difficult to provide a satisfactory grammar of this area in French, although the choice between one construction and the other in the examples above might be one dependent on register or style, the noun alternates being the marked forms, which would allow one to generate these noun + adjective groups in a way exactly parallel to the corresponding English constructions. This might go some way towards explaining the fact, noted by Levi (1973:344 fn 4), that the wider use made of these adjectives in French seems to be equivalent to the wider use of compounds in English:

student politics	la politique estudiantine
tear gas	le gaz lacrymogène
a family reunion	une réunion familiale.

However, such a derivation in French must remain no more than a hypothesis until such time as a grammar of

compounding parallel to the English grammar has been motivated for French, for without that prerequisite a derivation of this type would be nonsensical.

3.7 LINKING ELEMENTS.

3.7.1 As Kristensen pointed out in the paragraph quoted above (§2.1.1), it is the formal aspects of compounds which most grammarians/linguists have dealt with in Danish, and for many this has meant simply a discussion of the linking elements. The same is true, on the whole, for German. Fleischer (1969:§5.1.2.5), Duden (1959:§§3775 - 3835), Koefoed (1958:§605), Diderichsen (1964:63/4), McClean (1950:§296), Rask (1830:83), Skautrup (1968:264/5), to mention but a few, spend, relatively speaking, a vast amount of time on the problem. Spore (1965:§141) deals only with this problem, giving vastly oversimplified phonological, morphological and semantic generalisations for the occurrence of the different link-phonemes. Iversen (1924:11)

"Mener altså at ikke bare teoretiske, men også praktiske hensyn tvinger oss til å forkaste både betydningsinnholdet i sammensetningsleddene og det logisk-grammatiske forhold mellem dem som inndelingsprinsipp"

and that you thus have to classify compounds by the juncture phoneme they take.

Let us look at a summary of the facts. There are three main ways of forming a compound in Danish: 1) the two roots are set side by side: bybane, kommunehospital,

træbord, papirkniv, etc.; 2) the two roots are linked by an s: undervisningsministeriet, stationsbygning, køns-sygdom, papirspose, etc.; 3) the two roots are linked by an e: ostemad, børnehjem, folkebibliotek, julemand, etc.. There are also other minor patterns where the two roots are linked by (e)n (rosenkål, galgenfugl), er (blomsterbed, studenterrevy) or by a subtractive form (kronprins, tronfølger, which lose an e and brillestel, bukseknop, which lose an r) or by a subtractive form and then an added s (arbejdsplads, embedsmand).

There seems to be general agreement that the first of these options, the historically primary form, is the unmarked one, though arguments for this are not given. Thus Diderichsen (1946:246):

"Substantiver optræder hyppigst i Rodform
naar ikke særlige Forhold gør sig gældende,"

Hansen (1967:296):

"Af de tre hovedformer for første led er
uændret form det normale,"

Spore (1965:§141):

"Composition directe ... est la forme non-
marquée: il faut un motif particulier pour
que la composition ne soit pas directe."

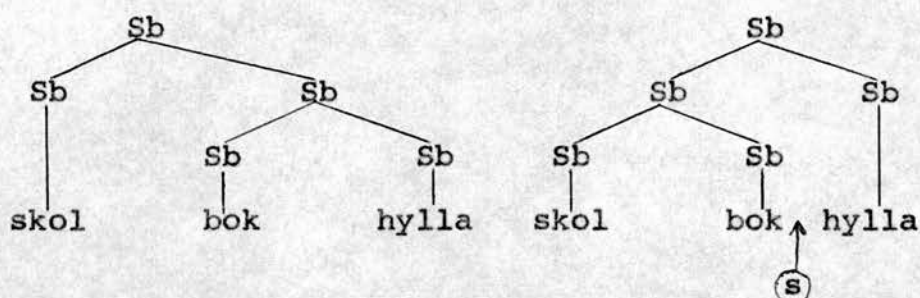
However, the value of this observation is, to say the least, doubtful, since it seems to be impossible to predict

entirely the occurrence of the different juncture types.

Thus Skautrup (1968:264) says:

"Helt klart afgrænsede regler for brugen af de tre hovedtyper: stammesammensætning, s-komposition og e-komposition, findes ikke. Analogier (efter ældre dannelser), påvirkninger udefra (især tysk) og lydlige vanskeligheder kan spille ind. Betydningsmæssige grunde for en form kan nu kun svagt spores ved e-komposition."

Hansen (1967:296 - 300) tries to give rules mainly on phonetic grounds, but has also to take some morphology and semantics and the native or non-native source of words into account. Iversen (1924:12ff) starts by giving phonetic contexts for s- and then goes on to discuss semantic correlates (cp. also Briegleb, 1935). But he has a lot of exceptions, and in some cases has to appeal to euphony for the insertion of an element (e.g., p.22, in præstegård). Noreen (1906:319ff) attempts to give a phonological description but finds he has vast numbers of exceptions. Söderbergh (1968:16 - 18) concludes that one cannot give rules. You usually, she says, get an s occurring where the first element is itself a compound. Teleman (1970:52) confirms this, and contrasts



"bokhylla för skolor"

"hylla för skolböcker"

(compare Briegleb, 1935:24 who points to the same phenomenon in German using the examples of Handwerkszeug and Stein-Werkzeug). Both Briegleb (loc.cit) and Hansen (1967:297) for German and Danish respectively provide counter-examples to this generalisation in Bahnhofplatz and brødfrugttræ. Söderbergh (loc.cit) says that there is a tendency to drop this s, possibly because of the influence of English, in modern Swedish technical language, an observation which Wennerbergh (1961:7) also makes.

Skautrup (1968:264) concludes that the modern formation -- apart from some analogous forms -- is phonologically conditioned, but no study which takes account of words formed at all periods in the history of the language is going to be able to take account of this, which is why the studies mentioned have so many difficulties. But if Skautrup is right he still has to explain the variation in papir(s) pose, blyant(s)holder, infinitiv(s)marke and other such series, and all the words where s occurs in some compounds but not in others which have the same first element (see

Hansen, 1967:297). It seems probable that we could argue for Danish in the way that Botha (1968) does for Afrikaans that the forms of compounds are completely irregular.

There is also another factor that has to be taken into account, and that is that occasionally variation can have semantic effect. Hansen (1967:298) discusses this point:

"Ved sammensætninger til mand- er alle tre muligheder udnyttet: mands- især svarende til en subjekt genitiv: mandsansigt, -arbejde, -dragt, -sang, -stolthed, -støvler, -vasen osv.; mand- bl.a. svarende til en objekt genitiv: manddrab, mandtal, men også i andre tilfælde: mandfolk, mandkøn; mande- bruges dels i sammensætninger som mandebod, -fald, -hul, dels i tilfælde hvor første led har funktion som et kvalitetsangivende adjektiv: en mandecigar, en mandesjus osv.."

3.7.2 Traditionally, a distinction is drawn between egentlige and uegentlige (German eigentlich, uneigentlich or echt, unecht; we shall translate these terms as proper, improper) compounds. Mikkelsen (1897:§39) explains it thus:

"En Sammensætning kaldes 1. EGENTLIG, naar den

er opstaaet ved en Forening af to Stammer, f.Eks. Byfoged, Graavejr ... 2. UEGENTLIG, naar den er opstaaet ved en Forening af to eller flere Ord, der oprindeligt ere sammenhørende Led i den sammenhængende Tale, f.Eks. Forglemmigej (en hel Sætning), Bysbarn (vedføjjet Tillægsfald), Hvidtøl (vedføjjet Tillægsord)."

Hansen (1967:302f) discusses the same problem, saying that there are two ways of forming compounds:

"Ved den ene støber man en morfologisk enhed af to ord der tilsammen dækker det indhold man ønsker at udtrykke. Enheden bygger på et sprogligt udtryk der rummer begge ordene samlet eller adskilt."

These are the proper compounds, and if two words could co-occur in the spoken chain but have no inflections marked in the compound they are still proper (storby, lillebil).

"Den anden fremgangsmåde består i at man bruger en syntaktisk forbindelse af to eller flere ord uændret som en enhed (juxtaposition): en præstegårds have > en præstegårdshave; en mands stemme > en mandsstemme; min moders mål > mit modersmål (sammensætninger med moder har ellers moder-)."

This distinction and its nomenclature are founded in the historical study of compounds. Indo-European formed

compounds by the collocation of two stems. This is the kind of composition that found its way into Greek and Latin (and less consistently into Sanskrit, although general rules of euphonic combination apply to juxtaposed stems, see Whitney, 1879: §§103, 1249), as reported by Darmesteter (1875:9):

"La différence essentielle entre la composition romane et la composition ancienne, c'est que la première combine des mots, la seconde des termes. Dans (les composés grecs et latins) on ne trouve que des radicaux nus, dépouillés de toute flexion, et suivis seulement d'une terminaison qui donne au composé son unité et son individualité."

It is only in the Germanic languages that we find compounds of the form stem + genitive + stem emerging, and this gave rise to the idea that these were in some way inferior or less genuine than the stem + stem forms.

There are a number of points to be made about this distinction. Firstly, it is, of course, a distinction that can only be drawn in a diachronic study: we find an s linking the two parts of a compound in many places, and it may not be clear whether or not it has this kind of genitive as its source; furthermore the e which is also found as a juncture phoneme goes back to a genitive ending at an earlier stage in the language's development, and it is

not possible to see purely synchronically whether a given compound containing the e was formed as an improper compound at a stage in the development of the language when the e still had full genitive value, or whether it was formed as a proper compound with an e added for other reasons, possibly euphony, at a later stage in the language's history. Since we shall be concerned with a synchronic study of compounds, this might in itself be reason enough to disregard the distinction. However, there are more important reasons.

When we consider Hansen's exposition of the problem (quoted above), there is a certain verisimilitude about the explanation because the forms are presented side by side and look parallel. However, if we try to make his examples definite, we immediately run into problems.

- * den mands stemmen
- * en mands stemmen
- den mands stemme
- * mands stemmen
- * mandens stemmen
- mandens stemme

The only acceptable combinations have only made mand definite not stemme. This contrasts with

mandsstemmen

where stemme is definite and mand remains unspecific (as

it does in all compounds that do not have a unique object or proper name as the first element). If the proper - improper hypothesis of the formation of compounds were correct, it would imply that all improper compounds were formed from indefinite syntagms. In fact, a genitive which modifies a noun replaces the article while the first element of a compound is a modifier (see below, §3.7.4) so this state of affairs is not really surprising. The alternative interpretation of the data, that it is because of the impossibility of making such a syntagm definite that the compound has to be formed, can be seen to be incorrect if we consider skrivebordsskuffe. Skuffen til (d)et skrivebord is not a paraphrase of skrivebordsskuffen but is still formed by making the second element of the syntagm definite.

Furthermore, there is also a problem in delimiting the two types of compound. Is storby in the sentence jeg mødte hende i en storby (compare jeg mødte hende i en stor by) proper or improper? From Mikkelsen's definition (quoted above) we cannot tell. It fits both definitions. However, if we look at the same word in the sentence jeg mødte hende i storbyen (compare jeg mødte hende i den store by) we have a proper compound (see Hansen, quoted above). The boundary between the two seems vague.

For these reasons we shall not take account of the proper - improper hypothesis of compounding, but shall assume that all compounds are proper.

3.7.3 There is also controversy as to what exactly the linking elements are. Holt (1956:195) considers that the linking s is a genitive morpheme, whilst in the opposing camp, Landmark (1969:35) argues thus:

"Da det er lite rimelig at s og e her bærer noen betydning, vil jeg ikke kalle dem for morfemer. Jeg vil heller regne dem for å høre til det foregående språktegn som kan ~~opptre~~ som ord ..., slik at disse språktegn pluss s/e blir å anse som kombinatoriske varianter av et morfem/en morfemsekvens, som kan opptre når morfemet/morfemsekvensen inngår som del av et mer komplekst ord."

Landmark's "lite rimelig" is a very weak argument for his point of view, but Holt's (loc.cit) argument for his position, namely that

"Det er netop disse bøjningers (genitivens) bortfald der er det ejendommelige ved forleddet i sammensætninger"

is historically incorrect since the forms without any

linking element occur in Indo-European before the forms with the juncture phoneme. The strongest argument for his position is that all the linking elements go back to genitive forms (or forms identical with the genitive) at an earlier stage in the language. This is equally true of the array of linking vowels in Swedish. But all the elements except the s have lost this collusion in form (or identity) with the genitive, and one can hardly take account of it in a synchronic study to conclude with Holt (*loc.cit*) that

"Man må anerkende at der i dansk er flere udtryksvarianter av størrelsen genitiv: -en- i Amalienborg, og måske det -e- der foreligger i barne- og børne-."

But there is also a historical reason for supposing that we are not, in a synchronic study, dealing with a genitive here. In Old Norse the genitive had a wide range of markers, depending upon number and gender. In modern Danish all these have died out except the -s genitive marker. The same may be claimed for German, with the exception that the feminine has its own genitive form there. But the array of linking vowels in Swedish or the linking e in Danish are the etymological descendants of these other genitive markers. However, for them to have survived when all other real genitives changed to the -s form, they cannot have been associated with any 'genitive

feeling' even at the time the -s form took over as the genitive marker, let alone today. It seems reasonable to suggest on this basis that the linking -s has exactly the same function in the compound as the linking -e and that it has no 'genitive feeling' attached to it either. It is difficult to find direct support for this claim from Danish (though see below), but we have some evidence from German that seems to show that this is at least the case there. Bloomfield (1933:231) points out that

"In Geburtstag 'birthday' the [-s] is a genitive-case ending, but would not be added, in an independent word, to a feminine noun like die Geburt, 'birth'."

Henzen (1947:58) gives further examples of this phenomenon, including Liebesdienst and Nahrungsmittel. Whilst it is morphologically impossible to add a genitive -s to a feminine noun, and we should perhaps on these grounds modify Bloomfield's "is" to "looks like", there is no contradiction involved if the -s in question does not reflect a genitive case form, but is merely a linking element. We find a similar case in Icelandic where words like landafræði can take a non-genitive -s (fræði being indeclinable) in, for example, landafræðisbók. Briegleb (1935:6) talks of Wortverknüpfung in these cases.

Furthermore, if Skautrup (1968:264 referred to above) is right and the form is phonologically conditioned, it is difficult to see why the form of the genitive should be phonologically conditioned (and different from the normal form) in just those cases where the word to which it is attached becomes the first element of a compound, but not where the word occurs in isolation: contrast, for example, en barnevogn and et barns vogn. Landmark's decision seems to lead to a simpler description.

Botha (1968:166) argues thus against the hypothesis that the juncture s is a genitive in Afrikaans:

"If we regard 'genitive' as a deep structure grammatical category -- as Fillmore (1968, p.77) does -- another possible hypothesis is that in the compounds in which the link phoneme /s/ forms part of the phonological representation of the specificans, the formative which occurs as this specificans is concatenated in the deep structure with the grammatical category 'genitive'. This hypothesis can also be falsified in both directions. Firstly, although the grammatical category 'genitive' appears in the deep structure underlying the compounds (12), the link phoneme /s/ does not constitute a segment of the phonological representations of the specificatiⁿ_g of these, and

similar, compounds

- (12) penpunt (pen point, nib)
familiekat (family cat, cat of a family)
deurknop (doorknob)

Secondly, although the presence of the link phoneme /s/ characterises the phonological form of the specificantia of the compounds (13), the grammatical category 'genitive' does not constitute part of the deep structures underlying these, and similar, compounds.

- (13) gevegsnasje (fighting nation)
gevoelsleive (emotional life)
amspenning (office medal, badge)."

This argument can be transferred, *mutatis mutandis*, to Danish, and we can replace the examples in (12) with

forfatterret
bordben
damekjole

and the examples in (13) with

redningskorps
følelsesliv
kvalitetsvarer.

There are also examples where the -s- is added or removed during the development of the language, a point which argues again for a solution where it is a linking

element rather than a genitive. Henzen (1947:59) points out that the first elements in -heit, -keit, -schaft, -ung, -ion, -tät take an -s today though they did not at the time Luther was writing (note, incidentally, that all these suffixes are concomitant with feminine gender). Briegleb's (1935) diatribe is directed at people who obviously felt at that time that it was 'wrong' to use a linking -s, and who thus left it out.

We shall, therefore, not consider these juncture elements to be genitive elements, but follow Landmark and consider them to be combinatory variants.

3.7.4 Unfortunately, satisfactory as this solution may appear, it is not quite as simple as that. The problems here start to arise when we look beyond German and Danish.

In Finnish (see Setälä & Nieminen, 1962:§§156, 194) the first element of a compound occurs usually either in the nominative or in the genitive (although other cases are permitted, particularly if the second element -- the head in Finnish as in English, Danish and German -- is a nominalisation of a verb of motion). It seems to be a bit too much of a coincidence that link elements in genetically unrelated languages should just happen to be genitives.

Similarly, if we look at Lees' (1960:199ff) description of Turkish compounds we find the same phenomenon, though here it is not the possessor but the thing possessed that is marked by the suffix -i/u. A genitive in -in is available in Turkish, but it is apparently not used in building compounds. As in the other languages, the idea of possession does not always seem to be present (e.g.: dil bilgisi, 'linguistics' language - know + Nml + possessed) but it is an overt possession marker that is used.

If we turn our attention to French, we find that many of the syntagms we have termed compound phrases may be reinterpreted as genitives. Admittedly, we find the same inconsistencies in calling the -de- link a genitive as we found in those discussions that termed the Danish linking -s- a genitive, but this would rather seem to strengthen the feeling that compound phrases like

coin de chambre

valet de chambre

chemin de fer

are in fact compounds of a sort. This kind of phrase with an overt phrasal genitive also appears in English:

the age of reason

the corner of the room

(though the presence of the article in this second case rather makes a difference, since the modifying element in a compound is normally non-specific and non-definite unless

a proper name or unique object -- see Seuren, 1973).

Interestingly enough, one exception is Sanskrit, where the use of the genitive in the first element, though attested, is rare (Whitney, 1879:§1250). It appears to be frequent in a range of other languages.

The answer is that genitives do play a part in compounding in the Germanic languages: synchronically in Icelandic (and possibly English, see below) but only diachronically in German, Danish, Swedish. We do not wish to deny the rôle played by the genitive in the development of compounds in Danish, only that it is synchronically speaking a genitive that links the two elements of a Danish compound.

We mentioned briefly above that a genitive is more like a determiner than a modifier. The justification for this claim is as follows. In a genitive like

Fred's house

Fred's is paradigmatically commutable with the, that, this, etc., but not with big, brick, white.

There are of course (at least) two types of genitive in English, as illustrated by the ambiguity of a lady's hat. In one reading this means the hat belonging to a specific lady. This is what Østergaard (1974:6) terms the determinator. In the other reading, lady is not specific and names the

type of hat, the type that is worn by the female of the species. Østergaard (loc.cit) terms this the nominator.

As we mentioned above, the modifier in a compound is, unless a proper name or a unique object, non-specific, so that the genitive in its determinator function can clearly be separated from the compound. This is further shown by the following paradigms:

- (a) Eton's system of education
 - The Eton system of education
 - The Etonian system of education
- (b) Anderson's grammar
 - An Anderson grammar
 - An Andersonian grammar

where the determinator genitive is semantically distinct from the compound or denominal adjective + noun forms (the latter two being synonymous). Even here there are some exceptions, as, for example,

- (c) Devon's climate
 - The Devon climate
 - The Devonian climate

but the major tendency is as illustrated in (a) and (b).

It is, however, not clear whether or not one can separate the compound from a sequence of genitive + noun where the genitive is a nominator. Wigzell (1969:227) does claim that

"Genitive constructions do not characteristically exhibit the same degree of internal cohesion as compound nouns and to regard them as modified compounds would in most cases be misleading"

but his examples suggest that he is merely considering determining genitives. Østergaard (loc.cit) links the two, Quirk et al (1972:§13.55ff) consider both as equivalent types of premodification.

It may well be the case, then, that modifying (nominator) genitives also form a sub-class of compound, along with the of phrases which we shall discuss in the next paragraph. The difference between an of phrase and 's premodification will then presumably be a function of the types of noun that allow 's genitives and of genitives (see Quirk et al, 1972:§§4.97ff). It certainly seems true that the vast majority of genitive + noun constructions that fall into this group have animate first elements (a lady's hat, a farmer's wife, a bird's nest, an examiners' meeting, cow's milk, etc.). One outstanding exception is summer's day (incidentally synonymous with summer day) where summer is clearly a temporal noun (Quirk et al, op.cit: §4.98(g)) which also permits 's.

If this is the case, then it seems likely that there is some systematic distinction between compounds and nominator

genitive + noun, possibly lexically conditioned. On the whole nouns denoting human beings seem to take the genitive construction when they occur in the nominator, unless the second element is a derived nominal: lady killer, manhunt. Nouns denoting animals seem to vary between the two constructions: sheep's head, sheepskin, cow's milk, cowhide, cat's cradle, cat gut. One of the deciding features may be something to do with the 'recognisability' of the animal in the item denoted by the complex, but this cannot be the only factor, as is seen by sheep's eye and by dialectal cow juice in opposition to cow's milk.

3.7.5 The solution to the whole problem of the linking elements is particularly involved, but it seems to be something like this.

The linking elements are lexically conditioned, that is that in the lexicon, along with any noun, is listed the form it takes when it becomes the first element of a compound. This is probably to lose some generalisation since, for example, all words in -ion or -tet in Danish are going to take a linking s (stationsbygning, universitetsuddannelse) but the high number of analogous formations does not allow us to state general phonological rules. It might be possible to include some kind of redundancy rules to gain

the phonological generalisations here. This lexical conditioning can then be over-ruled in the following ways:

- i) In a lexicalised compound which is not generated by the grammar anyway, but listed in the lexicon;
- ii) In specific cases in order to avoid confusing homonymy. Briegleb (1935:10) gives the example for German of Sommerszeit ('summertime' as in 'in the summertime we love to go for picnics') vs. Sommerzeit ('summer time' as in 'British Summer Time');
- iii) Certain words can have two or more possible forms, either in free variation (papir(s)pose, blyant(s)tegning) or with a semantic difference between them (see Hansen, 1967: 298 on mand, quoted above, §3.7.1).

It would seem that this rule of lexical marking can be extended to stress assignation in English, although we have presented arguments against this above. In the last section we were, even if we did not say so in so many words, dealing with lexicalised material, a constraint laid upon us by the format of the works quoted and referred to. If we consider non-lexicalised material the rule does not seem to be so prone to exceptions. The vacillation in stress can then be explained partially by prosodic features, as noted by Bolinger, and partly because of the normal lack of semantic effect of stress vacillation (but see Lutsdorf, quoted above, §3.6.42).

With these provisos in mind, we can now claim that as the presence of a particular linking element can be lexically marked on the first element of a Danish compound, so stress can be marked in English, but on the second element of the compound. Thus -cake always leads to unity stress, while -pie always leads to double stress (see Lees, 1960: 120, quoted above, §3.6.43); occasionally lexicalised compounds break the pattern, so that we find, for example, mathsmaster, physics master, etc., with compound stress, but headmaster with even or second element stress; in specific cases stress difference can be used to avoid confusing homonymy, thus birth day vs. birthday and girl friend vs. girlfriend (see above, §3.6.45); and certain elements can have two forms, either in free variation (ice cream) or with a semantic difference (coffee cream with double stress, but face cream with compound stress).

It seems that we can even explain the of paraphrases in this way. If we consider the German word Narrenfreiheit (the extra allowance made for court jesters who could do and say things in their professional capacity for which other people might be punished, and, by extension, any such allowance) we find that we have to translate it as freedom or liberty of fools (or the alternative form with an 's genitive). *Foolliberty and *foolfreedom are both unacceptable. If we follow this through, we find that all

compounds in -freedom or -liberty are unacceptable. We have to use a paraphrase.⁷ Similarly, age (= era), though it can be preceded in a compound by a concrete noun (stone age, iron age), can never be preceded by an abstract noun (*reason age but age of reason; *mystery age but age of mystery). Here we have a clear case of variation between two forms on semantic grounds. It would seem, therefore, that we can consider such of phrases as lexically conditioned forms of compounds.

This principle cannot account for all of phrases, however, since the of phrase seems very often to be a stylistic variant of a compound. Consider:

correlation coefficient	coefficient of correlation
viewpoint (in one sense)	point of view
peace lover	lover of peace
deer hunter	hunter of deer.

It is difficult to say when these stylistic paraphrases are allowed. From the examples quoted, it might appear that they are permissible if the head of the construction is an agentive or the determinant is abstract. While there

⁷ As if to prove this statement incorrect, The Observer 17/11-74 had a headline 'Editors to see Foot on Press freedom'. This may be a case where newspapers are ahead of everyone else (see §1.1.4).

may be some correlation here, these conditions are not sufficient, as is shown by the fact that peace worker does not give worker of peace but worker for peace. It does appear to be the case that for an of phrase with no article to be possible, the determinant must be either semantically singular or grammatically non-countable, but again it is not clear whether this is a sufficient condition. We shall limit ourselves to noting the alternative source of of phrases.

3.8 VERB + NOUN COMPOUNDS.

3.8.1 The main problem with verb + noun compounds discussed in the literature is the form of the verb, and this is particularly true of French. Darmesteter (1875:146ff) argues strongly that this is an imperative, not only in French and the other Romance languages, but also in German and English (op.cit:155). This claim seems to be based in the first instance on forms like rendez-vous, Vergissmeinnicht, forglemmigej, forget-me-not, Rührmichnichtan, touch-me-not, laissez-passer, décrochez-moi-ça, etc., since, as Darmesteter points out (op.cit:148), 14/15 of verb + noun compounds in French are formed with first conjugation verbs where there is no difference between the imperative singular, the stem and the third person singular of the present indicative. All of the examples listed by Darmesteter for English are equally vague between the imperative and the stem or infinitive, e.g.: breakfast, cutthroat, etc..

Darmesteter (op.cit:160) claims, however, that it is impossible that the verb should be a stem, a thème verbal:

"Dans nos composés, nous avons précisément des compléments: passa-tempo, porte-manteau, tire-botte, fac-totum, Bleibimhaus. Le verbe ne présente donc point une idée générale d'action, mais l'idée d'une action s'exerce sur un objet; par suite le verbe sort de l'abstraction pour

entrer dans la réalité vivante: il est donc personnel, et il faut y voir absolument un temps personnel."

Now this is a very weak argument. Darmesteter is making the mistake, made equally by others in the discussion of the linking -s- of Danish compounds (see above, §3.7), of confusing form and function. He assumes that if the form is equated with that of the infinitive or stem then the semantic effect must be that of the same part of the verb. He does not allow for the fact that an identical form may fulfill several functions: the clearest example is perhaps the suffix -s in English which can show plurality, genitiveness or present tense, third person singular; one would not wish to say that genitiveness and plurality must be equated semantically because they happen to co-incide in form. Furthermore, Darmesteter is assuming that the stem of a verb must have a consistent impersonal semantic effect. But one could equally well argue that the stem is merely the maximally unmarked form of the verb, and is vague as regards (im)personalness, showing only which verb is present.

Marouzeau (1955:90) criticises Darmesteter's claim that the verb in these compounds is an imperative on semantic grounds:

"Quel sens peut avoir l'impératif (et adressé à qui?) dans passee-montagne?"

and again (op.cit:91):

"Quelle vraisemblance de qualifier un paresseux (fainéant) en l'invitant précisément à ne rien faire (fais néant!), un vaurien en lui enjoignant de ne rien valoir?"

Even Spitzer's solution (quoted in Lloyd, 1966:258) of seeing in such words jeering nicknames does not seem to give a satisfactory reply to these questions.

Even Darmesteter (op.cit:166) has to renounce his claim for a synchronic imperative:

"Enfin, reconnaissons les faits dans toute leur gravité. Pour le vulgaire, l'impératif, s'il a jamais existé dans nos composés, n'y existe plus actuellement."

Later (op.cit:175/6) he modifies this rather:

"Deux forces agissent pour former nos composés verbaux: l'une primitive, la force qui les a créés à l'origine avec le verbe à l'impératif, et qui, toujours existante, est encore pleine d'activité; l'autre postérieure, la force analogique, qui imite et applique aveuglément, sans se soucier des erreurs, les formes dues à la première."

Summing up his position, he says (op.cit:177):

"Les composés sont formés primitivement,

et de nos jours encore, avec l'impératif.

Une analyse inexacte amène à y voir des créations avec l'indicatif; mais la science qui rend compte de cette erreur a le droit de la corriger, et l'on peut admettre que logiquement, sinon en fait, tous les composés contiennent l'impératif."

Yet it is on the level of logic that Marouzeau's arguments (quoted above) have greatest weight. Note, however, that if we assume the force of analogy creating compounds on the model of original imperatives, we can then recapitulate our arguments against the genitive analysis of the Danish linking -s- in compounds. Originally the form of the verb may well have been an imperative (Lloyd, 1966:257 says that the evidence seems to be beyond dispute on this point), and this would account for the rendez-vous series of examples quoted above, but this does not mean to say that it has to be an imperative in a synchronic study. This conclusion is reinforced because all the clearest examples of imperative formations are in non-productive (lexicalised) series.

But what of the arguments that lead Darmesteter to admit that some of these verbs look like indicatives? The arguments here apply solely to French, since the form of the verb does not coincide with the form of the indicative in Danish, English or German.

If we leave aside his examples from Latin and Old French, examples which deal mostly with proper names, Darmesteter (op.cit:165/6) has two main reasons for admitting a resemblance with an indicative in some compounds. The first is that in some words

"De création moderne ... le peuple qui les a formés y a mis assurément le temps qu'y indique l'orthographe actuelle, le présent."

These are words like tord-boyaux, va-et-vient, boit-tout, abat-jour. -In fact, all this shows conclusively is that, at the time the orthography for these words was fixed, the verbal element was not considered to be an imperative. His second reason is the gender of these words: they are all masculine, which is the unmarked (neutral) gender. Darmesteter explains this by a paraphrase in ce qui Un porte-feuille is ce qui porte les feuilles, and so on. These arguments Darmesteter does not consider to be particularly forceful. But if they are not terribly strong arguments in favour of an indicative, it seems to us that they are stronger arguments against an imperative, at least in a synchronic grammar.

This, then, is the point of view which we shall adopt here: the verbal element of a verb + noun compound is, synchronically at least, not an imperative but rather some

kind of verbal stem. In this we follow Lewicka (1963:133) who says that in these compounds

"Le premier élément, quelle qu'en soit l'origine, est ressenti comme un radical verbal pur."

3.8.2 Marouzeau (1955:89) cites a large number of toponyms (Hurlevent, Chantemerle) and a very few lexicalised non-toponyms (croque-monsieur, marchepied, pensebête) of the form verb + noun where the noun is apparently the deep structure subject of the verb. These are exceptions to a general rule which says that in a verb + noun compound in French the noun is the direct object of the verb, which explains Darmesteter's paraphrase in ce qui ... (see above). The same is not true of Danish and English. In English there are a few examples of the type bakehouse where the second element shows the location of the activity of the first, although this series does not seem to be productive. In Danish there are many more of this type, and the series is productive: flyveplads, skrivebord, flyveskrift, skriveskrift, etc.. These normally have English equivalents with forms in -ing in the first element.

But there is one very great problem with first element verbs in the Germanic languages, as is pointed out by Landmark (1969:66):

"I noen tilfeller kan en vanskelig avgjøre om det er verb eller substantiv en har for seg Det gjelder i de eksempler hvor første IC formelt sett kan være 1) både verb i infinitiv og svakt substantiv: 'ripe/fast', eller 2) både verb uten infinitivsmorfem og sterkt substantiv: 'styrt/sikker'. Det ser ut som forskjellen mellom ordklassene substantiv og verb er 'nøytralisert' (opphevet) i slike tilfeller."

It is also the case in Danish and Norwegian, though Landmark fails to point this out, that the -e on the end of what looks like an infinitive might in fact not be an infinitive -e but a linking -e (see above, §3.7). We can see this problem very clearly in relation to English, which, as we have already had occasion to note (§3.6.1), is notorious for allowing words to change word-class without any concomitant change of form. Bakehouse and drawbridge are two cases where there is no noun of the same form as the verb in the first element, and they are both lexicalised, but if we look at cookhouse, fall-guy, daredevil, rattlesnake, break-water, cutthroat and many others we find that, to judge by

the form alone, the first element could just as easily be a noun as a verb. (See Koziol, 1937:§117 anm., and, for similar remarks with reference to German, Carr, 1939:175) There seem particularly to be very few productive series where the first element is not thus ambiguous in English. Possibly compounds with make- as a first element are an exception to this.

In Danish, though there are, as Landmark points out, large numbers of compounds where the first element is undecidable in this way, compounds like rejseleder, rejsekompagnon, plantepind, taleevne, arvegods (see also Hansen, 1967:316), there are still many compounds where the first element, again judging by the form, must be a verb: the examples quoted above in flyve- and skrive- demonstrate this.

In Danish and English, then, we find that the categorial adherence of the first element in so-called verb + noun compounds is not as certain as it might seem. We shall return to consider some of the implications of this later (§4.3.1). In French, on the other hand, such ambiguity of adherence virtually never occurs. Firstly, in the vast majority of cases there is no nominal element homonymous with the verbal element in question: there is no nominal element of the form nettoie, ouvre, couvre, pèse, tourne, traîne, etc., and yet each of these is repeatedly found as the first element of a compound. In cases where there is a homonymous

clash, there is very often a control element in the gender of the compound. If both elements are nouns, the gender of the compound will normally be the gender of the head, if the first element is a verb the compound will normally be masculine (see above, §2.2.24). Thus marchepied, for example, must contain a verb, since the noun marche is feminine. Chasse-pied equally, if the semantics of the elements did not make a noun + noun reading absurd, would still have to contain a verb because it is masculine. (Darmesteter, 1875:193 lists some counter-examples where compounds, though evidently containing a verb semantically, are of feminine gender. Robert, however, assigns masculine gender to most of the few of these he lists -- e.g. chasse-marée. There would appear to have been a movement of regularisation in the three quarters of a century intervening.) There are thus very few examples in French, examples with garde- being the exceptions to prove the rule, where there can be any doubt that the first element of these compounds is a superficial verb.

3.8.3 A further problem arises when we consider the verb + noun compounds of French and English where the noun is the direct object of the verb. So far we have dealt only with endocentric compounds,* and have defined these as being

hyponyms of the expressed head of the compound (see §1.1.3). But if we consider garde-feu, attrape-nigaud, cutthroat, killjoy, we find that they are not types of feu, nigaud, throat and joy at all. The real head appears to be unexpressed: we are dealing here with exocentric compounds. This is not true for Danish where læsebog, bankekød are types of bog, kød and thus endocentric compounds.

Rohrer (1967:§1.4.2) argues that in French, compounds like porte-plume have an agentive "Nullmorphem", and are in fact parallel to German Federhalter. Later (op.cit: §2.15.2) he suggests that these are, however, not exocentrics ("Nullableitungen") but are to be reckoned as noun + noun compounds, the first element containing both the idea of the action and the idea of the agentivity. It is difficult to see the distinction Rohrer is trying to draw here: there seems to be no real distinction between the two groups, only a terminological one. Also, since the distinction between endocentric and exocentric is fundamentally a distinction at surface structure level, it cannot take account of possible zero morphs which only show up in the deep structure. Further, we have seen above (§3.8.2) that these first elements act differently from the way in which one would expect a nominal head of construction to behave. We cannot therefore agree with Rohrer that these are noun + noun compounds like science-teacher, but we shall consider them to be exocentric compounds.

PART TWO

THEORY

CHAPTER IV

THE GRAMMAR

4.1 ADJECTIVE + NOUN.

4.1.1 Before beginning to talk about the generation of adjective + noun compounds, we must look at the concepts of ambiguity and vagueness.¹ Starosta (lecture, University of Edinburgh, summer term, 1974), although not actually using the term 'vagueness', suggested that ambiguity is that which has syntactic consequences and thus has to be accounted for by a grammar, while vagueness has no syntactic consequences. Chomsky's (1971:186 fn) examples of John's picture and John's puppy, he argued, are thus not ambiguous, although they may have the various interpretations which Chomsky allots to them. Starosta's semantics only gives that which is common to all possible readings. The shooting of the hunters, on the other hand, is ambiguous, since only in one reading can one add by the natives. Obviously, such a distinction is going to depend to some extent upon what one takes to be a

¹ The term 'vague' is used remarkably vaguely, if we may use the word, (see Binnick, 1970). We do not here use the term in the way Kooij (1971:119) does, for example, when he points out that native speakers of English can argue about whether a dress is yellow or brown because "the range of referential application (of the colour terms) is not unambiguously delimited." We shall use the term in a sense closer to Lakoff's (1970a: see below).

'syntactic consequence' and thus upon the scope one attributes to syntax, but nevertheless the distinction would seem to be fairly clear.

Lakoff (1970a) provides a different test, and one which gives different results. He takes some "clear" examples on both sides.

1. Selma likes visiting relatives
he says, is clearly ambiguous, while

2. Sam bought a new lamp
is vague because he may have paid \$5 or \$100 for it: no specification is given. He points out that

3. Selma likes visiting relatives and so does Sam
is nevertheless only two ways ambiguous, not four as one might predict, since "visiting relatives" cannot be given a different interpretation in the two halves of the sentence. On the other hand, for

4. Sam bought a new lamp and so did Sandra
to be true, it does not have to be true that they both paid \$5. The construction has a multiplicity of readings. He suggests that this might be a test for ambiguity as opposed to vagueness.

Lakoff's test cannot be applied to noun phrases in isolation, of course, but if we consider

5. Peter likes John's picture and so does Fred

we see that by Lakoff's test this is ambiguous, since it cannot mean, for example, Peter likes the picture John painted and Fred likes the picture of John. His criterion clashes, then, with Starosta's.

One can see several things which might account for this: Starosta seems to be looking for some external criterion, while Lakoff starts off by assuming some kind of definition for ambiguity and vagueness, and seeks only a test by which to judge doubtful cases; Starosta is looking primarily at ambiguity, Lakoff's criterion is much more determined by a prior understanding about what "vague" implies -- and his vague sentences are 'vague' in a very woolly way. As we understand Starosta, he could only allow a sentence to be vague on a pertinent point, but by Lakoff's criterion a sentence like

6. Peter painted John's picture
might be vague not only with respect to whether he used oils or water-colours, but as to whether he was a foot-and-mouth painter or used his hands, how big the picture was, whether it was a good likeness, whether it was realist or abstract and even whether John had one eye or two. At this level the distinction becomes merely trivial, for it seems unlikely that any sentence could fail to be vague, as indeed is pointed out by Mistler-Lachman (1973:550). In fact, one wonders to what extent the word 'vague' is appropriate, and

whether 'irrelevant' might not be a better term, particularly in the light of Gricean principles which state that the speaker gives all relevant information. For this reason we find Starosta's distinction more valid, providing that he can adequately define a 'syntactic consequence'.

However, despite this, Lakoff's test can prove useful. Firstly it is easy to apply, and secondly it appears to be the case that it defines a larger set of constructions than does Starosta's. It also makes a definite decision one way or the other. So that, although Lakoff's test might define as ambiguous some constructions which one, by Starosta's test, would wish to regard merely as vague, it is unlikely to define as vague anything that Starosta would define as ambiguous. Thus if we use Lakoff's test as a test for vagueness, it will define a common core of vague sentences which, provided the information is in some way relevant, would be defined as vague by either of the theories. Furthermore, while Starosta's criterion can only provide negative evidence for a construction's being vague (the evidence being that one can find no syntactic difference that depends upon the double reading) Lakoff's provides a more positive kind of test, if one is testing for vagueness.

If we now return to the examples we considered in §3.2 showing the two readings of the copula, we can apply Lakoff's

test to them. Making a new sentence based on (30) and (31) from §3.2.5 (This is ward six; the men in here are mad: This is class six; the kids in here are mad) we can get

7. The kids in here are mad and so are the men in that asylum.

This sentence, accepted by native speakers, has only two possible readings, one in which everyone is permanently mad and one with the mixed reading for the copula. In fact the mixed reading (the kids are temporarily mad, the men permanently so) is the more natural one. The other two of the four readings Lakoff's test for vagueness would predict (where the men are mad at the moment and the kids permanently or where both are merely mad temporarily) are syntactically possible, but are ruled out by the pragmatics of the situation. By Lakoff's test, then, the different readings for the copula are not a case of ambiguity but a case of vagueness. That is, we do not have to produce two separate underlying structures to account for the difference noticeable at surface level.

A further argument in favour of the two readings of the copula being a case of vagueness rather than ambiguity is available if one accepts Binnick's (1970:151) statement that

"The presuppositions involved in ambiguity ... are always linguistically bound; indeed they are

linguistic in nature. It is wrong to think of ambiguity as a case of a word or expression representing two or more 'ideas,' but rather it is a matter of two or more linguistic terms or categories. Otherwise we would have to argue that they is ambiguous because it can gloss both (Spanish) ellos and ellas."

In the same way, the two readings of BE are not linguistically coded in English, although they translate SER and ESTAR. BE is thus vague rather than ambiguous.

Kooij's (1971:67, quoted in Zwicky, 1973:103) main criterion for ambiguity is that

"... If in a grammatical description, more than one structure, let us say structures A and B, are assigned to one and the same sentence, there should be other sentences in that same language which within the framework of the same grammatical description unambiguously have the grammatical structure A, and other sentences, which unambiguously have the grammatical structure B."

Now, as we saw in §3.2, the only cases where one of the two readings is completely ruled out are (a) when the verb to be is not expressed or (b) when an adverb specifying just

this difference is added.

Zwicky (1973:101) argues that one cannot argue from material added as in (b).

"It won't do to claim that (10) (he set up a private army (recent past vs remote past)) can be 'disambiguated' by just or some time ago:

(14) He just set up a private army

(15) Some time ago he set up a private army

because if (10) is merely vague, then the added material will supply the necessary semantic content, whereas if it is ambiguous, the added material will select the necessary semantic content."

To a certain extent this argues against the test proposed by Starosta (see above), although Starosta's test does include far more material than is eliminated by this proviso. With this point in mind, we can see that Kooij's test, like the others we have mentioned, points to the two readings of BE being a case of vagueness, not ambiguity. Other tests proposed by Zwicky (op.cit) lead us to the same conclusion. Thus, if we have two rivers, the Mbawe and the Igtoto, which are navigable in the two different senses (see §3.2.3) we can still say

8. The Mbawe and the Igtoto are navigable.

We thus conclude that there is no reason to suppose that the

different readings of the copula in English (or, by extension, Danish, French, German, etc.) are caused by ambiguity and thus require two separate deep structures, while there is, on the contrary, some reason to suppose that the distinction is merely vague, and requires only one deep structure.

4.1.2 Brekle (1970:58, 1973:7/8) claims that there is no tense category present in a compound. Lipka (1971:§4.2.3) and Teleman (1970:38) also take this position. Rohrer (1973:3-5), on the other hand, makes the apparent counter-claim that tense is a category present in word-formation. We must insist on the word "apparent" since all Rohrer's examples come from derivation not from compounding. But Rohrer is following Lees (1960) who derives compounds from actualised sentences which, in the model in question, must contain a category tense.

Unfortunately, two different processes appear to have been confused in this discussion of tense. Let us consider the following from Rohrer (1973:4):

"Moreover, if we interpret words like winner, owner, etc. temporally, why not also interpret simple words like un aveugle, une femme, etc.

as ambiguous with respect to tense?

E. Bach is aware of this possibility and interprets certain NP's like my wife as 'x { is, was, will be } my wife'."

Let us assume that this is, in fact, what Bach says. Now it seems fair enough to say that some nouns are tensed and some appear to be ambiguous with respect to tense. Thus, to use Bach's example (1968:100)

9. I knew the beautiful girl when she still had
braces on her teeth and hated boys
demands a reading whereby the girl is beautiful now, while

10. My wife went to the cinema for the first time
with her father

makes no specification as to the tense of wife. In many cases tensing of a noun phrase is redundant anyway in that it merely agrees with the predicate of the sentence in which it occurs (see Anderson, 1973b). However, examples like those discussed by Bach (1968) would appear to be numerous enough to demand that nouns should be tensed in a grammar, in the way suggested by Bach (1968) or Anderson (1973b). The same kind of argument can be applied to compound nouns, as is shown by

11. I knew the madman when he was two years old
and sane

12. The tenderfoot has become an experienced scout

13. Our houseboat will be made from a converted barge.

If we extend Rohrer's (1973) arguments to cover compounds as well, we end up with an underlying structure rather like that of Lees (1960), perhaps

14. I knew the man (the man is mad) (when {the man was two years old and the man was sane}).

However, we have seen in §3.2.1 that there are semantic arguments against this kind of derivation.

We have argued then that all noun phrases, not only cases of word-formation, are tensed. It is thus trivial to say that compounds and morphological derivatives are tensed, and indeed this misses the true generalisation. Yet to this extent one can agree with Rohrer that compounds are tensed.

This does not, however, seem to be what Brekle has in mind when he says (1970:58) that

"Weder im Deutschen noch im Englischen
Tempus- oder Modalkategorien u.ä. im
Bereich der Komposition und Derivation
konstitutionell eine Rolle spielen."

What Brekle seems to mean here is that the relationship between the two elements inside the compound, the relationship between mad and man in madman is not tensed. These elements, as we have already seen (§3.2), are related by a feature of INHERENCE, which is aspectual in nature, and semantically an INHERENT feature cannot be tensed: the aspectual category INHERENT entails a semantically tenseless predication. On

this level, we must agree with Brekle, Lipka and Teleman that compounds are not tensed, though they are aspectually marked. This is supported intuitively: a blackbird is not a bird which was black two hours ago, a bird which is black right now or a bird which will be black in a couple of hours' time; it is a bird which can be defined by its blackness. Similarly with Danish and French examples like lilleskole and petit pain.

4.1.3 It seems further that mood² and negation are as irrelevant to compounding as tense is, but the evidence here is far more tenuous.

In the case of mood the arguments appear to be primarily negative: it would seem counter-intuitive to coin a compound, say tree-axe to mean 'an axe which { may, might, can, could, should, ought to, will } be used for cutting down trees.' In

² It is not clear exactly what Fillmore (1968:23) means by the term mood which he does not expand. We assume here that it includes (a) modal verbs, (b) statement/interrogative/imperative. 'Mood' in the traditional sense of indicative vs. subjunctive would seem to be a surface structure category and as such irrelevant here.

fact, such a source would not fit with the determinant's being the primary defining characteristic (see §3.4.4) of the subgroup which the compound denotes, since although a tree-axe may, might, could be used for felling geraniums, as an offensive weapon or for chopping the firewood, its primary function is that it is used for felling trees.

Similarly, one cannot envisage a compound of the form tree-axe where one is questioning the fact that the axe is intended for cutting down trees, nor where one is commanding that it be used in this way. We have already (§3.8.1) argued against the thesis that verbal initial elements in compounds are imperative.

Brekle (1970:59) contents himself merely with saying that

"Analog (to the case against quantifiers in compounds) argumentiert werden kann bei der Annahme der Irrelevanz der Kategorien 'Tempus', 'Modus' etc. für die semantische Seite von Kompositionsstrukturen"

although this is perhaps not quite as clear as one might wish. Even Rohrer who sets out to show (1973:2)

"That most of the elements that Brekle and Fillmore include in the 'modality' component can be found in elements of wordformation"

does not argue in favour of mood in word-formation and indeed his conclusion (op.cit:11) includes speculation about "Why sentences which are specified for tense and mood cannot be transformed into compounds" thus apparently contradicting the main thesis of his paper. It seems then to be generally accepted that mood plays no part in compounding.

Negation is an even more tricky problem. Rohrer (1973: 2/3) argues that negation is present in word-formation on the basis of derivational pairs like

15. Il n'est pas probable qu'elle vienne

16. Il est improbable qu'elle vienne

which he claims are synonymous and derived from each other. First of all, these sentences, and others like them, e.g.

17. That man is not sociable

18. That man is unsociable

19. Le chef n'est pas content

20. Le chef est mécontent,

are not synonymous, since the form with the negative in the derivative seems to be consistently stronger, and so strictly speaking one should not be able to derive the second from the first in each case (at least not directly) without allowing transformations to change meaning. However, this does not really provide any counter-evidence to Rohrer's claim that negation plays a rôle in word-formation, only to his implicit claim that sentences like (16) are derived from sentences

like (15) or from a common source. Brekle remarks (1973:7) on this point that he has

"Nicht behauptet, dass Negation im Bereich der gesamten Wortbildung keine Rolle spiele -- also Derivation mit eingeschlossen -- sondern (sich) auf den Bereich der Nominalkomposition eingeschränkt."

Unfortunately, he provides no argumentation or evidence in favour of his position: he does not tell us how he would wish to deal with words like non-starter, no-go-area, non-event, non-sens, non-intervention, non-violence, Nichtsnutz, Nichtschwimmer, Nichtwissen, ikke-fagmand, ikke-abonenter, intetkøn, ingenting, icke-rökare (all lexicalised compounds³). There seem to be two different ways of dealing with this type of compound: the first is to derive the negative element from the modality component (in a Fillmorean grammar) or from a standard negative 'constituent' (in a Chomskyan grammar) and to merge the negation with the head of the compound by transformation. This is more or less the procedure employed by Rohrer for derivation. However, there is a vast difference between

21. He decided not to hear the suit
22. He decided to hear the non-suit

³ All compounds used as illustration in this chapter are, unless otherwise stated, observed, non-lexicalised examples.

23. Det er intet køn

24. Det er intetkøn

(although the examples quoted above do not necessarily give such clear distinctions) which, if this method were employed, would come from the same deep structure and so be synonymous. The alternative solution is to say that the negative element is an adverb in the same way as any other adverb that provides the first element of a compound, only it has a negative semantic effect. This does not necessarily rule out the possibility of lexical decomposition, since the adverb node could have a sentence embedded under it. This solution, the one we shall use, although we shall not go into the nature of the possible lexical decomposition of negative adverbs, means that the negative element of the modality is irrelevant in the generation of compounds.

4.1.4 It would appear then, from the above discussion, that the only part of Fillmore's modality constituent which we have to generate when deriving compounds is the aspect node. But we can now see that we do not, in fact, even need to generate that, and that to do so would actually involve us in a contradiction.

We argued above (§4.1.1) that the distinction between the two readings of the man is mad was caused by vagueness, not ambiguity, and that we thus did not require two separate underlying structures to account for these two readings. Yet now we appear to be in a position where we have to generate two underlying structures, reflecting exactly this distinction, in order to distinguish compounds from normal sentences. But if we look more closely at the times when we actually need to generate this aspectual marker, we find that they are very strictly limited: we need it to generate compounds, to prepose navigable class adjectives and in the generation of agentives. It would seem that in each of these cases we can generate no modality constituent, and account for the aspect by a redundancy rule which marks the aspect as [+HIP] in just those cases where no modality is generated. (The term 'redundancy rule' may be rather misleading here, since INHERENT aspect may be seen as a natural result of a failure to generate a Modality constituent and thus further specify mood, negation, tense and aspect.) In this way we capture the markedness of the INHERENT aspect (see §3.2.5), account for the vagueness of most English sentences in respect of this distinction, and we can still generate a normal aspectual marker to account for the different copulas in Spanish, etc.. We thus leave the pragmatic component or co-occurring adverbs to account for the INHERENT reading when it applies elsewhere -- as in fact we

already had, by implication, when we concluded that the distinction was not an ambiguous one.

Now, there are three ways of not generating a Modality constituent in these cases. The first is to insert an optional rule whereby

$$25. M \rightarrow \emptyset$$

but in a dependency grammar this rule is just meaningless, and if the rule is taken to be a Phrase Structure rule as in the works of Fillmore, then it breaks one of the basic constraints on such rules, that constituents must not be rewritten as \emptyset . The second possibility might be a rule of the form

$$26. S \rightarrow (M) * P.$$

One difficulty with this rule is that it would then have to be constrained so that the M was only omitted when the S was the daughter of an NP, and then not in every case. This is not impossible, if, for example, NP cannot govern S but an arbitrary symbol, say Z, which is then replaced for the left hand symbol in (26). However, in this case, the generality of embedded sentences being of the same structure as matrix sentences is lost. Also, this rule is apparently redundant, in that tree-pruning might apply to it. This would give our third, and preferred possibility of embedding P directly under the NP instead of S. Our redundancy rule would now specify aspect as [+HIP] in just those cases where

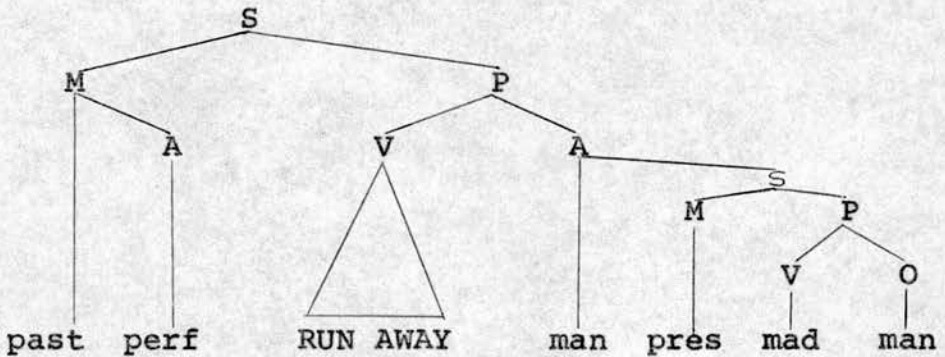
P was embedded rather than S. Such a solution cannot lead to confusion between adjectives that form compounds (like mad) and adjectives that are preposed (like navigable) since no adjective appears in both classes.

We are now, therefore, in a position to distinguish between the man who is mad from which, we will argue with Vendler (1968:85ff) the mad man is derived, and the madman (lexicalised example). In the trees below they have both been put into the frame

27. The --- ran away.

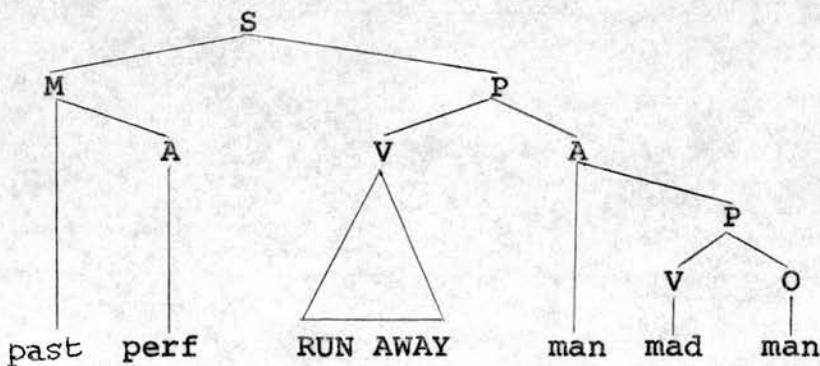
Tensed predicates on NPs and nouns below case nodes have been omitted for simplicity. The same principle can, *mutatis mutandis*, be applied to sentences including navigable class adjectives.

28.



The man who is mad ran away \Rightarrow the mad ~~man~~ ran away

29.



The madman ran away.

By embedding a proposition rather than a sentence our model gains a generalisation. The difference between word-formation (or at least some parts of it) and sentence construction is defined without the use of an extra component (see Rohrer, 1973:2). The generalisation, however, can only be gained in a Fillmorean grammar, since there is no constituent in a Chomskyan grammar which covers the items we have found it unnecessary to generate. If we wanted to allow for the embedding of a sentence without an Aux in a Chomskyan framework (the nearest we could get to an equivalent) we should need an extra, restricted, PS rule in the base to permit this, and the generalisation would immediately be lost.

4.1.5 Once again, we have argued this derivation purely on the basis of English examples, and we have to ask whether the principles involved can be extended to cover the other languages we are dealing with.

All the factors seem to apply in Danish as they do in English. One can argue analogously for the vagueness of *VERE*, and we have already seen (§3.2.6) that there is *INHERENCE* in Danish, as well. Nouns appear to be tensed exactly in the same way as in English; mood and negation seem to function identically as far as our portion of the grammar

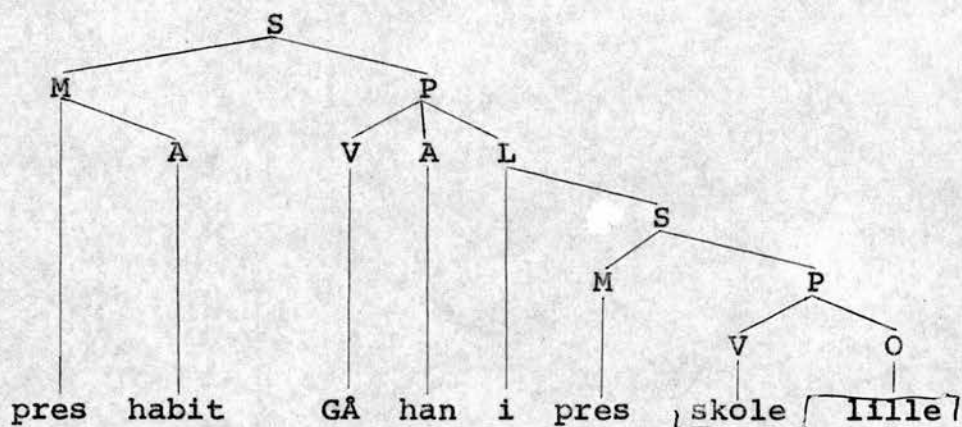
is concerned: the only difference seems to be that there is nothing in Danish to equate with navigable class adjectives.

If we wish to distinguish, say, lille skole from lilleskole, in, for example,

30. Han går i en ---

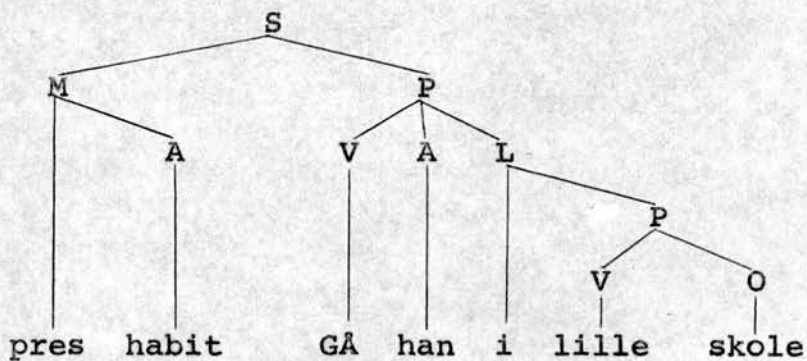
we can do it in the same way as we have shown above for English (abbreviating as before):

31.



Han går i en lille skole.

32.



Han går i en lilleskole.

The transformations applying to the output of these trees, however, become more complex in Danish than in English, particularly if the O node is marked as [+def] or [+pl]. The definite form of (31) will have to give

31a. Han går i den lille skole

and the plural (definite)

31b. De går i de små skoler.

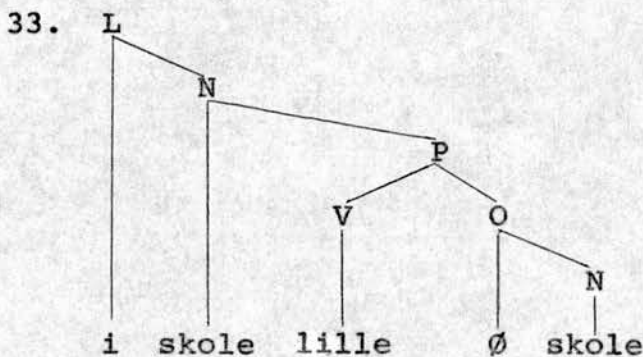
The definite form of (32) is

32a. Han går i lilleskolen

and the plural (definite)

32b. De går i lilleskolene.

Of course, this problem does also apply in English as far as plural formation is concerned, but the problem appears more complex in Danish. In fact, it can be solved in the same way in both languages. As we mentioned above, the trees (28), (29), (31), (32) are abbreviated, and if we expand, for example, (32) below the L node, we get



(the tense is not included in this diagram). It is presumably the top N which is marked for definiteness, plurality and so on, the lower N having the same features copied on

to it since it is the head noun which shows the number and gender of a compound (but on the subject of copying, see below §5.3.42 for a modification to this statement). Where P is immediately dominated by N everything below P must be treated as a single unit -- as one 'word' -- by successive morphological rules. This accounts to some extent for the paradox about the notion of a compound word pointed out by Allerton (1972:321):

"By compound word we generally mean a 'word' made up of two or more other 'words.' Now if a word is defined as some kind of minimum unit, such as the minimum syntactic unit amenable to Lyons' tests of permutability ('positional mobility') and uninterruptability (1968:202) how can both the compound word (e.g. railway) and the component words (e.g. rail and way) simultaneously conform to these criteria of minimalness (?)"

We can find further support for this view in the behaviour of navigable class adjectives. If another word is interposed between a preposed adjective of this type and the following noun, the result is usually an odd phrase, if not an unacceptable one. Where a phrase of this type is judged acceptable, it is very often because the interposed item forms a new semantic whole, often a compound, with the noun, and the navigable class adjective is then seen as

proposed to the new semantic unit. For example,

34. The officer commanding

35. The commanding officer

are noun phrases which are affected in this way, and

36. The commanding tall officer

is odd unless one imagines a subgroup of officers who are tall officers, with one of them in command of the subgroup; he could then be described by (36). Similarly,

37. The only soluble difficult problem

is an odd construction. (Cp. §3.6.44, where we saw the same criterion defining a compound.) This criterion of the creation of a new semantic subgroup seems to a large extent to coincide with the different types of adjective in English:

38. The commanding American officer

is acceptable (a) because American officer is a semantic group and (b) because American belongs to the correct class of adjectives and is thus permitted to co-occur with commanding and after it.

Danish does differ from English in the array of adjectives it allows to form compounds. In English, the only adjectives which compound are either Germanic or very early Romance loans, mainly monosyllabic but with a number of disyllables (particularly among the Romance loans). As well as the equivalent of the Germanic adjectives, Danish allows compounding with a number of more recent adjectives, partic-

ularly loan words in -al. We may quote ritualtyranniet, socialcenter, triviallitteratur and privatbyggeri. But since these adjectives can be used both attributively and predicatively, they do not appear to contradict any of the generalisations we have proposed.

4.1.6 The problems facing us in French are completely different. Here the major difficulty is deciding when we have an adjective + noun (or noun + adjective) compound, and when we have a normal noun phrase that includes an adjective.

Rohrer (1967:§1.3.10) gives us some criteria for this, and he later returns to the problem (op.cit:§2.12.1). His criteria are as follows:

1. The position of the adjective is fixed
2. The adjective cannot be adverbially modified
3. The adjective cannot be co-ordinated
4. Du, de la, de l', des are used before a preposed adjective, rather than de
5. Single word synonyms exist
6. In some cases the position of the adjective is abnormal
7. The compound is dealt with as a unit when other

adjectives are being positioned.

The difficulty with all these criteria is that they might equally well be used to identify idioms, and indeed one suspects that insofar as they identify compounds it is lexicalised compounds which they distinguish, not nonce formations. Only one of this type was found in our corpus and that was six-pack, which is so obviously a loan from English, that it scarcely needs to be taken into consideration, and the Commission de Terminologie de l'ORTF did coin franc-jeu (for 'fair play') but again this is in a special category (a) because it is a calque, (b) because it is artificial and (c) because it is probably never used anyway. If it can be shown that there are new coinages which fit all of the applicable criteria Rohrer lists, then there are productive adjective + noun (or noun + adjective) compounds in French, and they can be generated in the same way as we have generated compounds in English and Danish. But individually the criteria are not all valid: the position of the adjective may be fixed for other reasons; there are some adjectives which cannot in any case be adverbially modified (see §3.6.2); the criterion with des etc. instead of de is only of value when the adjective precedes the noun, and then only with the plural, since the other forms can exist before adjectives in the singular as well; single word synonyms exist for any number of phrases (for example

"A small time-piece with a spring-driven movement and of a size to be carried in the pocket" (SOED) and "watch") without the phrases being regarded as compounds for that reason. 3,6 and 7 appear to be the best criteria Rohrer gives, and even then 6 is only of use in a small number of cases.

But it rather seems that, if one discounts loan-words and calques, adjective + noun (or noun + adjective) compounds are not generated in French: rather, ordinary NPs built up of these configurations are lexicalised. This conclusion would appear to be partially supported, at least, by the relative lack of specialised meaning of French 'compounds' of this type.

It should perhaps not surprise us that this should be the case: adjective + noun compounds are not very productive in English, either, though we have noted a few. Freeshot and colddrink may be lexicalised in American English, but are not in British English, freepost, the GPO's new service, is certainly a recent formation, and the nonce formation bluebook was overheard, meaning 'address book' since the original address book of the family in which this was current was blue. The pattern is much more productive in Danish.

4.2 NOUN + NOUN.

4.2.1 We have already noted (§3.6.2) that nouns and adjectives act differently with respect to compounding when they occur in attributive position. Our goal here is to explain that difference in the framework of a grammar. In doing so, we have also to take into account the other facts we have noted about such compounds, in particular their structural ambiguity (§§3.4.1/2) and the fact that the determinant is the primary defining characteristic of the subgroup denoted by the compound (§3.4.4). In the light of the discussion in the last section, we shall assume in what follows that a compound rather than a clause results when a proposition rather than a sentence is embedded, and that to specify the compound we only need describe the proposition.

In the last section we followed Lyons (1968:§§7.6.4/5), Lakoff (1970b), Anderson (1971) and others and implicitly accepted that adjectives should be generated under the V node, without any discussion of the problems involved. Nor do we wish to take up this point now. But this meant that we had a complete proposition composed of a V and a case node to embed in order to generate a compound. This is no longer true when we start to look at noun + noun compounds. The verb is missing.

However, we have seen that Lees (1960), Rohrer (1967), Brekle (1970), Teleman (1970) and others postulate an underlying verb, deleted in the surface structure. We have earlier criticised this proposal (§3.4.1) for leading to a non-recoverable deep structure. The first problem to be solved would appear to be to make the two points compatible: to get, in other words, a recoverable verb in the deep structure.

For this to be possible either the verb in all compounds must be the same, or it must belong to a very limited set of verbs (possibly semantic primitives like CAUSE, BECOME, BE: see McCawley, 1971:30), and preferably the former, as even the limited second alternative might lead to undecidable deep structures. Lees (1960:143) rejects this possibility in any case:

"It seems quite unlikely that all the members of one large productive class of subject-object compounds can be so treated in terms of just a few specified verbs"

though this judgement might be revised in the light of more modern linguistic theories of lexical decomposition. (Werth, 1973, for example, assumes a deep structure for compounds on such a basis, which acquires a complexity difficult to describe, requiring ten embedded sentences, some with four arguments, to account for wine-press.) The chances of finding

a single verb to cover all possibilities seem slim, particularly when we consider examples like Lees' flour mill and windmill.

Yet this is perfectly possible as soon as one stops looking for a verb which is either a surface structure verb (as Lees was doing) or a semantic primitive. If we postulate the existence of a PRO-verb of compounding, then the problems can be solved. Such a verb would require a constant interpretation, and would have no surface structure form at any time. It would have to be interpreted to show a relationship between the two elements of the compound, though not to state what the relationship was. A linguistically realised meaning for such an element might be "stands in such a relationship as one might expect, given all contextual factors, to". Such an interpretation, and its lack of precision, finds support in Adam's (1973:88) comment that

"In many cases the first element functions as a sort of mnemonic device, a reminder of the nature and associations of the object or notion that the whole refers to."

We shall symbolise this PRO-verb by generating an element COMP under V.

A PRO-verb of compounding of this type builds into the grammar the semantic ambiguity of compounds which we discussed

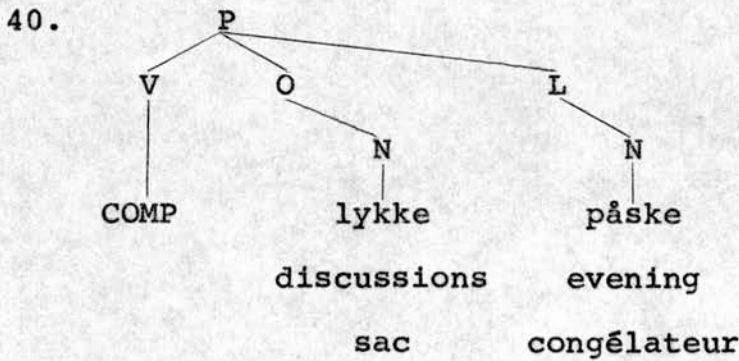
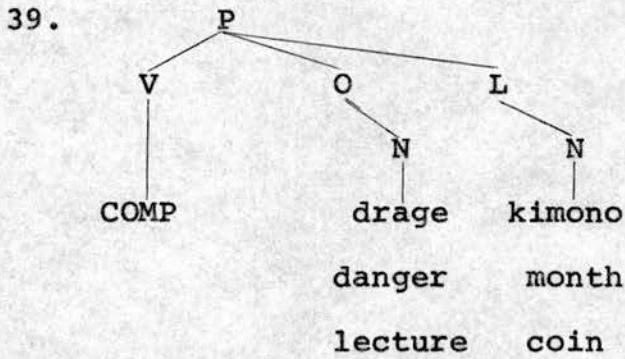
in the last chapter (§3.4) and a reference to the pragmatic component (see §3.5); it also explains the variety of different relations that exist between the two elements of a compound, including those which previous commentators have found beyond the scope of their theories. To illustrate, we might use the dialectally lexicalised examples of Jesus bug and Jesus boots. The latter means 'boots such as Jesus wore', i.e. sandals; the former means 'a bug which walks on the water in the way that Jesus did', i.e. a water-boatman. Even these very different and very complex relationships can be accounted for by the VCOMP. Furthermore, if this hypothesis is correct, it explains the failure of semantically based descriptions of compounding in the past to account for all the possible relationships (see §2.4.2).

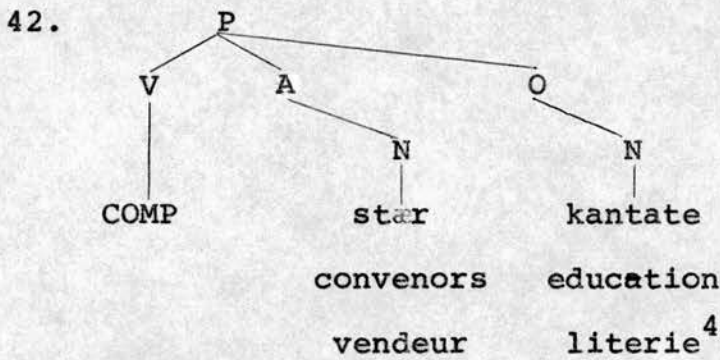
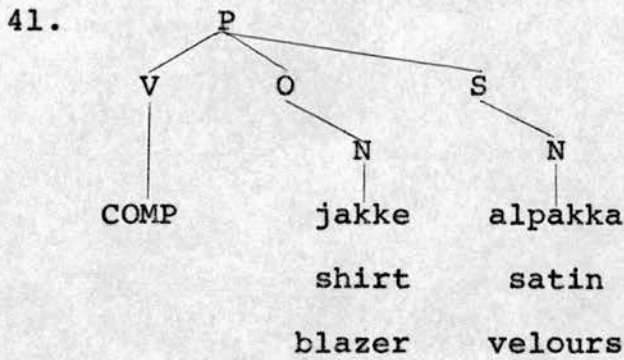
This PRO-verb might appear to be like the PRO-verb proposed by Motsch (1970:216) or Barbaud (1971:95 et passim), but in fact it is rather different from either of these. It becomes clear in Motsch's article (1970:217) that by a PRO-verb he understands a neutralisation of surface verbs suitable in the context, rather in the same way as Vendler argues (see above, §3.4.1). Barbaud's PRO-VP is merely a VP not realised at surface level, but which has the function of a full VP. Very often, other relational elements (comme, contre, etc.) are also generated. Our VCOMP is the only relational element linking the two parts of the compound,

and it is not related to any surface form at all: it is a V used only in the process of compounding and is a deep structure semantic unit without surface realisation.

We can see how this functions if we consider the following compounds:

dragekimono	danger month	coin lecture
påskelykke	evening discussion	sac congélateur
alpakkajakke	satin shirt	blazer velours
kantatester	education convenors	vendeur literie





In every case the head of the compound is marked because it also appears outside the embedded proposition, and it is this that separates the series shown in (39) and (40). It will be noted that inside an embedded proposition there can never be any prepositional marker of case, even where this would be obligatory if it were a sentence that was embedded (in (41) for example). Indeed, the case nodes appear to be

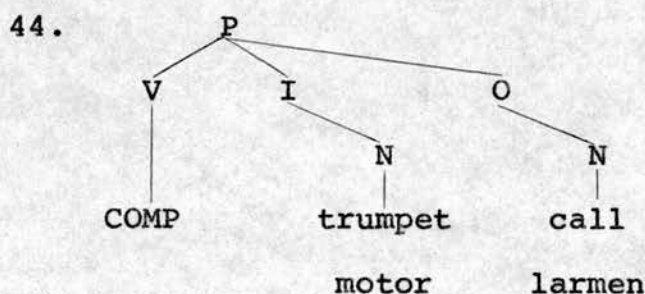
⁴ Some of these examples contain nominalisations, and for them a modified structure, though one which is not incompatible with the structure given here, will be proposed in §5.3.43.

klippevægsansigt

frost shadow (type of make-up)

cour-puits

though this configuration will not necessarily always produce this reading:

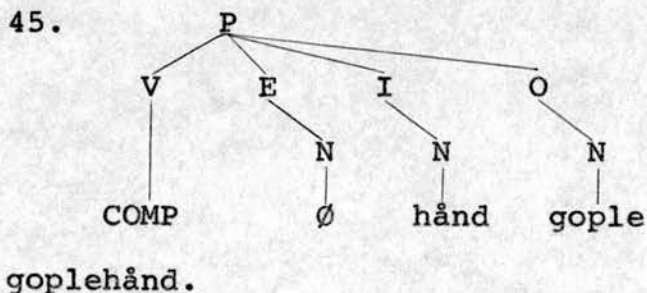


though in these cases it is the O rather than the I which is the head of the construction, and in most cases where the instrument is the head of the construction it is unclear whether it should be regarded as an Instrumental or as a Source:

beauty fluid

fortykkelsesmidler.

In any case, any possible confusion here is set aside if we insert in the resemble cases an empty Experiencer node as Fillmore suggests.



4.2.22 We have seen above how a case array of an Objective and a Locative can generate compounds like dragekimono, påskelykke, danger month, evening discussions, etc.. But we have also seen (§1.2.3) that an Objective plus a Locative case array can account for equative sentences. Compounds which appear to be related semantically to equative sentences are appositional compounds like⁵

dukkebørn	kineserdreng	pumpegris
garden shed	flatlet	smock-blouse refresher deodorant
anges-garde-chiourme	auteur-compositeur	
		maître-carrossier.

In §3.1.1 we pointed out that strictly speaking one could distinguish two types of appositional compound, the simultaneous like boucher-chareutier and the non-simultaneous like maître-coiffeur (lexicalised examples). However, both these sub-types may be included under the equative compounds: le compositeur est un auteur, le carrossier est un maître. There seems to be little reason to separate them. It should, nonetheless be noted that a difference can still be seen, since one could equally well say, without a change in meaning, l'auteur est un compositeur but not le maître est un carrossier.

⁵ See note 4, p.287.

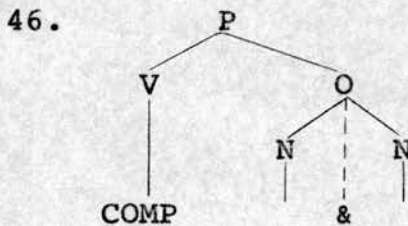
Although, as may be seen from the examples, this type of compound exists in each of the three languages under consideration, there is a very significantly higher proportion of them in French than in the Germanic languages, and they provide one of the preferred methods of compounding in French. In our sample, which was a small one (approx. 130 items in each language) so that it is difficult to draw hard and fast conclusions from the data, appositional compounds made up approx. 4% of the total number of Danish compounds, for English they made up approx. 3% of the total number, and for French approx. 30% of the total number.

The problem of confusion between appositional VCOMP - O - L configurations and the same configuration containing a genuine locational locative is not to be taken too seriously. Firstly, the nature of the VCOMP itself and the reference the VCOMP makes to the pragmatics of the situation should be sufficient to prevent any misunderstanding. Secondly, however, the nature of many of the lexical items would mark as aberrant any attempt to interpret the Locative case in real space terms -- dukkebørn and kineserdreng provide good examples of this. And finally, in a surprisingly high number of cases a locative interpretation other than that which we provided for equative sentences (see above, §1.2.3) is possible. In the examples above -- chosen at random -- we may consider pumpegris, garden shed flatlet

and anges-garde-chiourme. Pumpegris may be seen as a (toy) pig CONTAINING a pump. Garden shed flatlet, as well as being a flatlet which is at the same time a garden shed, might well be a flatlet IN a garden shed; and anges-garde-chiourme might not only be angels who are prison warders, but angels IN shape of prison warders. Similar analyses may be provided for other appositional compounds.

Both appositional and similia compounds, which in most models are given separate structures, may thus be explained by the same structure in our model, a structure, moreover, which is already required to explain other compounds.

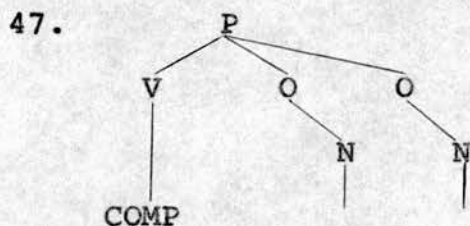
4.2.23 But it seems likely that this same structure can also handle dvandva compounds. As we pointed out in §3.1.1 a dvandva is the sum of its parts, so that some kind of co-ordination would seem to be required. Presumably, such a configuration would be something like



There are, however, certain weaknesses implicit in this configuration. In it, the VCOMP is redundant, since the reduplication of a noun under any case node demands co-ordin-

ation anyway. This does not mean that this configuration is impossible, nor that it would not produce the required result, since the VCOMP in this case would merely be interpreted as a co-ordinate relationship, but it offends against the simplicity metric. Also, some kind of transformational rule would be required to delete and in these configurations in just those cases where P was embedded or where VCOMP was present in the Proposition, either part of the disjunction being a sufficient stimulus, since the two are ultimately related.

A simpler description could be obtained if it were assumed that co-ordination were a multi-place predicate. If this were the case, dvandva compounds could be generated in exactly the same way as other noun + noun compounds:



The VCOMP would be interpreted in the same way as the co-ordination predicate for these compounds.

Following McCawley (1970b:92, 1972:516-540), Anderson (1974a:27 et passim) makes just such a suggestion, namely that

"Coordinate substantives are generated via

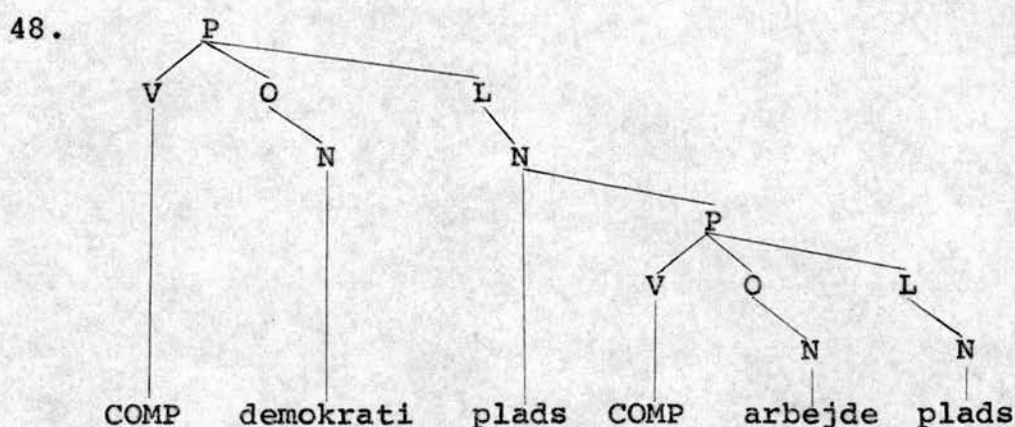
a replication of nom(inative) permitted only under a coordinating substantive predicate."

In a Fillmorean grammar, where predicates are inserted into a case array rather than case arrays being predicted by the predicate, this statement would have to be inverted so that any replication of Objectives required a co-ordinating substantive predicate. While this suggestion of Anderson's should not really be considered in isolation from the pertinent generalisation about quantifiers and co-ordination, we shall take out this single point for consideration here. Anderson (op.cit:29) shows that no higher quantifier predicates would be necessary for simple co-ordination of this kind. If we allow Anderson's theory here we gain a generalisation as far as the grammar of compounding is concerned, since all endocentric noun + noun compounds can then be generated in the same way. If Anderson's theory is not accepted, then the configuration (46) or one like it will have to be used to generate dvandva nominal compounds. Further evidence from a field ~~other~~ than either compounding or quantification is required here to show whether Anderson's suggestion is of overall value. Until this is forthcoming we accept it and the generalisation it provides.

It may seem unnecessary to spend so much time on a section of compounding which is -- at least in the languages with which we are dealing -- not very productive. Our

sample showed no true dvandvas from Danish or English and only three from French: Baccardi-daiquiri, Baccardi-tonic, Baccardi-Coca-Cola. But this does not mean that dvandvas are not productive, particularly in this age of business mergers (see above, §3.1.1) and productive patterns should all be provided for in the model.

The method of generating dvandva nominal compounds which we have accepted here has one advantage. It has often been claimed that compounds are binary, that is, however many elements go into making up a compound it can always be split into two major elements, each of which may be split in two, and so on. By and large, this holds true, as may be seen by analysing even very long 'joke' compounds like Donaudampfschiffahrtsgesellschaftsunteroffizier or sporvognsskinneskidtskraberfagforening. But as Wandruszka (1972:147) points out, this fails to hold in dvandva compounds, which may have three elements of equal status -- bleu-blanc-rouge, Rank-Hovis-McDougal -- and there would seem to be no theoretical reason why there should not be more. This can be built into the grammar very simply by a constraint to the effect that in a Proposition which contains VCOMP only two case nodes may be realised at surface level unless the case nodes are identical. A longer compound like arbejdspladsdemokrati would be built up thus



so that the final compound, though made up of three elements would only be the realisation of two case nodes. We shall look at this in more detail later.

4.2.3 Once again, French differs enough from the Germanic languages to merit particular comment, not only in its apparent favouring of appositional compounds (see above, §4.2.22) but also in the ways it seems to motivate the compounding processes.

We have already (§3.6.3) quoted Rohrer's (1967:§2.11.3) remark about compounds in French that

"Wenn jedoch ein Substantiv als determinierendes Glied durch das Gebrauch sanktioniert ist, wird es immer und immer wieder verwendet Das gilt nicht nur für das bestimmende Glied, sondern auch für das bestimmte."

This would appear to be a keynote for compounding in French. The use of a word like idée in a (lexicalised) construction of the type idée vacances, immediately gives rise to a host of others: idée cuisine, idée tricot, idée gâteaux and so on. It was very noticeable in our sample of non-lexicalised French noun + noun compounds that approximately half of them had at least one 'productive' element in this sense, and even a new word like body (= 'bodystocking', not listed in DMN), once it had been used in a compound, was able to form a whole series: bodypolo, bodytotal, bodygym, bodysweet, bodydanse, bodynu, bodyspring.

It is true that there would appear to be a gap here between the written language, and particularly the written language of journalism and advertising, and the spoken. It might be perfectly acceptable journalese to write la question éducation et le problème finances ..., but it is unlikely that this would be spoken at anything other than the most informal level. Similarly, many of the compounds to be found in advertising slogans (e.g. blazer velours, jupe coton) are probably never used in the spoken language unless in direct quotation. Nonetheless these structures obviously exist in the language, even if they are not fully exploited: the question of how frequently they are used would seem to depend upon register alone.

But this in itself would not be enough to account for all the compounds in French, and there is another very important force acting to create compounds: it is linguistic borrowing, and hand-in-hand with this we find loan translation.

It is very often difficult to tell in retrospect whether a new word is a loan (or calque), or whether the innovating language has created the same structure from its own resources. A case in point might be missile air-mer. Even clear evidence of the prior existence of a word in another language is not really sufficient to prove a new word to be a calque. Some cases, however, particularly loans as opposed to calques, are clear. Examples are mini-jupe, pace-maker, play-boy, safari-photo (all from DMN) attaché-case, ball trap, film couleur (meaning a roll of film, une pellicule, and not a film as shown in the cinema), flashcube and others. Because of the difficulty in deciding just when a word is a calque, it is very awkward to evaluate the importance of loan-words and loan-translations as innovating forces in the field of compounding. The influence, however, appears to be considerable, and may be one of the main sources of compounds in modern French.

It is not clear just how far this borrowing goes. The French reading public has, in recent years, been repeatedly

admonished about the new *franglais* being spoken in France, and (American?) English seems to be the main source of new loan-words in French. The question is whether this process has gone beyond the loan of just words. The third main source of compounds in French seems to be the language of advertising -- a branch of French particularly open to transatlantic influence. And English language advertising tends to make good use of compounds, if only to save space. Eye-catchers like 25% Introductory Discount Offer, The SunsilK Setting Lotion Sprays, Air cushion comfort; Salon dryer efficiency are important in advertising. So too in French: Prix festival, carrosserie materiau antichoc, crayons double nuance (advert for eye make-up) shout from the pages of magazines. It might be that it is merely the desire to save space that has motivated this proliferation of compounds in French, but it seems at least likely that there is some degree of conscious imitation involved. And even constructions like idées-cuisine, which could scarcely originate in a direct calque from English, might well originate in a desire to imitate English style.

But these three headings are not necessarily enough to account for all French compounds: (jupe à) carreaux mouchoir, crédit bail, épaules façon bouteille Perrier, for example, do not really seem to fit under any of them. In these few cases we appear to have genuine French compounds.

Barbaud (1971:114) insists that

"Le composé binominal n'est pas une
importation étrangère"

whatever Etienne might think, but it would seem to be only a small proportion of compounds that give evidence of this in French, and compounding certainly appears to be limited in French in ways in which it is not limited in the Germanic languages.

Some of this argumentation may seem specious, in that for virtually any Germanic nonce compound it will be possible to find lexicalised or frozen compounds which contain at least one of the elements. This should not surprise us too much in languages like Danish and German where practically any noun can become a compound element. The difference between the state of affairs in these languages and French lies in the insistence that French appears to lay on this condition, which gives rise to whole families of words in, for example, -choc, -limite, -miracle, -clef, -mode, etc. (see §3.6.3), as well as less extensive groups in -sport, papier-, wagon-, -maison, etc., and in the reluctance that French shows in creating new compounds which cannot be attached to such series unless it is very strongly motivated by a loan, or by space-saving necessity.

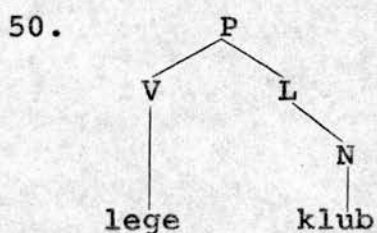
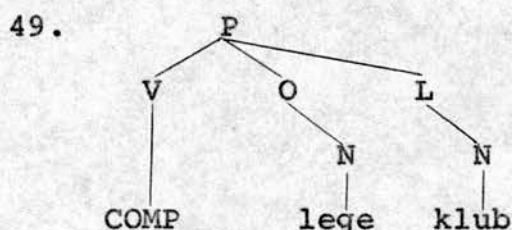
4.3 VERB + NOUN AND NOUN + VERB.

4.3.1 We have already (§3.8.3) seen that French compounds of the type lèche-culture, garde-mythe are to be considered as exocentric compounds. We shall thus not take them into consideration in this section, but deal entirely with verb + noun compounds in Danish and English.

We have also seen (§3.8.2) that in these two languages it is often very difficult to decide whether the first element in (lexicalised) examples like rejsekompagnon, rattlesnake is a noun or a verb. In our previous discussion we considered this mainly from a formal angle, but there is frequently no semantic evidence which allows one to judge either. Is a rejsekompagnon a companion on a voyage or a companion who is travelling, is a rattlesnake a snake which rattles or a snake which has a rattle?

There would appear to be two possible solutions here. The first is to consider the first element in these compounds as a nominal element which is a form of a verbal root, in the same way as the infinitive has traditionally been regarded as a nominal element. Indeed, in many languages the infinitive can take overt nominal markers in the form of articles etc.. Consider German das Laufen, das Glauben, etc. and French le savoir, le pouvoir, etc.. The alternative is to generate the first element in these compounds as a normal

verb, with a rule to the effect that a verbal element generated in an embedded P as opposed to an embedded S will have a different phonetic form in many cases, a form which, in Danish, for example, is very often identical to the imperative form: knækbrød, bygmester, (lexicalised examples), and often identical to the infinitive form: legebutik, byttehytte. In terms of trees, this is a question of whether a compound like legeklub should be derived as in (49) or (50).



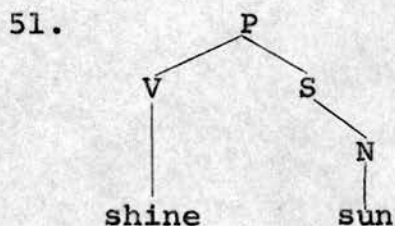
A derivation like (49) brings verb + noun compounds into line with noun + noun compounds, a derivation like (50) brings them into line with adjective + noun compounds.

The difficulty is to make anything other than an arbitrary decision here, since there does not appear to be any hard evidence one way or the other. There are, however, two points which tend to suggest that the solution shown in (50) might be the better. Firstly, the configuration we

drew up for adjective + noun compounds was based on the supposition that adjectives should be generated as verbs (following Lakoff, 1970b et al). It would seem rather inconsistent, then, to generate adjective + noun and verb + noun compounds differently. This argument is, of course, far from conclusive, as it could be that the configuration for adjective + noun compounds should be changed to resemble (49). Secondly, there is a technical reason. We shall see later (§5.2.1) that the model can be extended to allow for French verb + noun compounds as well. However, if the verb in these compounds is generated under an Objective node, the result is two Objectives in the same Proposition, since the noun in these compounds is invariably in the Objective case. There is no reason to suppose that the verb in French verb + noun compounds is any different in nature from the verb in the English and Danish verb + noun compounds cited above, and indeed, both types of verb + noun compound can be found in English (see §5.2.1). On technical grounds, then, coupled with reasons of consistency, it seems that a derivation as illustrated in (50) is more convenient, and it is the derivation we shall use.

4.3.2 Noun + verb compounds are very much rarer, though lexicalised examples may be found in English:

sunshine, sunset, nose-bleed. Hansen (1967) does not include this structure as one of his types of compound for Danish, and we have not found any clear examples of it, so this section may be taken as applying only to English. Noun + verb compounds seem to differ from verb + noun compounds in their preferred case arrays, S and I being preferred here, A, I and L being preferred in the case of verb + noun compounds, but otherwise they may be generated in precisely the same way:



4.4 AGENTIVES.

4.4.1 By an agentive compound we shall mean a compound which is morphologically marked by the presence of the suffix -er (-or). Not all such compounds are necessarily true semantic agents: some of them denote experiencers (e.g. those in -lover) others, as we shall mention below, instruments. Examples of the first group (agents and experiencers) are compounds like country lover, factory boiler cleaner, menthol smoker, placard bearer and so on. These compounds also exist in much the same form in Danish, where we find examples like kalendervender, fremtidsforsker, and it is unclear whether we should also include in this group Danish compounds in -ant, as pornofabrikant. Rohrer (1967:§2.7) points out, however, that constructions like briseur-grève are unacceptable in French. Wandruszka (1972:156, then 175f) comments on this and points out that this semantic relationship is almost always expressed by a de compound phrase in French. Our remarks in this section will accordingly be limited to Danish and English.

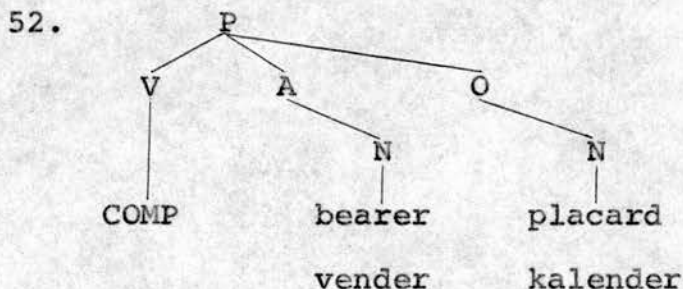
First we must distinguish between forms which are genuine compounds of this type, and forms which, though superficially the same, have a different bracketing. Thus, while we might wish to analyse placard bearer as 'one who bears a placard' we would not wish to analyse (lexicalised) honeymooner as 'one who moons honey'. Similarly with

moonshiner, moonlighter, bootlegger, left winger, carpet-bagger. These are all made up of a compound or idiom + -er: honeymoon is a compound in its own right, placardbear is not. In the case of moonlighter the problem is different, since a moonlighter is not 'one who moonlights' either. Here we seem to have some metaphorical extension of moonlight being transferred from to do a moonlight flit. In left winger we seem to have a slightly different use of the agentive ending, as well, where it appears to mean 'someone who has a connection with'. However, this is a problem in derivation rather than compounding, and we shall not deal with it further here. In what follows we shall be concerned purely with forms bracketed like: (placard)((bear)(er)). Vinje (1970:§3.5.5) implies that compounds that do not fit this bracketing may be more frequent than is generally assumed. He considers the new formation revolverintervjuer, which must be someone who gives a revolverintervju. He suggests that lystløgner and fjernseer must be dealt with in the same way.

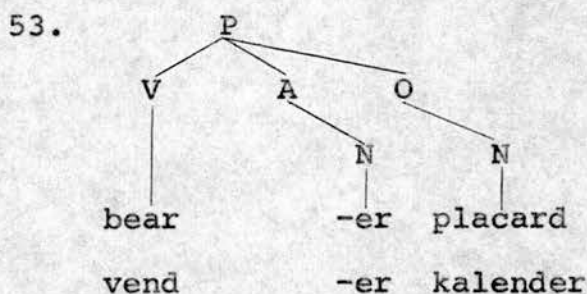
Many compounds of this form do not denote an agent at all, but an instrument. The following examples are all instruments rather than agents, though there is no grammatical reason why this should be the case: carry-cot transporter, hair conditioner, ice-cream maker, waste bin freshener, and Danish linjeskriver. We shall assume that apart from the

case node marking the suffix, these sets of compounds are identical.

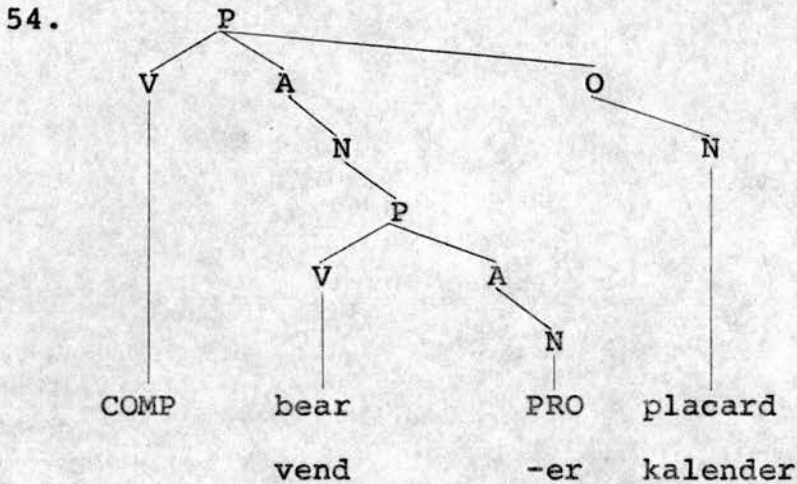
If we use an analysis with VCOMP as we have been doing above, we obtain, for placard bearer, kalendervender



However, upon consideration, it becomes clear that the VCOMP is always going to be interpreted as if it were the verb in the agentive element, as indeed was implicit in our discussion above. Thus it might seem reasonable to suggest an underlying structure



Brekle (1970) assumes a solution similar to (53) in some cases. There is, however, a third possibility, which we must not discard at once, which is closer to (52) than to (53):



Of course, this situation only arises in the first place if one assumes a transformational approach to lexical insertion rather than a lexicalist one.

Tree (54) looks as if it contains a redundancy, as the subtree is embedded into a tree which is virtually identical with it. This does depend rather on how the transformation leading to the insertion of words like bearer is formulated: it may be simpler to formulate if it occurs in a Proposition by itself, for example. Further, there is the problem of how the cycle will operate on a tree like (53). In (54) the agentive will be inserted on the lowest application of the cycle, the compound on the next, but if the agentive only is formed on the first application of the cycle to (53) there is no verb left with which to form the compound, and if the first cycle does form the compound straight away, then the rules for the generation of agentives may have to be slightly different when the agentive occurs in a compound from when it occurs in isolation. If this is the case, it may be an

argument for preferring (54) to (53), but if, as seems likely, this difficulty can be avoided without too great a modification to the system, then the evidence is not sufficient to point one way or the other. (54) then only gains the generalisation of having the same lexical items always coming from exactly the same tree, and this has to be balanced against the loss of generalisation in the repetition of constituents.

4.4.2 Let us consider possible evidence for accepting one or the other of these solutions. Evidence in favour of (54) might be adduced if there was no case in which an agentive which could not also exist in isolation could form a compound. If this were true, solution (54) would allow one to specify the restrictions on agentive generation only once, without the presence of the extra case node clouding the issue.

The converse of this is that if there are agentives which occur only in compounds, these will, presumably, have to be generated as in (53) rather than as in (54) unless a restriction is imposed so that such forms may only arise when embedded below a Proposition containing VCOMP. It is, in fact, this converse which applies, as can be seen if we

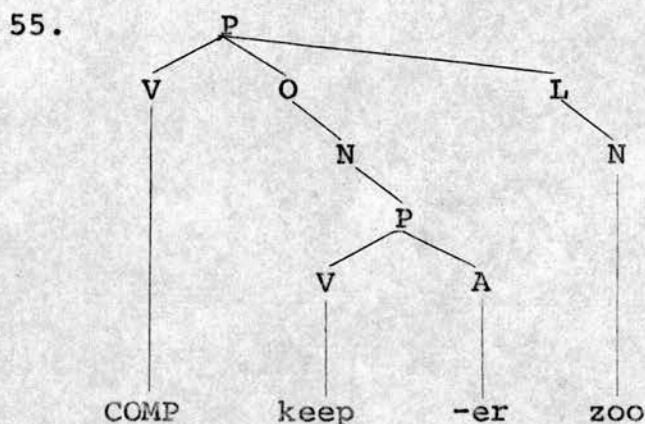
consider the following (lexicalised) examples:

Da: cigarmager	*mager
husholder	*holder
Eng: housekeeper	?keeper (in this sense)
householder	*holder (in this sense)
carpet sweeper	?sweeper

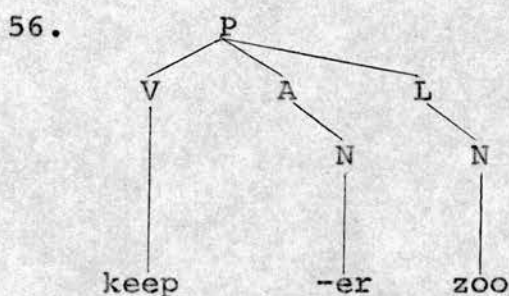
Juul-Jensen (1934:18) gives a list of agentives which can only occur in compounds in Danish. They include -bider, -ganger, -rider and others. Many of these examples are lexicalised or at least received, but it seems likely that at least -rider and -mager are productive, though no examples occurred in our sample. It is not clear whether there are any productive series of this type in English or not.

There is also an argument in favour of the solution shown in (54). It is a semantic argument, and perhaps not as convincing as the syntactic argument in the other direction, but it cannot be ignored.

If we consider a (lexicalised) agentive compound like zoo-keeper, we can see that a zoo-keeper is not a man who keeps zoos in the way that a cat owner is (pace women's lib) a man who **owns** cats. He is rather a keeper in a zoo. Thus we have a motivation for wishing keeper to be inserted as a lexical item into the tree before it reaches the stage of compounding; we want a tree (55) which is of the same type as (54).



This construction is then interpreted as 'keeper does whatever one would expect a keeper to do under the circumstances in a zoo.' The alternative, using a structure like (53) would be



which would be interpreted 'someone keeps in a zoo' -- a meaningless sentence. Similar examples can be found in Danish where the structure in (54) seems more appropriate. We may cite systemdigter which is not 'én der digter systemer' but 'én der digter efter et system' and gæstarbejder which is not 'én der arbejder gæster' but 'en arbejder, der er en gæst', so that the matrix Proposition does not even contain an Agentive.

Marchand (1969:§2.1.6.3), though he does not distinguish between the two groups in any formal system as we have done,

claims that

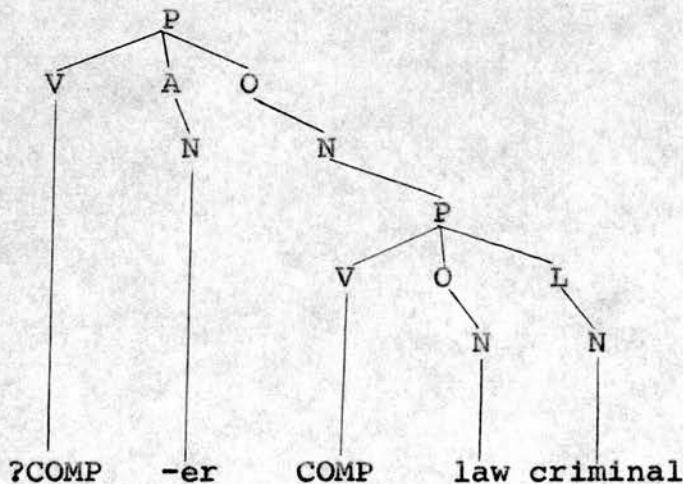
"Strictly speaking there are two types of compound agent substantives, the type deer hunter and the type watchmaker. In the first case we are dealing with a combination of two independent lexical units, deer and hunter, a sb/sb compound, analysable as 'hunter of deer.' Watchmaker is different in that only watch is a lexical word while maker is a functorial derivative which merely renders the syntactic relation S-P of the underlying sentence 'he makes.' To the first type belong such combinations as ballet dancer, cigar smoker, coloratura singer, crime reporter, language teacher, spelling reformer"

Although Marchand's argumentation does not appear to be particularly strong here, since watchmaker can surely be analysed as 'maker of watches' to reflect 'hunter of deer', yet it seems likely that his compromise solution is the best here, allowing both types to exist side by side. Exactly what criterion should be used to separate the two types is, unfortunately, not clear. Nor which of the two solutions should be the preferred one, though Marchand comes down heavily on the side of the type shown in (54). But the grammar should include both possibilities. A decision as to which type to use in which case might be found in a complete grammar with a complete lexicon where lexicalised

agentive nouns (or, presumably, received ones as well) would have to be inserted in a tree like (54). One could then say, as Marchand is presumably trying to say, that if a paraphrase in 'one who ---s ---' is required, a tree like (53) will be necessary, and if a paraphrase like 'a --er of ---' is required a tree like (54) will be needed. Marchand falls down, however, in that he has no fixed concept of lexicalisation nor any fixed lexicon to refer to.

4.4.3 A slight extension of this system can be used to generate such notoriously ambiguous examples as criminal lawyer, two-dimensional mathematician, natural historian, etc.. In their normal acceptations (a person who deals with criminal law, etc. etc.) they can be generated in the same way as any other compound +er agentive (see above §4.4.1):

57.



In their alternative readings (a lawyer who is a criminal etc.etc.) they can be generated from trees like (54). The use of the element COMP in (57) to produce an agentive, although it makes semantic sense, is a definite extension of the use to which we have previously put it. We shall return to comment on this extension in Chapter VI. If lawyer is a lexicalised form, as seems likely, it may be necessary to generate it rather than -er under the A node in (57).

4.5 LIMITATIONS ON COMPOUNDING.

4.5.1 So far, we have been talking as if the generation of compounds was an entirely free process without limitations of any kind. However, Jespersen (MEG:VI:§8.1.5) points out that

"A term like Carlyle's mischief-joy is felt by most people as foreign to the genius of the language",

Rohrer (1967:§2.7) points out that forms such as briseur-grève and enseignement sciences do not occur in French, and Barbaud (1971:83/4) points out that compounds like bateau-bateau, bateau-navire are non-occurrent (though one wonders to what extent this observation is correct when a wider range of contexts is considered and given the existence in some dialects of pomme-pomme as a contrast to pomme de terre), so there is obviously some kind of limitation applying to compound generation.

We have already discussed (§3.6.5) one kind of limitation in English in Levi's (1973) hypothesis that the modifying element of a compound is an adjective in just those cases where an adjective exists in the lexicon for English. This limitation accounts for the 'foreignness' of mischief-joy (presumably a direct translation of German Schadenfreude): mischievous joy might not carry all the connotations of the German word, but it is a grammatical phrase. We have also mentioned (§3.4.4) that there are no genus-species compounds

in English. We have to discover whether there is any other limitation applying.

4.5.2 Barbaud (1971:80-84) provides ten rules for the "contraintes internes" on compounding. These rules, however, are not so much limitations on the words which can co-occur as limitations on the semantic readings of the relationship between the elements given a specific co-occurrence. Barbaud works within the framework of a Chomskyan grammar (see §1.2.1) and assumes that each noun is marked with a series of features, including [+commun] [+concret], [+animé], [+humain]. It is in terms of the co-occurrence of these features that he limits the relationship readings. For example, his rule 4 (op.cit:82) states that

"Si deux noms communs humains sont concaténés, ils ne peuvent établir qu'une relation attribut",

and he cites examples like lieutenant-détective. Not all his rules are so neat, however. Consider, for example, rule 9 (op.cit:83)

"Si deux noms concrets sont concaténés, ils peuvent établir entre eux soit une relation attribut, soit une relation métaphorique,

soit une relation de complémentarité....,"
 the difference between the three groups being explicable,
 according to Barbaud, in terms of presupposition (Barbaud's
 term for what we have called pragmatics of individual
 lexical items) and formal identity.

Unfortunately, Barbaud's constraints do not seem to be
 sufficient as they stand. Baccardi-*tonic* cannot be explained
 at all, and neither can Baccardi-Coca-Cola since there is no

"SN qui précède le terme antéposé ... muni
 des traits [+collectif] et [-vectoriel]."

Lapin-symbole ('Play Boy' avait accepté de donner son l-s
 à une troupe de scouts) breaks rule 8 (loc.cit)

"Si un C(omposé) B(inominal) a pour
 constituants un nom commun animé, suivi
 d'un nom commun inanimé, il ne peut établir
 qu'une relation métaphorique",

maître-film (un m-f de Fellini) breaks rule 6 (loc.cit)

"Si un CB a pour constituants un nom commun
 humain suivi d'un nom commun inanimé, il peut
 établir indifféremment soit une relation
 métaphorique soit une relation de complémentarité",

sauce-crevette breaks rule 10 (Op.cit:83)

"Si un CB a pour constituants un nom commun
 concret suivi d'un nom commun animé, il ne peut
 établir qu'une relation métaphorique"

and so on. And his constraints are of even less value if we consider Danish and English with their much wider structural ambiguity, so that anemonekone means a wife who is an anemone (and thus breaks Barbaud's rule 6) but could equally well mean a woman who sells anemones (which might fit rule 6) or a woman like an anemone (which would fit rule 6). (See above, §3.4.2.)

Henzen (1947:48) notes that there is a tendency to use monosyllabic or at least uni-morphemic words in the first elements of compounds in German, and one suspects that there is some truth in this in other Germanic languages, although it cannot be stated as anything more than a slight tendency as formations like partnership area and søvnighedsgrad show. Koziol (1937:§77) also claims (for English this time) that latinate words are less often used in compounds because of their foreignness. This might, however, be a mis-interpretation of the facts, and it may be that latinate words are used less often in first elements at least because of the existence of corresponding adjectives.

4.5.3 The obvious place to look for limitations when using a case grammar is in the permitted case arrays. However, this is not as simple as it sounds, mainly because

it is not always clear which case particular elements should belong to. For example, in beauty guide is the guide the Source of the beauty, the beauty the Goal of the guide or a bit of both? Or is the guide the Instrument by which one obtains the beauty? One suspects that the advertiser hopes the customer will read it as OS or OI whilst himself believing it to be GO. We have classified it as GO. Some other examples are even more awkward. Nonetheless, we have attempted to show that the case arrays are severely^e limited.

Since we have allowed seven cases (see §1.2.4), but not allowed two occurrences of the same case node in any one Proposition, one might expect there to be $7 \times 6 = 42$ different possible combinations. The table on p. 321 shows this not to be the case.

The table is filled in with examples taken from our sample for the languages under consideration. Always subject to the limitations expressed in the first paragraph above, we believe we have covered all the combinations occurring in that sample. However, we would not wish to claim that it is impossible for any combination to be formed which is not filled in in the table. In fact we believe this not to be the case. The table should be taken as a guide only. We have underlined OI and LO since these

case arrays are used for resemble compounds and equative (i.e. appositional) compounds respectively in all three languages. We do not give examples of these constructions here.

CASE ARRAY	FRENCH	ENGLISH	DANISH
A HEAD E A I A O A S A G A L A	vendeur literie collaborateur commerce extr.	menthol smoker	kagekone børnemagts- representanter køkken-alkymist
E HEAD A E I E O E S E G E L E	spécialiste lon- gues distances	darts enthusiast	<i>dyre ven., handelskvinde</i>
I HEAD A I E I O I S I G I L I		hair conditioner	linjeskriver
O HEAD A O E O I O S O G O L O	glaces maison body-danse sac congélateur	kitchen appliances commando raids good neigh- bour policy trumpet call beetroot juice beauty advice bone cancer	sælger-vrøvl frueønsker betjent-blik missebarak eventyrvasen
S HEAD A S E S I S O S G S L S	flashcube ? air-mer	exercise sandal	fortykkelsesmidler
G HEAD A G E G I G O G S G L G	? air-mer		
L HEAD A L E L I L O L S L G L	bain mousse coin-lecture	carbon-ribbon typewriter danger month	opfinderland dragekimono

The first point of interest to emerge from this table is the high degree of correlation between the three languages. All the more so since the gaps in the Danish column at LI, OE, IO, IL and in the English column at LA, AL would appear to be accidents due to the size of the sample rather than genuine gaps in the system.

The second point of interest is that with very few exceptions all the permissible combinations contain either an O or an L or both: OL and LO are the most common combinations. Two of the examples which do not fit with this generalisation, collaborateur commerce extérieur and børnemagtsrepræsentanter might very easily be reclassified as AL (IN external trade) and SO (to what extent is a representative an Agent, anyway?) respectively. Both of these were the only examples in their particular categories. That would leave only the French example air-mer (in missile air-mer) which we shall consider again later (§5.5.2, which see also for other doubtful examples).

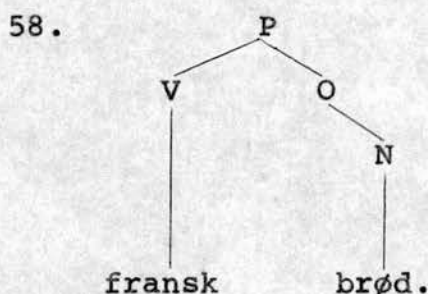
In any case, whether or not this turns out to be a true generalisation -- and it is certainly a significant one -- it is obvious that the case arrays used for generating compounds are severely limited. In a Fillmorean framework where the case array chooses the predicate, only the admissible case arrays can select VCOMP as their predicate.

Thus it can be seen that the case nodes are not redundant in a grammar of compounding, even when a VCOMP is being used (see above, §4.2.1).

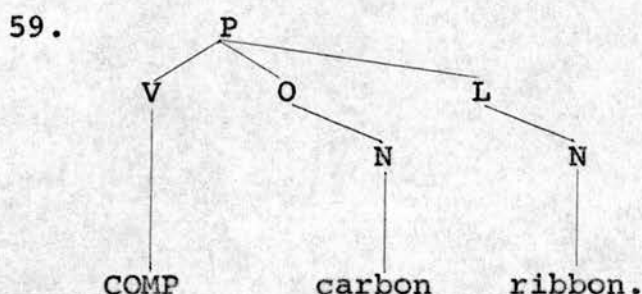
4.6 CONCLUDING EXAMPLES.

To conclude this chapter and summarise the discussion in it, we shall look at the generation of two examples: franskbrødsfyr and carbon ribbon typewriter.

Each of these examples can be broken down to form binary parts at each level of analysis -- franskbrødsfyr gives franskbrød and fyr, then fransk and brød, carbon ribbon typewriter gives carbon ribbon and typewriter, then carbon and ribbon, type and writer. In each case we start with the deepest level of the analysis, the innermost brackets. Franskbrød is an adjective + noun compound. It is frozen, but we have seen that this type of compound is still productive, so the grammar can generate it if required. Since we only need consider a Proposition, as a compound rather than a relative clause is the result, we generate franskbrød thus:

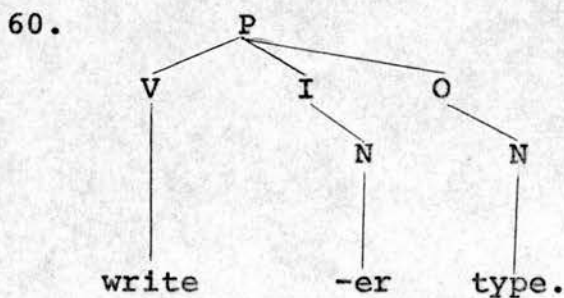


In carbon ribbon the carbon is on the ribbon. Ribbon is thus a Locative, carbon an Objective. Once again we need only consider the Proposition, but this time we shall need the compounding predicate VCOMP:

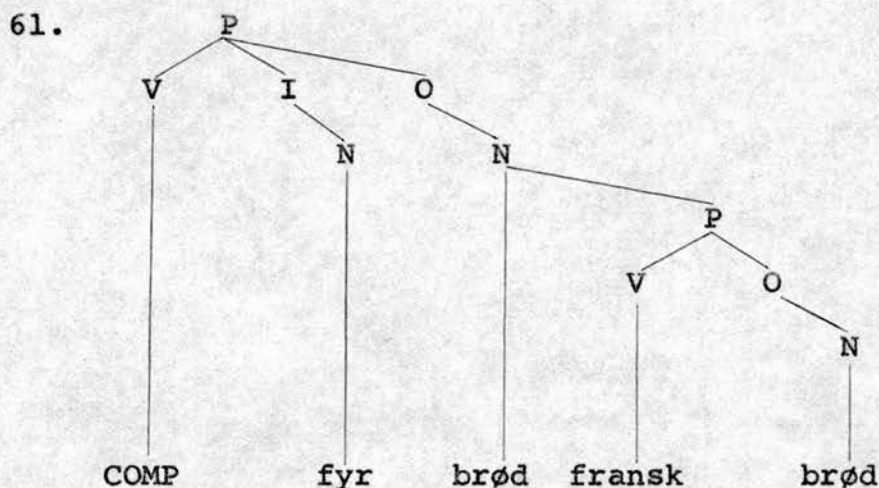


Although, strictly speaking, it is redundant in the case of franskbrød, since there is only one noun there which can be head, each of these Propositions is governed by a Noun which is the head noun, and must be identical to one of the nouns in the embedded Proposition if the generation is not to be blocked. Note that in (59) O and L are both present, so the presence of VCOMP is permitted.

Now let us switch our attention to typewriter. We have two possible trees here, but since a writer in isolation is not the same thing as a -writer in typewriter, being an agent not an instrument, we shall choose to generate the whole at once rather than generating the element writer first. Again, only a Proposition concerns us, and again the head noun must occur governing that Proposition.

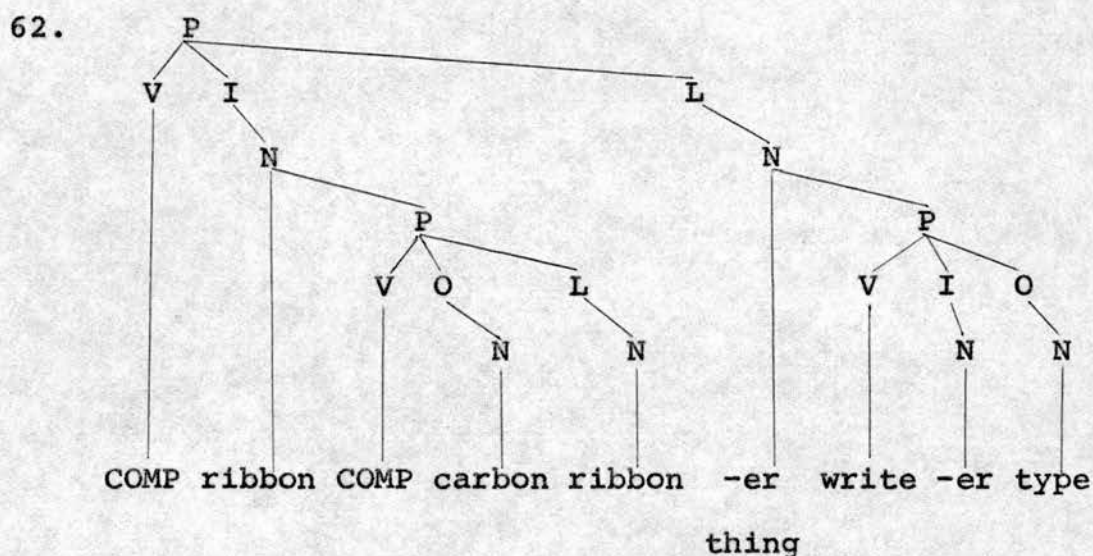


Now we have to embed these various trees into their matrices. Franskbrødsfyr is a man who resembles white bread, so fyr has to be an Instrument as the stimulus for the comparison (see §1.2.3) and franskbrød is Objective. The resultant tree is:



The /s/ between the elements of the compound is inserted by a late rule dependent upon lexical conditioning and on the fact that there is a compound under the uppermost case node (see §3.7).

In carbon ribbon typewriter the typewriter is the location of the carbon ribbon, and the carbon ribbon the instrument by which the typewriter prints. We obtain, then the following configuration:



Each of these matrix propositions is now ready to be embedded in the sentence in which the compound occurs -- perhaps hun gik med sin franskbrødsfyr under armen and I insist on using a carbon ribbon typewriter in which case an O node from the matrix sentence will govern the N governing the P of franskbrødsfyr, and an I node of the matrix sentence will govern the N governing the P of carbon ribbon typewriter.

CHAPTER V

EXTENSIONS

5.1 ADJECTIVAL MODIFICATION.

Jespersen (1891) points out that adjectival modification of a compound is ambiguous. He cites the examples of unge dameportræt where the adjective modifies the first element of the compound as opposed to venlig landsbypræst where the adjective modifies the last element. He points out that this ambiguity exists equally in German and English and quotes Goethe "O säh'st du, voller Mondenschein" and Arnold "the golden mace-bearers". This ambiguity can occasionally give rise to amusing or ridiculous alternative interpretations. The following example is an attempted joke from a disc-jockey (Tony Blackburn, BBC, Radio 1, 24/9-74):

LETTER: "I'm in hospital recovering from a long
knee operation"

D.J. "I always thought that knees were about
the same length for everybody."

A further example on similar lines is found in the text of a pop-song of the 1950's:

"I said, 'Mr Purple People Eater, what's your line?'
He said, 'Eating Purple People and it sure is fine.'"

Jensen (1904) takes up this point, and also gives some examples of occasions when it has mis-fired:

En yngre Dame (afdød Embedsmandsdatter) søger ...
Et legat for ugifte landmænds døtre.

He shows that it is not merely adjectival but also prepositional modification which suffers from this ambiguity, and cites examples where the compound seems to fit into the sentence very clumsily:

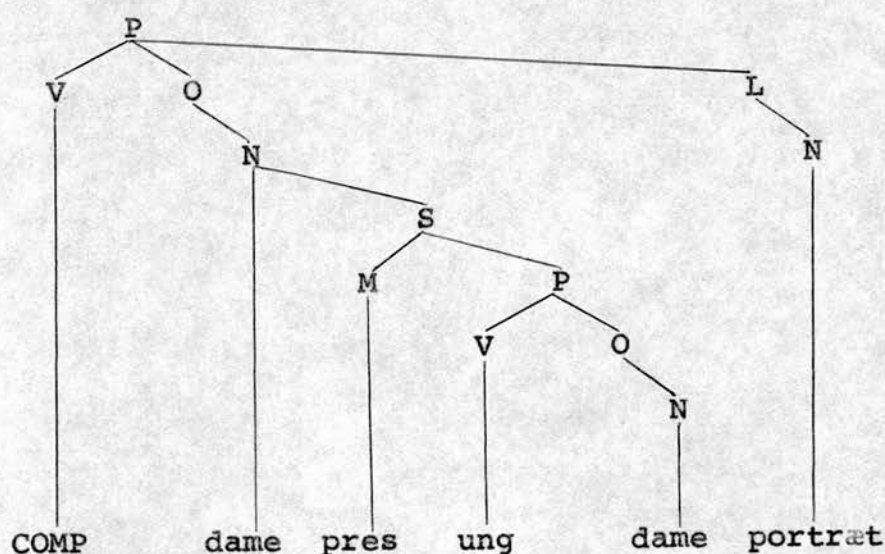
Rejsebeskrivelse gennem Makadonien

Billetsalg til Malmö

Togenes Ankomsttider til København

and so on.

But this ambiguity, which for Jespersen and Jensen was a problem in compounding, is easily accounted for by our theory. In unge dameportræt, unge modifies only dame, not portræt. We need therefore to include this information in our tree. This can be done as follows:

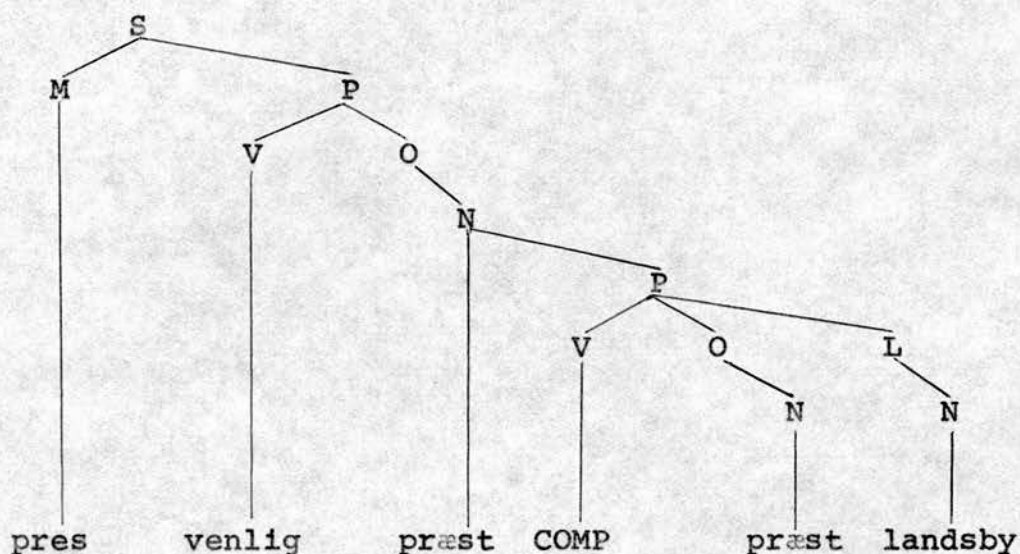


In venlig landsbypræst, on the other hand, venlig modifies not one element but the compound as a whole, as it would any non-syntactically complex noun. It can be shown that

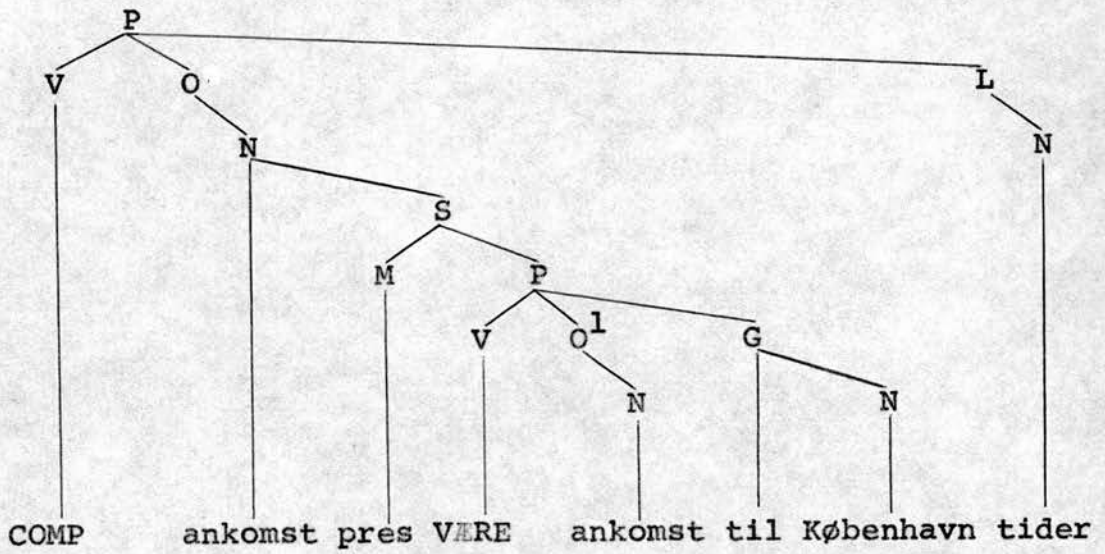
the adjective modifies the whole compound rather than just the last element of the compound if one considers a sentence like

Dr Finlay is not a good doctor, but he is
a good village doctor

or a Danish equivalent, where the lack of any clash between the two halves of the conjunction shows that good cannot be modifying the same element in both halves. The tree for venlig landsbypræst, then, must be



The same applies, *mutatis mutandis*, to the examples with prepositional phrases, but a prepositional phrase is placed after, not before, the noun it modifies. The tree for ankomsttider til København, for example, would be



The grammar that we have outlined above can cope, then, with an area which has previously been considered a problem area for compounding.

¹ The derivation shown here is a simplified one in that it shows ankomsst as a simple element, whereas it is a nominalisation. Compounds with nominalisations will be discussed below (§5.3.4). The discussion there will not affect the basic principles underlying this tree.

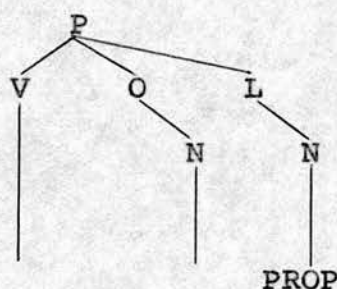
5.2 EXOCENTRIC COMPOUNDS.

5.2.1 So far we have limited ourselves specifically to endocentric compounds, and ignored exocentric compounds. Now, however, we can see that even exocentric compounds will fit into the framework we have postulated for endocentric compounds.

We have defined an endocentric compound as being a hyponym of its own head (see §1.1.3). In exocentric compounds the semantic head of the compound is unexpressed: for example, a redskin is not a type of skin, so it cannot be an endocentric compound, it is a type of man, or for some speakers, alternatively a potato. It is the unexpressed 'man' (or 'potato') element which we term the semantic head, since it is the element of which the compound is a hyponym. This head element is pragmatically determined. That is, there is nothing in the exocentric compound itself to show whether the head is a person, animal, bird, tree, flower or whatever. Most of these exocentric compounds are lexicalised, and their semantic head is thus fixed by convention, but in the case of a nonce compound we have to look for an entity bearing the appropriate characteristics: bignose might, in a children's story, be used to address a crocodile; redskin might, under certain conditions, be used to mean a kind of apple or plum, and so on. In a grammar, therefore, the semantic head may be shown as a PRO nominal

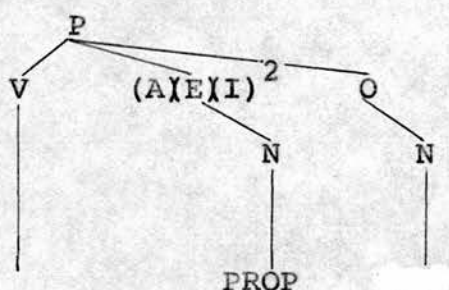
node bearing a reference to the pragmatic component. This element may also bear some semantic features. We shall term this element PROP (pro-noun + pragmatics).

Now if we consider adjective + noun exocentric compounds like redwing, blackhead, graaben, langøre, rouge gorge, bas bleu (in as far as the French examples can be said to be compounds and not idioms, see §4.1.6) we find that in every case they are made up of the adjective and a noun in the Objective case. And in every case the missing semantic head is the possessor of the quality or thing expressed by the compound, and so is invariably in the Locative case. We can thus very easily draw an outline tree into which all adjective + noun exocentric compounds will fit:



Similarly, if we look at French verb + noun exocentrics (see §3.8.3) like porte-avions, lèche-culture, porte-babil and the corresponding English series like cutthroat, scarecrow, know-all we find that in each case we have a verbal element and an Objective case noun. This time the semantic head is either an Agentive, an Experiencer or an

Instrumental, so that once again we can draw an outline tree which the whole series will fit:

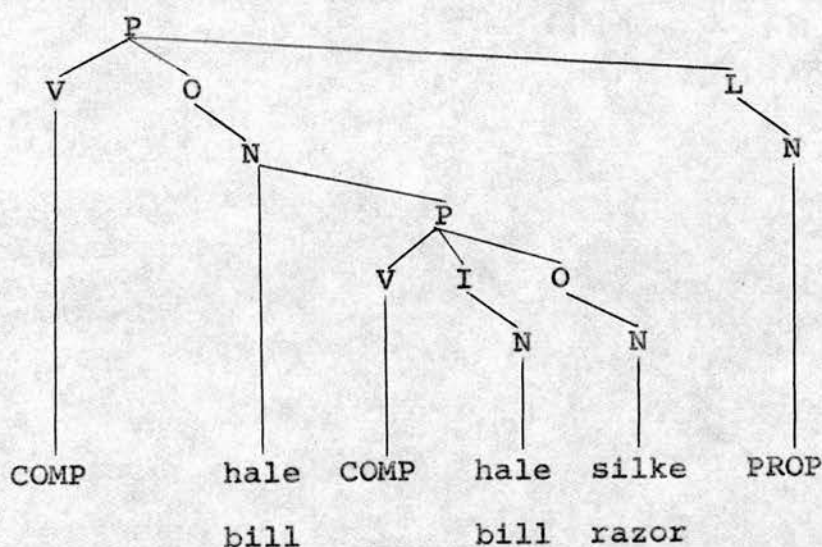


This type of compound appears to exist only in very limited numbers in Danish, and these are possibly all lexicalised. An example is vendekåbe. There are also other exocentric verb + noun compounds, such as sladderhank. These seem to be completely lexicalised as well.

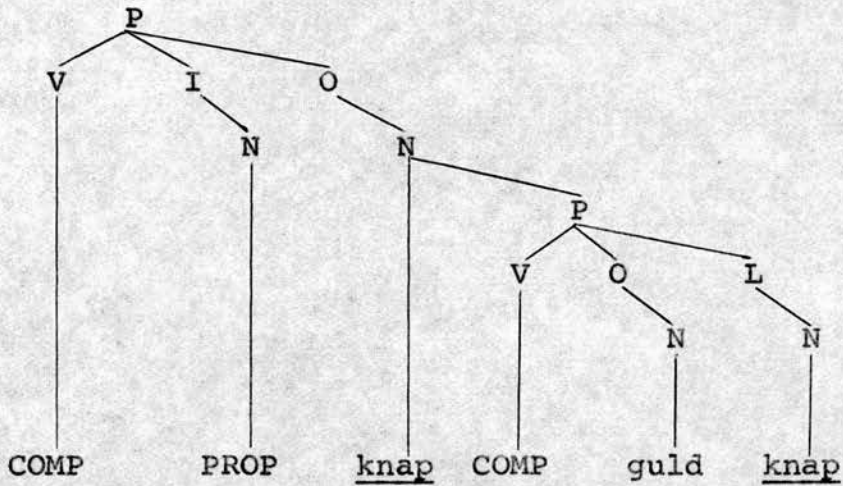
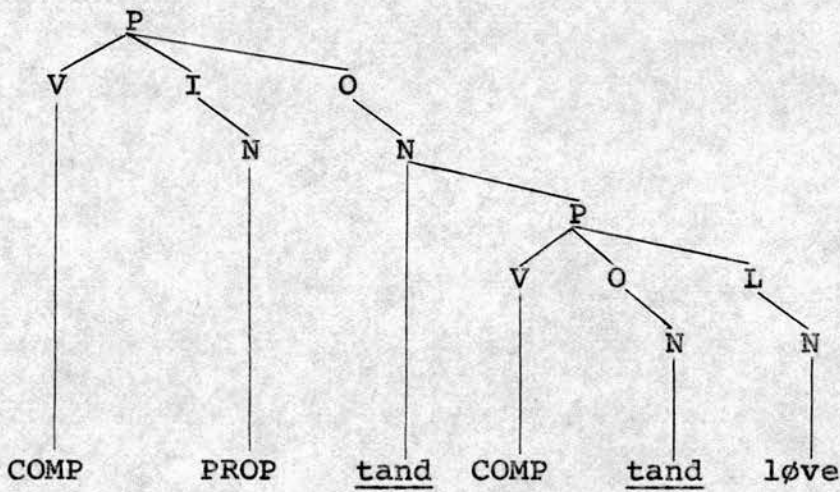
Noun + noun exocentric compounds are found only in Danish and English, not in French. The most common type is illustrated by egg head, razorbill, silkehale, pilblad. Each of these compares a part of the entity to which it belongs with something else. A silkehale is a bird (unexpressed semantic head) which has a tail (expressed head) like silk (expressed modifier). In case terms, therefore, the hale is an Instrumental as it stimulates

² This notation is extended from Fillmore (1968:28) and should be read as 'either A or E or I'.

the comparison, and silke is Objective (for details on this analysis of resemble see §1.2.3). However, we cannot merely add a PROP under a Locative node in this case, since the silkehale -- or at least the head of that construction, hale -- is Objective as regards the locational element. An embedded compound is thus required to allow this, and we have the structure:



This has the useful effect of marking the head of the embedded compound. While it may seem redundant to do this in the above examples where the expressed head is always the N dominated by I, there are some Danish examples where this is not true. Consider løvetand and guldknap. In these examples, the unexpressed head ('flower') is compared with the expressed compound, which is made up of an Objective and a Locative. But in one case it is the Objective which is the head of the expressed compound, and in the other it is the Locative. Compare the two trees:

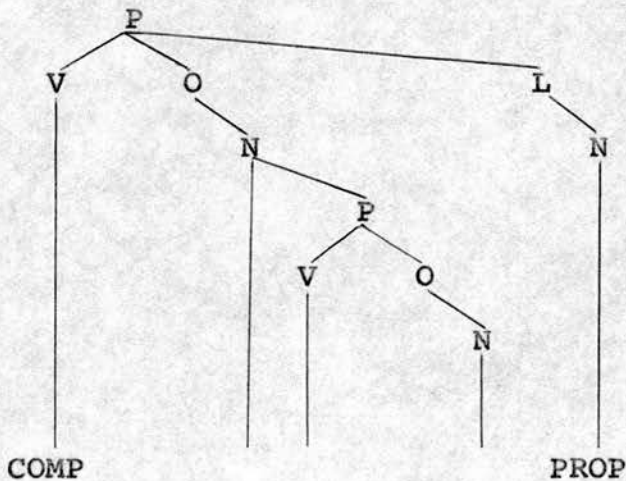


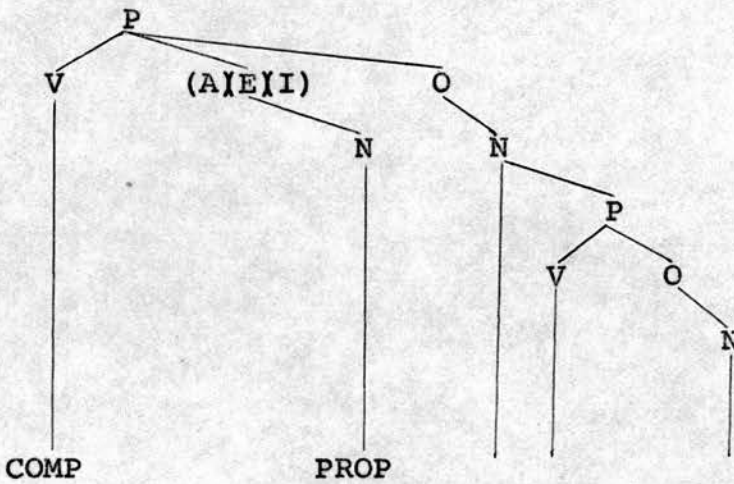
These two can only be generated in the correct order if the head of the expressed construction is marked outside the embedded P. And it is unacceptable for the head of the expressed construction to be marked as the head of the whole compound since different selection restrictions affect the head of the expressed portion and the semantic head of an exocentric compound: one does not, for example, say

The egg head blew its nose

even though head would be correctly referred to as it.

On the other hand, we do find in French that the gender of an adjective + noun exocentric compound can follow the gender of the expressed head rather than that of the semantic head where these clash. Thus, although it is la gorge and le rouge-gorge, where the gender of the compound is the gender of the unexpressed semantic head, it is le bas bleu, where the gender of the compound is that of the expressed head. This suggests that it would be useful to have both marked in the grammar. In view of this it seems reasonable to modify the trees for adjective + noun and verb + noun exocentric compounds so that they will fit the pattern suggested above for noun + noun ones. These trees will then be (respectively):

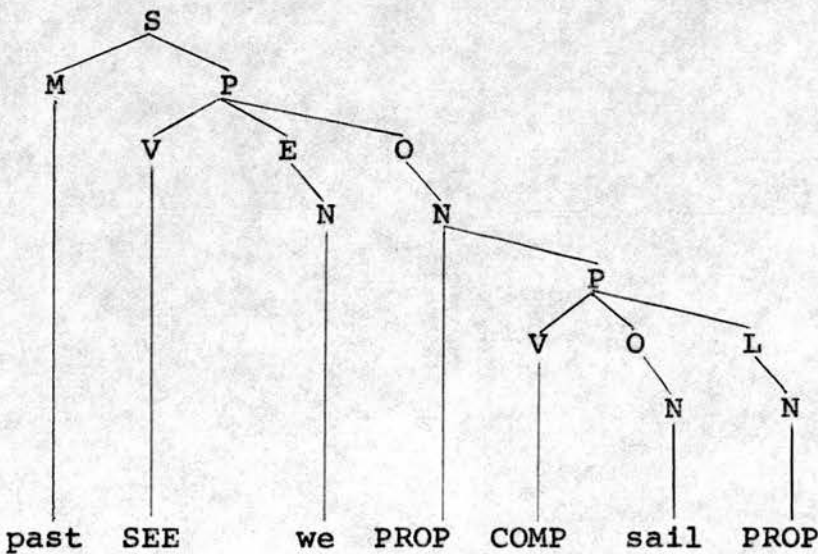




5.2.2 Once we have set up this system for dealing with exocentrics, we see that it will equally well deal with synecdoche. Since synecdoche is the naming of something by one of its parts, the unexpressed whole must always be dominated by a Locative node. Thus

We saw a sail

in the sense of 'we saw a ship' could be generated



In this context it is interesting to find Darmesteter (1875:39) saying, not as we say here that synecdoche is a type of exocentric, but the converse, that exocentrics are cases of synecdoche.

5.3 COMPOUNDS WITH OTHER PARTS OF SPEECH.

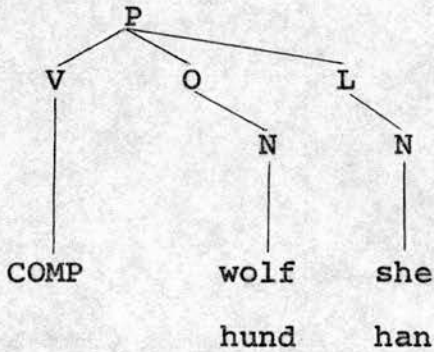
5.3.1 So far we have dealt only with nominal compounds which include nouns, adjectives and verbs. In this section we shall attempt to show that the grammar we have proposed to deal with these groups of compounds can in fact cope with other types of nominal compound as well.

For example, there are in Danish and English a number of compounds made up of a third person pronoun and a noun. In all compounds of this form, the primary function of the pronoun is to mark the sex of the head, though in some lexicalised cases the connotations have spread beyond this, as in, for example, he-man. The typical usage is illustrated by han-hund, she-wolf. Lehmann (1969:19) reports that

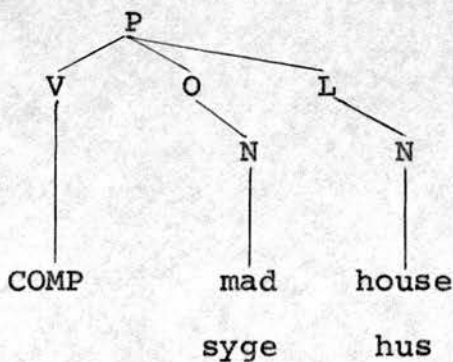
"A few compounds with first and second person pronouns are attested in the Rigvedic hymns"

but this pattern does not seem to exist in Germanic or Romance, except when the pronoun is almost a cited form: Söderbergh (1968:9) quotes forms like nireform, dusägende and this type is found also in Danish and English, with third as well as second person pronouns. Now, a third person pronoun may be seen in these main constructions as a minimally marked nominal: only gender is noted. And, as the name 'pronoun' suggests, such constituents can be generated under an N node. In these constructions there seems to be an equative relationship underlying the

compound ('the wolf is a she') and so the pronoun will always be generated under an L node, the head noun always under an O.



Similarly, there are in Danish and English (the corresponding meaning is expressed in French by a compound phrase) a number of compounds apparently made up of an adjective and a noun, but where the adjective does not modify the noun. Examples are madhouse, greenhouse, sweet shop, sygehus, and possibly grønthandler. In fact, as becomes clear if we consider syntactic paraphrases of these compounds in which we find, for example, 'a shop which sells sweets', 'a house for mad men, for the mad', 'et hus til de syge', these compounds should be seen as being made up of two nouns, the first of which is converted from an adjective. They can then be generated in the same way as any other noun + noun compound.



5.3.2 Let us now consider the group of compounds which includes the following:

datid, udenomsnak, fremgang, efterår, medmenneske

away game, afterthought, by-way, outpost

avant-bras, arrière-cour, sous-locataire, entre-temps

and a contrasting group, particularly prolific in French, made up of compounds like

eftermiddag

afternoon

à-compte, pourboire, sans-culotte, après-midi, entr'acte.

These examples give rise to a number of questions, the first of which is the categorial status of the first elements.

This problem may be stated as two subsidiary problems:

(1) is the same part of speech involved in the two contrasting sets of examples or not? (2) if the same part of speech is used how do we account for the different constructions of the two sets, and if different parts of speech are used how do we distinguish between them?

Zandvoort (1957:§801) distinguishes between these two classes. In the first group, he says, we have cases of conversion where an adverb is used as an adjective, in the second group -- and he gives the English examples of up-country districts, uphill work-- we have compounds made up of preposition + noun. The distinction is evidently one interpretable in terms of some kind of underlying syntax.

Away game is not related to away the game, but uphill is related to up the hill. And there is a further piece of evidence which would tend to support this distinction: the first group are almost all endocentric (efterår might be an exception, but might well be completely lexicalised anyway) while the second group are all exocentric; most of the English examples which seem to relate to the second group can only occur as the first element of a compound.

Let us provisionally assume, then, that this distinction is valid. The first question it raises is where do these elements originate, from what are they derived. Let us consider prepositions first.

Brøndal (1928:30 -- p.78ff in original) was one of the first in recent times to point out that prepositions are relational, and in his system they have a relational feature in common with both verbs and conjunctions. Diderichsen (1946:§§8, 14), following Brøndal, classes verbs and prepositions together as "words expressing a relationship" (but see also below). This movement, begun in the 1920's, has continued right through to the 1970's. Bally hints that verbs and prepositions have a lot in common on several occasions (1932:§§192, 348, 512, etc.). Chafe (1970:159) assumes that locative prepositions (at least) are verbs, but provides no discussion of this point. Similarly,

Leech (1974:184, 192) assumes that prepositions are predicates. Becker & Arms attempt to prove, not that prepositions are verbs, but (1969:1)

"That verbs and prepositions may be surface realizations of the same abstract semantic categories."

Their evidence, in summary, is as follows:

- 1) verbs and prepositions of motion have deletable objects, verbs and prepositions of location do not;
- 2) many verbs of motion can be paraphrased by a maximally unmarked verb of motion and a preposition (cross vs. go across); other verbs may be paraphrased by prepositions (use vs. with);
- 3) prepositions can function as predicates, especially as imperatives (Down! He upped his rating);
- 4) prepositions, like verbs, may be transitive, semi-transitive or intransitive;
- 5) motional prepositions and stative verbs can only take epistemic modals;
- 6) locational prepositions can be continuative, motional ones must be momentary and function syntactically like momentary verbs such as wake up;
- 7) in languages like Indonesian, Thai, Chinese, the elements we would normally call prepositions are in fact surface structure verbs (this also applies

in a limited way to French, see Bally, 1932: §348).

Of course, these arguments are not all of equal weight. We should not consider (3) above without also realising that prepositions can function as nominals:

The ups and downs of life.

Argument (1) is in fact incorrect since not all verbs of motion have deletable objects; one cannot delete the object in

He passed the salt

He fished my hat out of the pond.

Arguments (1) and (4) are weakened since the "intransitive" prepositions, or those with "deletable objects" are frequently termed, and treated as, adverbials (see below). Arguments (5) and (6) are really different aspects of the same argument. And the strength of argument (7) would appear very dubious since one can obtain similar evidence that prepositions are nominals, very often from the same languages: in Twi, for example, directional prepositions look like auxiliary verbs (and might thus be expected to give support to Becker & Arms' thesis) and they are followed by a noun of location and a postposition; these postpositions are locative and in general are identical in form with nouns expressing body parts: the preposition 'in', for example, is expressed by the postposition -mu which is also the word for stomach. This situation is common in West African languages. All in all, then, it is not clear how much

credence should be given to this 'evidence' that prepositions are predicates.

Let us leave prepositions for a moment and turn to look at adverbs. Here the position is even less clear, and has been far less discussed in the literature. It must be stressed that the adverbs we are dealing with are not sentence adverbials -- much discussed in the literature -- nor are they manner adverbials, neither of which can be used in the first element of compounds. They are a very limited set of adverbials expressing time and place. This seems to be the only hint we have as to how to generate these elements. If we look at other adverbials of time and place we find that these are very often prepositional phrases or, in inflecting languages, casually marked nouns. For example, in Russian we find forms like ночью 'by night' and машиной / автомобилем 'by car'. To take a borderline case, in Danish we find a form hjemme which might be a place adverbial 'at home' or might be the locative case of the noun hjem. The obvious thing, then, is to derive these adverbials from locative case nodes. The exact mechanics of this need not concern us here: it would seem fairly clear the type of thing this is going to entail, and much of it is far from controversial. Katz & Postal (1964:134) and Anderson (1973c:63), for example, make similar proposals.

This, however, brings us back to one of our original problems: how do we distinguish between the two sets of elements, particularly as some forms appear in both places? Jespersen (1924:87ff) argues fairly convincingly that adverbs of this type and prepositions, along with conjunctions and interjections, belong to the same part of speech, which he terms 'particle'. Diderichsen (1946:§14), although he links verbs and prepositions, goes on to say that prepositions and adverbs may be classed together as particles. If this view has fallen out of fashion in more recent work, it would seem to be largely because, in concentrating more on synthesis than analysis³, transformational syntax has been concerned more with knowing what node to generate than with knowing to which category to assign a given element. It does not necessarily reflect on the strength of the arguments of people like Jespersen.

But if it is the case that these adverbs and prepositions belong to the same category, and they have a great deal in common to suggest this may be so, which of the derivations

³ This sounds contradictory to Chomsky's (1957:48) claim that there is no direction involved in a TGG. We would not wish to challenge this theoretical point here, but merely point out that very often transformational practice, if not theory, has been to concentrate on rules which will produce grammatical sentences, rather than to analyse texts.

we have proposed above is to be abandoned? The choice would seem to have to be fairly arbitrary. However, it seems likely that, at least in a localistic grammar (see §1.2.1 for the term; for further discussion see below, §5.5), most of the prepositions we are dealing with here, as well as the adverbs -- the whole class of particles, that is -- can be treated as locatives in much the same way as we suggested above for the adverbs. The underlying representations in some cases will be more complex than for the adverbs alone, and it is not always exactly clear what form these representations will take, but their local nature does not seem to be in doubt. Consider, for example, after, under, up, sous, entre, outré. Even sans can be seen as a negation of a locative ('not with'), and pour is an overt directional marker in sentences like

Il est parti pour Paris.

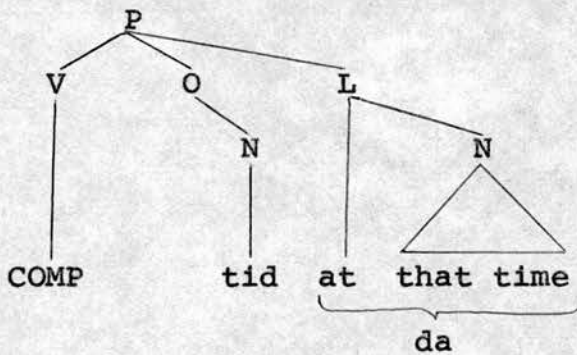
For this reason it might be more satisfactory to generate all these elements in the way we have suggested for adverbs, but this decision is to a large extent arbitrary, and may depend upon the model being used. We can envisage three possible solutions:

1. Generate adverbs and prepositions separately, adverbs as nouns, prepositions as verbs, as specified above.
2. Generate all particles as nominals (preferred solution).

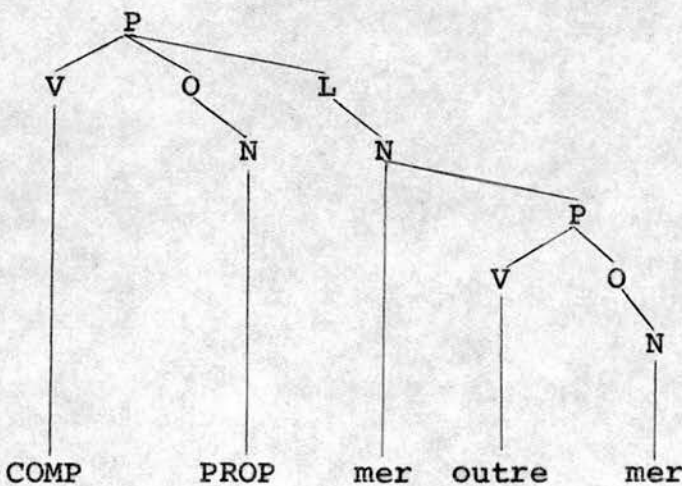
3. Generate all particles as predicates.

If we take an example from each group, datid for the adverb + noun and outré-mer for the preposition + noun, we can see the kind of results these three possibilities will give. If we first look at (1), a proposal in which all compounds including adverbs must be generated as endocentric constructions and all compounds including prepositions as exocentric constructions (optionally with the PROP position further specified in English, as in uphill work), we obtain the following structures:

1a.

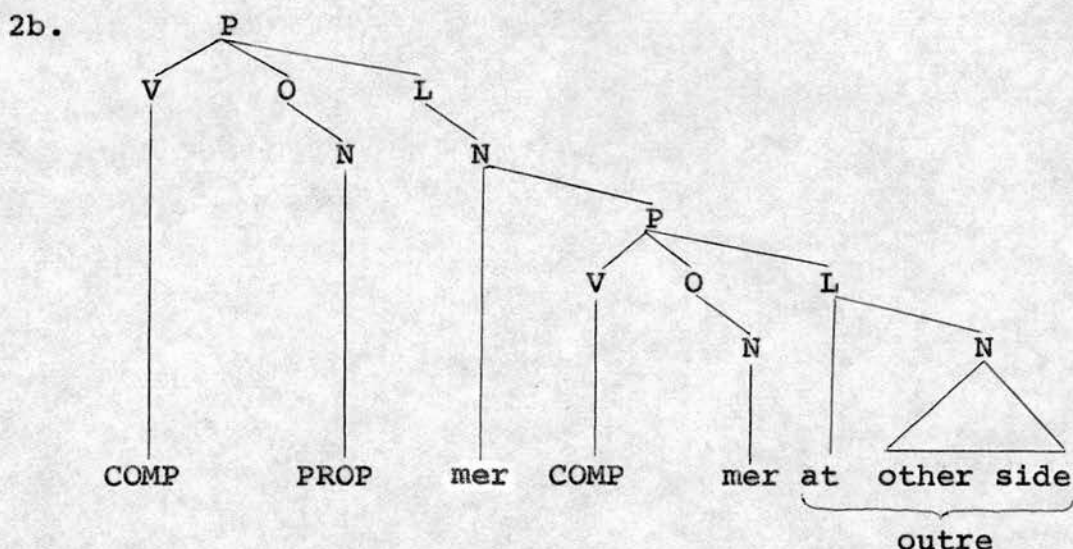


1b.

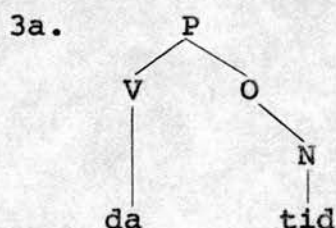


In solutions (2) and (3) the difference between our two

original groups of examples is presumably marked by whether they are exocentric or endocentric. In solution (2), our preferred solution, datid is generated as in (1a) and outré-mer is generated thus:



Solution (3) might be seen as supporting Zandvoort's claim (quoted above) that adverbs used as compound first elements are converted adjectives, although this is not very satisfying since these elements do not otherwise act as adjectives. By solution (3), outré-mer is generated as in (1b) and datid is generated thus:



In (1a) and (2b) the structures under the lowest L node are to be taken as approximations rather than as definite proposals. It may be that the lowest V in (1b) and (3a)

should be further analysed, but on the other hand it is not clear how this would be done in a Fillmorean grammar, and if done in an Andersonian grammar it would lead to structures more like (2b) and (1a).

The point that arises from this discussion, however, which is of value to us here, is that the compounds we have been discussing can be generated in the framework which we have already proposed in Chapter IV.

5.3.3 In connection with compounds with particles, we come to look at a whole series of nominals like

runaway, make-up, dropout, get-together

which are generally assumed to be nominalisations of the appropriate phrasal verbs. Thus, for example, Bolinger (1971:xiii) says:

"The phrasal verb is -- next to noun + noun combinations -- probably the most prolific source of new nouns in English. It generates them by the same stress-shift rule that gives us import from impórt, digest from digést, combine from combíne, and so forth; hence standoff from stand off, runaway from run awáy"

See also McArthur (1973:48ff) and Zandvoort (1957:§774).

However, this begs two rather important questions. Firstly, what is the source of such compounds as fall out, love-in, pushover, lay-by for which there is apparently no phrasal verb; and secondly, what is the difference between the "major pattern" (cp. McArthur, loc.cit) and the "minor pattern" where the particle precedes the verb: intake, by-pass, outlay, downfall, upkeep, etc.. McArthur (op.cit: 50) suggests that the distinction may be semantic:

"Although the major pattern is used mostly for abstract ideas, it is also used for persons and objects. Such uses are often highly specialized, idiomatic or slangy."

But the minor pattern is also used mainly for abstract ideas (downfall), but also for persons (upstart) and objects (by-pass), so this does not seem at all helpful, although it does seem to be the case that only lexicalised examples of the minor pattern are found designating objects and persons.

We can also rule out several other factors which turn out not to be decisive as to which of the two patterns is used. The decisive factor is not lexical conditioning, although this may play a contributory rôle. McArthur (op.cit:7) lists 17 particles which may be used in phrasal verbs. Of these, four seem never to appear in nominalisations: about, along, apart and beyond. Of the remaining 13, four

never appear in particle + verb nominalisations. These are around, away, past, together. But all 13 appear in verb + particle nominalisations: runaround, runaway, play-back, breakdown, stand-in, play-off, come-on, fade-out, pullover, fly-past, breakthrough, get-together, build-up. These examples are, of course, all lexicalised. Examples of the existing patterns in particle + verb nominalisations are: backstop, downtrow, in-put, off-shoot, on-set, out-break, over-hang, through-put, up-keep. We can add to McArthur's list by which is found in both positions (lay-by, by-pass) and under found only in first position (underlay). So the pattern used is not conditioned by the particle used, though this does have some sway.

Neither is it conditioned by the verbal part. This is shown by the existence of such doublets as hangover::over-hang, spinoff::off-spin, fall-out::outfall, breakout::outbreak and lookout::outlook. But even if these were lexicalised exceptions, originating to distinguish themselves from the other member of the pair, we would still have lay-by vs. overlay, outlay; come-on vs. outcome; uptake vs. takeover; onset, upset vs. set up, setback and so on. Again there do appear to be some tendencies, but this cannot be put any more strongly than that: flow and take seem to appear more often as second elements, but this impression might be due to an insufficiently large corpus. Similarly,

and with the same caveat, run and drop, for example, seem to appear more often as first elements.

A combination of these two factors might go some way towards providing a basis for distinguishing between the two nominalisation patterns, but it seems unlikely. Other factors such as transitivity, exocentric vs. endocentric, motional vs. locational seem to be irrelevant. It does seem to be the case that no inseparable phrasal verb (or fixed phrasal verb: McArthur, 1973:53) can provide either type of nominalisation, but the pattern of nominalisation undergone seems to be entirely idiosyncratic, and may have to be listed in the lexicon.

It is possible that this is only true of frozen or lexicalised examples, however. It has been suggested to me (Tom McArthur, personal communication) that minor pattern nominalisations are only synchronically productive when some strong force of analogy is at work, as in the case of through-put after in-put and out-put. If this is true, then synchronically there is no problem, since the major pattern is the only true nominalisation pattern, and all minor pattern nominalisations are lexicalised. Diachronically, one has to explain the dying out of the minor pattern, and its existence in the first place. Tom McArthur has again suggested (personal communication) that this may

be at least partially explicable in terms of the varying influence of Latin.

As for the question of whether these forms actually are nominalisations of phrasal verbs, it would seem that we can answer with a modified affirmative. Those which synchronically are not nominalisations of phrasal verbs are either (a) lexicalised nominalisations of phrasal verbs which no longer carry the appropriate meaning, or where the nominalisation, once lexicalised, has changed its meaning (upstart, walkover) or (b) formations by analogy with forms which are nominalisations of phrasal verbs (for example, love-in is by analogy with sit-in for which there is a phrasal verb). Their being nominalisations is seen more clearly in Danish, where corresponding nominals typically have nominalisation endings or forms: at være til > tilværelse, at gå af > afgang, at køre ind > indkørsel, etc..

This being the case, we can see that forms like upkeep are not generated in the same way as forms like updraught. As far as our grammar of compounding is concerned, we need only deal with these nominalisations (a) when they form part of a larger compound unit (student sit-in, get-away car: see McArthur, 1973:50f) and (b) when they are exocentric. In either case they behave like other nominalisations (see below).

5.3.41 We shall now turn to consider the generation of compounds with gerunds and the distinction between these and noun phrases with a modifying gerundive. The terms gerund and gerundive are here used idiosyncratically, and not exactly as in traditional grammar. Gerund will be used to refer to a nominal form in -ing, gerundive to an adjectival form in -ing. We can illustrate the forms we mean by an old children's riddle: "Why must you always tiptoe past the medicine cabinet? So as not to wake the sleeping pills." The point of this riddle hinges on the ambiguity (in the written language) of the phrase sleeping pills. When spoken with one stress, on sleep, the form sleeping is taken as a gerund and the meaning is 'pills for making one sleep.' If two stresses are used, the form sleeping is taken as a gerundive, and the meaning is 'pills which are sleeping.'

There are two points to be noted about this. (1) In any given V-ing + noun phrase the distinction between the gerund and the gerundive is always maintained by a stress difference. (2) Semantically the gerund consistently expresses the purpose of the noun: this may be paraphrased as 'noun for Ving (with)' or as 'noun causes s.o./s.th. to V', though not necessarily by both in any one example.

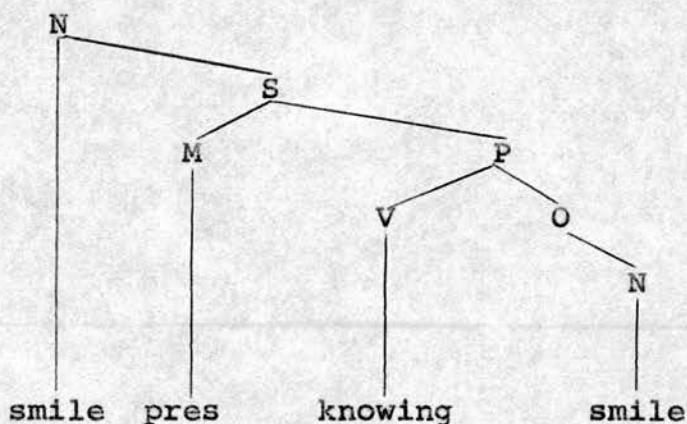
There would seem to be no doubt that both the gerund and the gerundive must be generated from the verb. Formally, it is very clear that they are both made up of a verb + ing. Further, the gerundive is, by definition, an adjective and it is generally assumed (following Lakoff, 1970b) that adjectives and verbs are derived from a single category. We have accepted this hypothesis here, so we would expect the gerundive at least to be generated under a V node. There is an apparent weakness here in that this would tend to presuppose the existence of a structure

noun + BE + V-ing

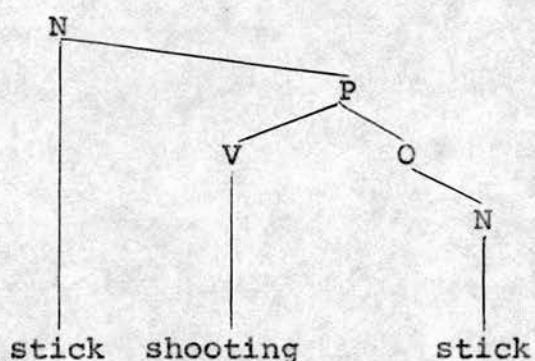
from which this is derived, and such a form would be identical to the form of the present continuous tense. In fact, this co-incidence in form appears to block the occurrence of this structure, so that in most cases it is non-occurrent when the V-ing is an adjective. There are, however, a very few counter-examples where the verb is stative and cannot occur in the present continuous. A knowing look, for example, might come from the look (he gave her) was (very) knowing, and seeming (a seeming lie) can also occur after the copula in some structures, though this is now rather archaic: he was seeming kind. Similarly with doubting, loving, pleasing, forgiving. In these cases the subject of the copula is very often a noun which would not normally function as the subject of the verb from which the gerundive is derived: a look cannot usually be said either to doubt or to know.

The verbs for which this works are all transitive. In the case of intransitive verbs, the preposed present participle always gives an adjective which cannot be modified, and when used predicatively always gives a form of the present continuous. Thus we have the sleeping dog and the dog is sleeping, but not *the very sleeping dog.

It would seem then that we can generate gerundive + noun phrases in the same way as we would derive any other adjective + noun phrases, so that a knowing smile, for example, would be generated



If we accept this derivation, we would appear to have two possible sources for the gerund. The first would be merely that it was the compound version of the gerundive, so that shooting stick, for example, would be generated:

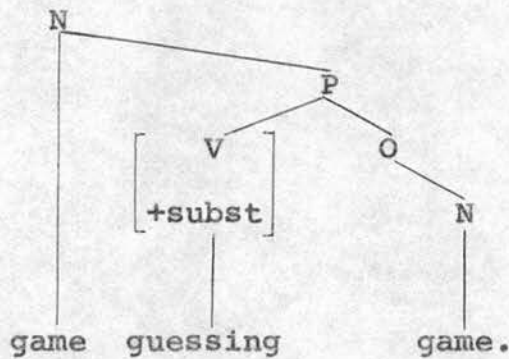


If this were accepted the difference between the two readings of sleeping pills (discussed above) would be dealt with in the same way as the difference between black bird and blackbird. However, for a number of reasons, this does not seem terribly satisfactory, although it is not impossible. It is unsatisfactory firstly because it would require a different generation of the verb + ing element in apple cooking (where it is decidedly nominal in nature) and cooking apple; secondly because it divorces entirely shooting in shooting stick from shooting in (both readings of) the shooting of the hunters. It might therefore be more satisfactory to accept the alternative source whereby, though still generated from the verb, the gerund is generated by a nominalisation transformation. This fits more closely with the traditional explanation of the gerund as a 'verbal noun'. It also means, if we accept Anderson's (1973c) approach to tense and aspect, that the gerund is syntactically identical to the verb + ing element found in the present continuous. This turns out to be a desirable factor since generally stative verbs do not provide a first

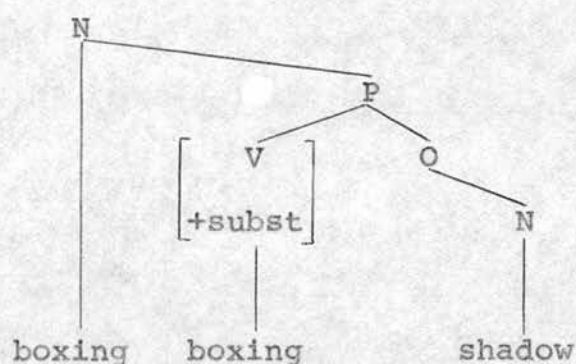
element for these gerund + noun compounds. The only counter-example to this generalisation that we have found is hearing aid, where hearing has become lexicalised as the name for one of the five senses (cp. touch, sight, smell, taste, none of which is a gerund), and where, in any case, a present continuous is possible:

I'm hearing better since I had my ears syringed.

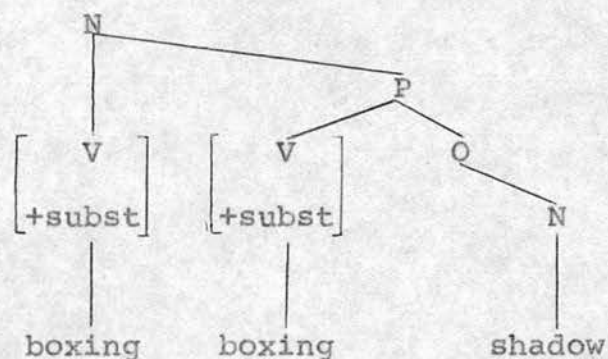
Following Anderson's (1973c:48) notation, then -- in as far as it applies to the generation of gerunds, only -- we can say that guessing game, for example, is generated thus:



5.3.42 However, the use of this solution gives rise in itself to a problem of a methodological nature, as we can see if we consider a compound like shadow boxing. If we generate this using the solution we have just proposed above, we get



The problem lies in the generation of the form boxing under the top N. We have postulated above that verb + ing forms are derived from verbs, so that to gain a verb + ing form under an N node we would apparently have to generate a V under the N node, possibly thus:



This has two major disadvantages which we have already discussed above (§1.2.3) in another context: firstly it introduces an entirely new type of rule into the grammar and secondly, as a result of this, it adds to the generative power of a grammar which is probably too powerful in the first place, and thus weakens the power of any generalisation provided by that grammar. So before we can accept the proposed solution for the generation of compounds including gerunds, we have to find an acceptable solution to this problem.

First of all, it should be noted that this is not a problem which is peculiar to compounding; the problem also exists when we are dealing with relative clauses.

Consider

Boxing, which is a violent sport, should be condemned by all pacifists

I'm talking about necessary shooting, not shooting which is for pleasure.

But the problem here does not seem to have been considered in the literature.

Seuren (1969:§3.2.1) attempts to prevent "the parasitic growth of deep structures" by postulating an algorithm which, for his example sentence I saw the game you wanted to make him lose, stipulates

"For the embedded relative clause ...

the following instructions:

(14) a) that it contain a noun phrase with game as the noun

or b) that it contain an embedded object-clause which is subject to the same instructions (a) and (b)."

The (b) section of this rule is to allow for the recursive property illustrated in his example where the word game occurs in the third embedded sentence. The precise nature of the mechanism need not worry us here, but we may note

that Seuren's final rule takes the form

"NP → Det + N + S:F

where S:F is read as 'S:F puts algorithm A
into action and S is subject to the instruction
rule F generated by A'

so that the rules that have applied to the NP in question must also apply in the S below the NP. The important point here for our purposes is that Seuren puts the burden of identical generation onto the upper N: any N which has an S embedded under it must control the generation of that S so that an identical N appears at some point in the S. In doing this he is automatically in the difficulty which we are trying to avoid, of having to introduce a new type of rule introducing verbal subjunction (in the sense of Anderson & Jones, 1972) under N.

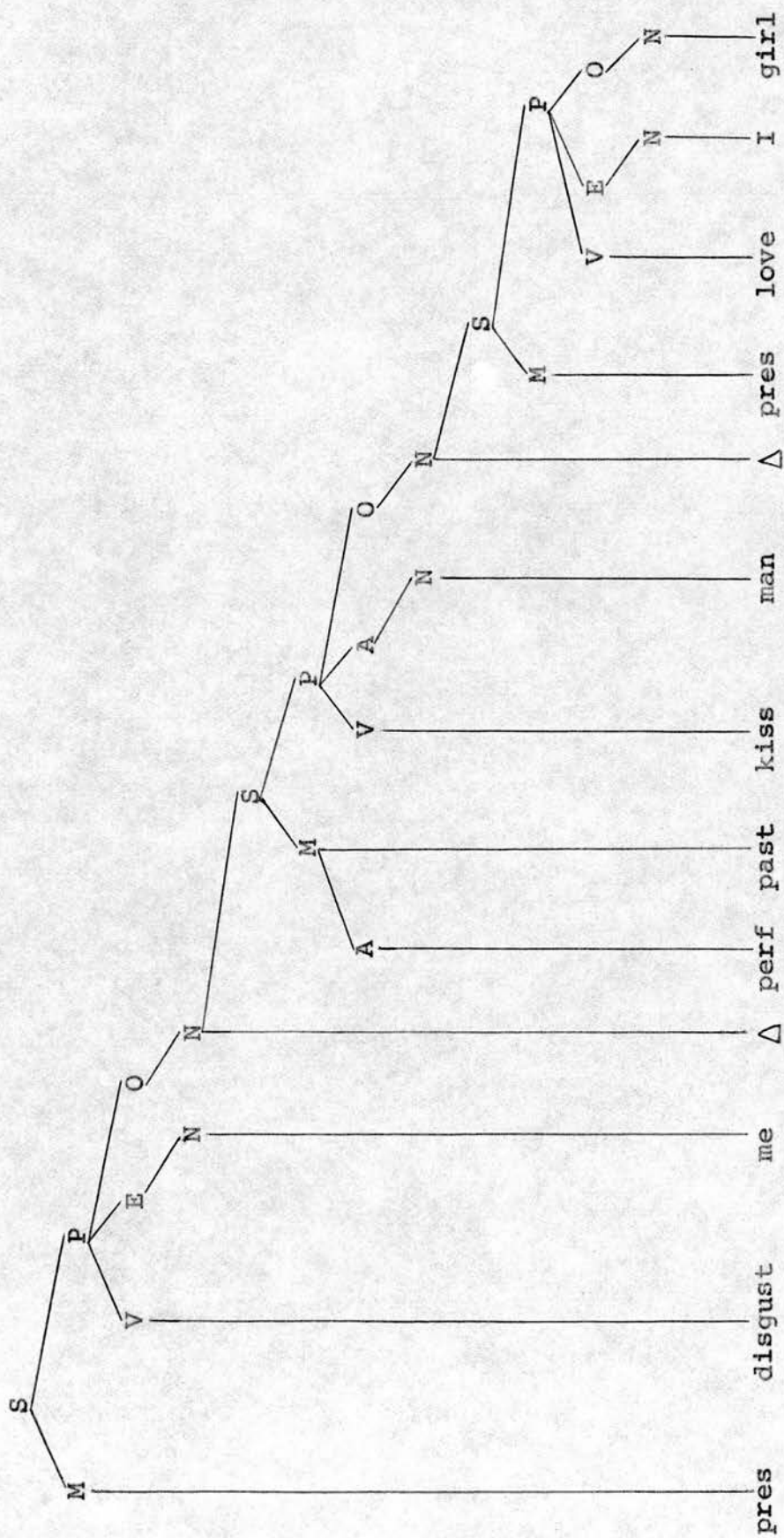
This being the case, it would seem that it must be the form of the lower N which influences the generation of the upper N. The simplest way to do this would seem to be by means of a copying rule which copies the form, and only the form, of an element inside an embedded S out onto the outside, upper, N. This is, in essence, the solution proposed by Schachter (1973:§2) under the heading promotion. It is also related to the solution proposed by Anderson (1972). Schachter's proposal is essentially that a dummy N should be generated when an S is embedded below it, and that

an element from within the S should be promoted into the slot left by the dummy N. Variations on this theme spring fairly easily to mind. It might, for example, be more satisfactory to mark strict identity between the dummy element and one of the arguments in the embedded S. Anderson (1972:136/7) suggests that the lower N be marked with a relativising feature [+wh]. It might be that the dummy N is not just one argument from the embedded S but the entire S. But since these are no more than variations on the same theme, let us retain Schachter's proposal for the moment.

We can see how this works if we consider the generation of a sentence like

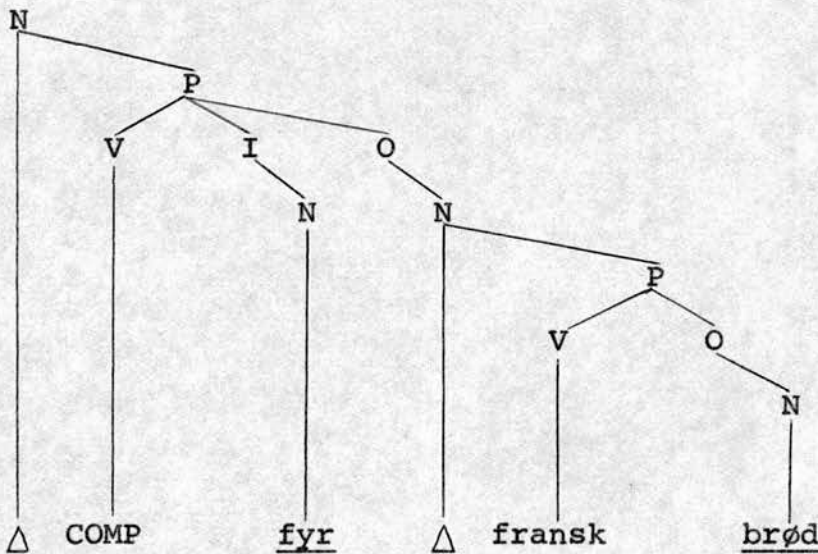
The man who kissed the girl I love disgusts me.

By the proposal under consideration here we would generate a structure like this:



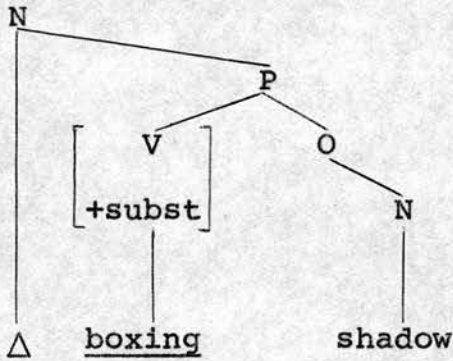
The successive applications of the cycle will give I love the girl, girl is then promoted to the first Δ , and the cycle applies to the second S to give the man kissed the girl I love. Man is now promoted into the dummy Objective slot, to give The man who kissed the girl I love disgusts me.

Mutatis mutandis, the same principle may be applied to the generation of compounds, except that here it will be a P which is embedded rather than an S. The trees will not differ greatly from those proposed in the last chapter, but the theoretical implications are not the same. One can compare the tree given for franskbrødsfyr in §4.6 with a tree under this new principle which would give (underlining head elements in each case):



Since it is forms rather than derivations which are copied up -- although the principle would not differ in essence if a complete derivation were copied onto the dummy element --

this solution overcomes our problem with gerundial compounds:
shadow boxing can now be generated like this:



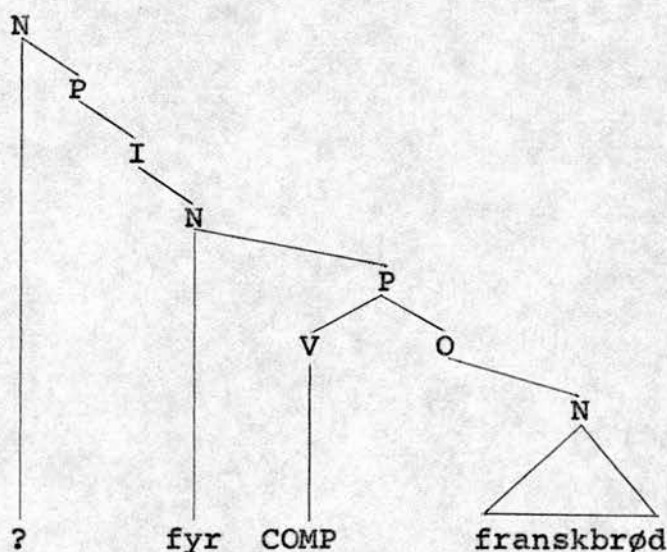
The same principle may be used to generate compounds with a verbal head: sunshine, nosebleed, etc. (see §4.3.2).

This solution has, however, much against it. Miller (forthcoming:§III) points out that there are dependencies not only in relative clauses but also in complementisers (a verb chooses the complementisers it takes) which could be captured in the same way if both were taken as working from the top down. These two arguments are logically independent of each other, and there is no a priori reason why the two should not work in opposite directions. If they do, however, no such generalisation can be made. This solution is also a retrograde step in that it once again permits "the parasitic growth of deep structures" which Seuren's algorithm was intended to prevent, although the end result is perhaps not quite so bad as it was pre Seuren, and it is incompatible with Seuren's proposals. Perhaps more importantly than either of these, however, it casts doubt on our system of marking the

head of a construction, and this point deserves discussion in greater detail.

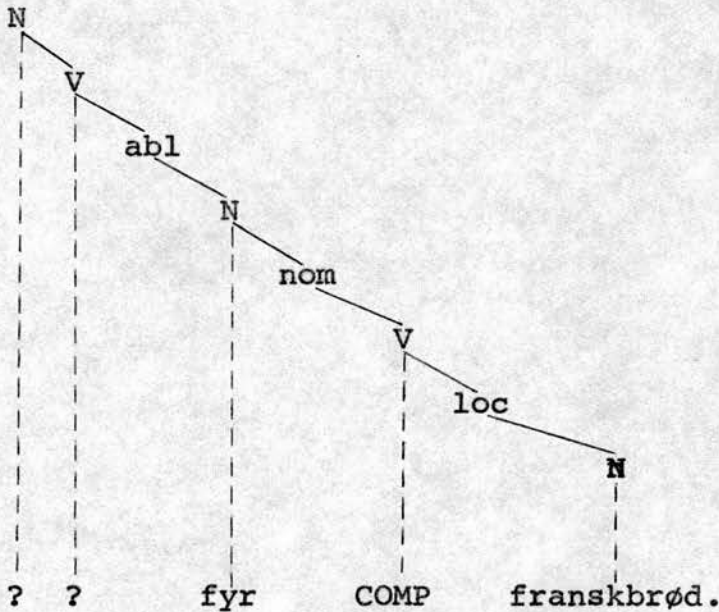
In a dependency grammar the head of a construction should govern all its modifiers. This is true of our grammar of compounding, but in a limited way only, since the head is also repeated on the same level as its closest modifier. The question is whether this system can be improved upon within this grammatical framework.

In our grammar an N can only occur below a case node which, in turn, can only occur below a P. In order to generate franskbrødsfyr with fyr governing franskbrød we would need a configuration of the following kind:



The I is necessary here because fyr is the stimulator of the experience (see §1.2.3), but this must be dominated by a further N since the compound as a whole is probably not an

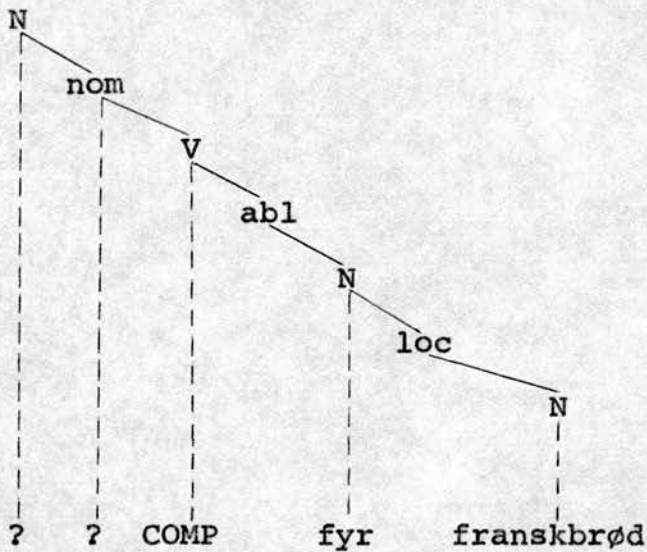
Instrumental in the sentence in which it occurs. In Hendes franskbrødfyr gik ned af trappen, for example, it would be an Agentive. But though it is clear that this top N is necessary, it is far from clear what it should dominate and what its function is if it is empty. Nor is the status of the top P clear. The problem is exaggerated further in an Andersonian grammar where we have an empty V instead of the empty P here:



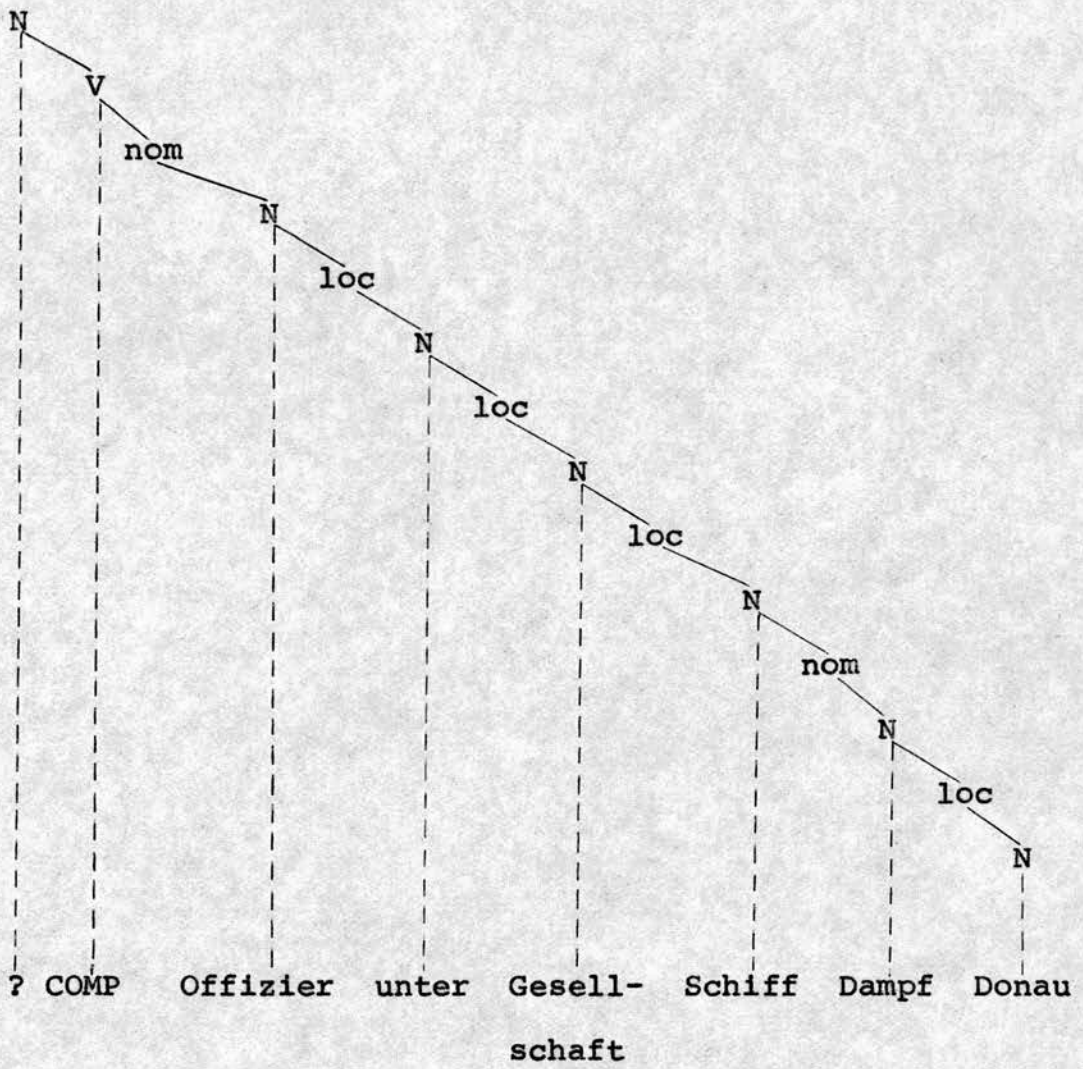
John Anderson (personal communication) has said that if he had dealt with relative constructions at the time of "The Grammar of Case" he would probably have generated them in much the same way as we have been generating compounds and relatives here, though he would not necessarily wish to be held to such a derivation now. This method is also implicit in Miller (forthcoming:§II). Not to use this type of

derivation gives rise to too many awkward questions.

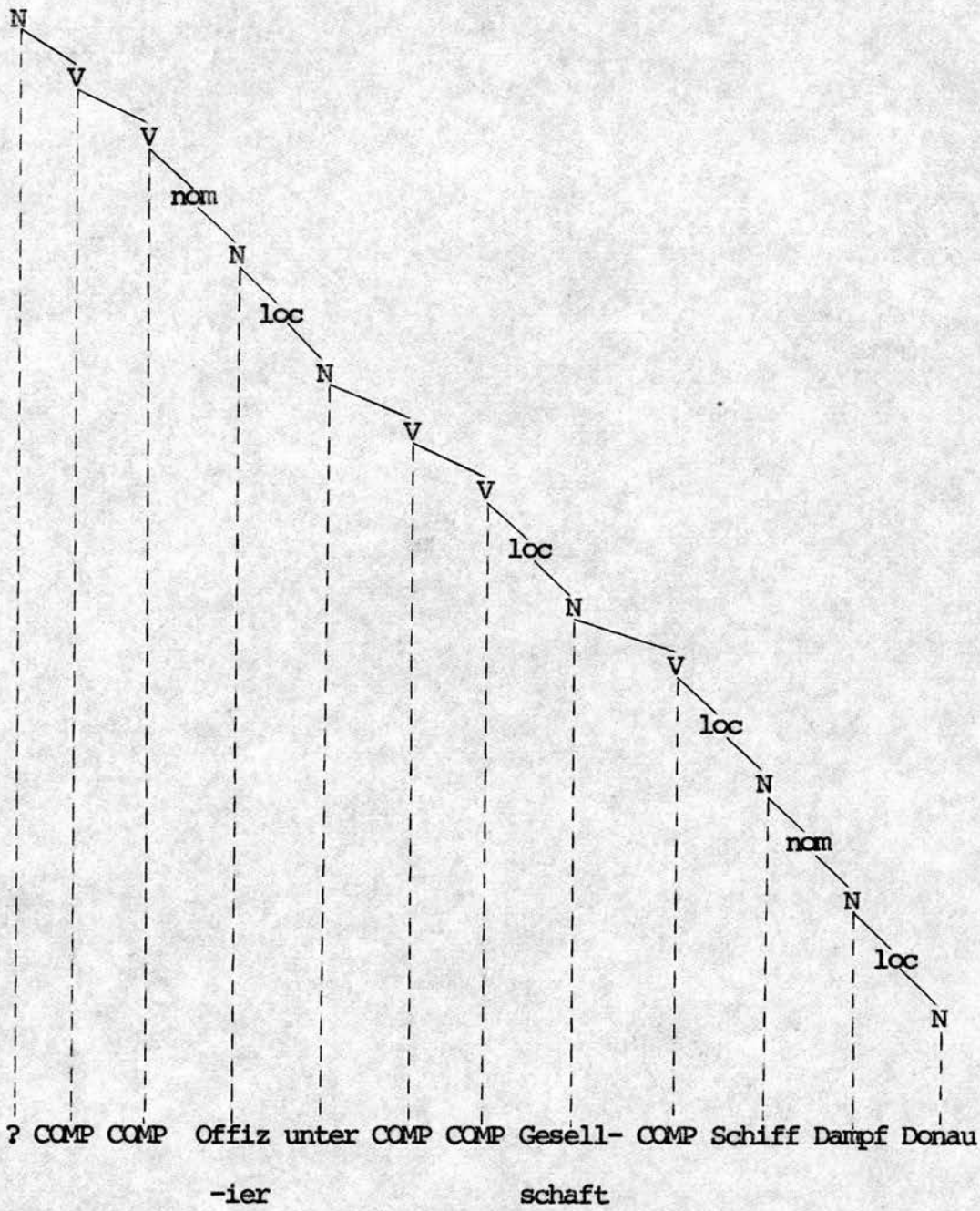
Of course, all this is assuming that we do not introduce a new type of rule which allows an N to govern a case node and another N directly. Although John Anderson (personal communication) has pointed out that the version where V and N regularly alternate is by far the stronger hypothesis, and that he has tried to keep to this as far as possible, this new type of rule does occur in Andersonian grammar (see esp. Anderson, 1974b), whilst its status would be problematical in a Fillmorean grammar. But even if one allows this type of rule, and generates configurations like



one is left with the problem of the status of the top N, and the problem of bracketing a compound like Donaudampfschiffsgesellschaftsunteroffizier which would presumably end up with a structure



or, at very best, (if the phrase is appropriate):



(relational elements have been omitted in this tree between N and V or V and V, but not between V and N).

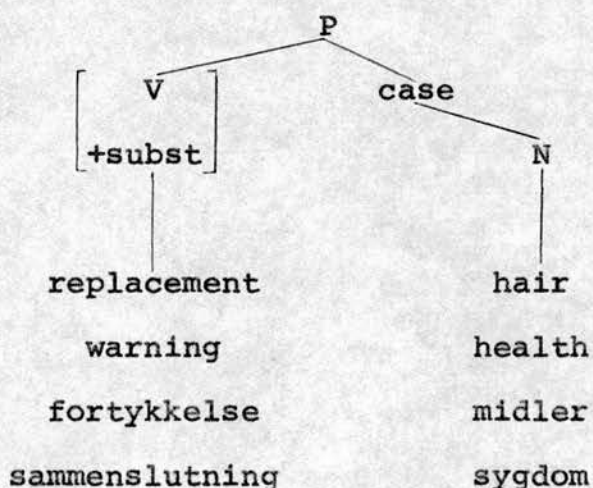
That these problems cannot just be shrugged off is shown by the calculation done by Wennerbergh (1961:47) where he points out that there are 2 combination possibilities for a compound

of 3 elements, but theoretically 14 for a compound of 5 elements, and 42 for a compound of 6 elements. The problems involved become so enormous that one is virtually obliged to keep to the method of marking the head -- however ad hoc it may seem -- that we have been using up to now.

The solution we have proposed for generating compounds with gerundial heads is far from perfect. Its disadvantages (clumsiness, retrograde steps in relative construction description) more or less balance out its advantages (general applicability, working in conjunction with the transformational cycle). Nonetheless, we shall let it stand, *faute de mieux*, as a tentative suggestion of a direction in which a solution might be sought. It must be remembered that although Miller (forthcoming) argues against this proposal, both Schachter and Anderson motivate proposals of this type from material other than relativisation, which suggests in any case that the system we suggest here has wider application than can be seen in compounding.

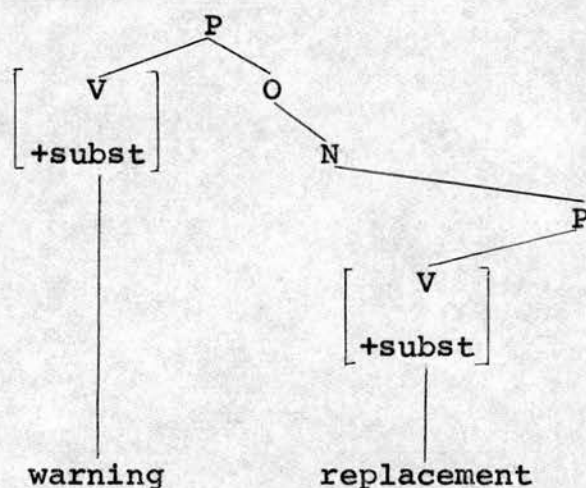
5.3.43 If we once accept a derivation of this kind for compounds containing gerunds, then it is but a small step to accepting this kind of derivation for other nominalisations, always provided, of course, that one is willing to accept

the transformationalist hypothesis as far as nominalisations are concerned. It seems likely that in this type of situation the concepts of lexicalisation and freezing (see §3.3) will once more be important: some nominalisations may well be frozen (received) or lexicalised and in these circumstances may be listed in the lexicon as nouns. Others may still be freely generable. An example of a lexicalised nominalisation might be knowledge. The frozen nominalisations might be those well-established forms which contain productive nominalisation suffixes: -ment, -ation, -ing, Danish -else, -ing, French -ment, -ation and so on. It would seem, then, quite reasonable to generate forms like hair replacement, health warning, fortykkelsesmidler, sygdomssammenslutning from a configuration of this type:



Although we did not come across any such example in our corpus, it would appear to be possible for a compound to contain a nominalisation in both elements. We might coin the

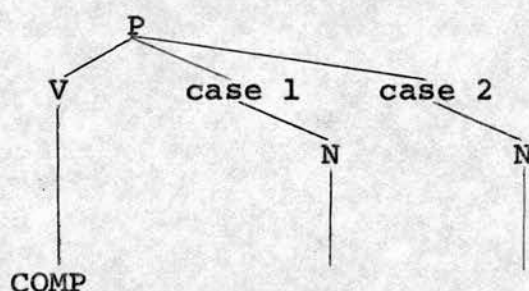
word replacement warning, for example. Examples of this type can nonetheless be generated in our grammar if one of the elements is generated in an embedded proposition under an Objective case node, in the following configuration:



If an Andersonian grammar is used the intervening N becomes unnecessary as the nom (for the Fillmorean O) can dominate a V directly. A P is embedded rather than an S here since tense appears to be irrelevant.

5.3.44 It might seem that generating compounds with nominalisations in this manner is just adding unnecessarily to the complexity of the grammar. However, this would seem not to be true. Rather it can be shown to be a necessary refinement if the grammatical framework is not to be modified.

First of all, there is the problem of the case frames which one would have to assign to compounds including nominalisations if the nominalisations were not derived direct from verbs. If the nominalisations were all listed in the lexicon, one would generate compounds of this type from a configuration like this:



Cases 1 and 2 have to be different cases (for a discussion of this point see §1.2.3). Now if we consider some of the actual examples found we can see that the motivation for different cases is in many instances extremely weak. In language development one might just say that language should be a locative ('development in language') but in health warning, fat burning, løsrivelsesproces, pennevennebegrebet it is difficult to motivate anything other than two Objectives convincingly. To attempt to do this looks very much like twisting the data to fit the theory rather than vice versa. In an Andersonian grammar where one is allowed two nouns per proposition (see Anderson, 1971: §§ 3.1, 4.51, 5.9) this problem might not arise, but the second problem is even more important in an Andersonian grammar than in a Fillmorean one.

If nominalisations are not to be generated from the verb in this way, then one has to go back and question whether the primary nominalisation, the gerund, is to be generated from the verb, or whether it is to be listed in the lexicon. If the latter is the case, then

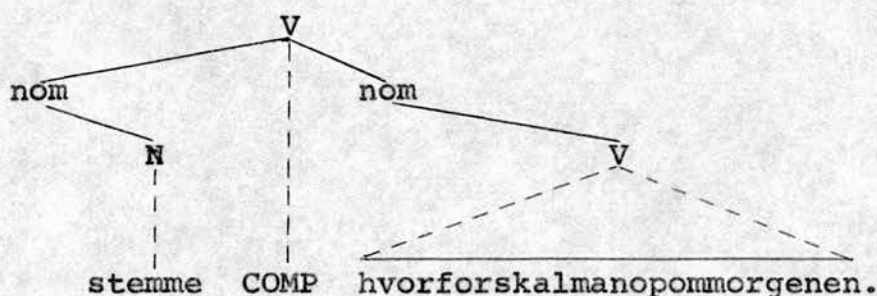
(i) the marking of the head of noun + verb compounds becomes a major problem, the more so since the problem then applies only in such a limited way and any solution becomes more limited and more ad hoc;

(ii) the problem of case-marking occurs here as well. It ~~seems~~, therefore, that a neater solution is in fact offered by the method we have postulated above.

5.3.5 Finally in this section we can look briefly at a type of compound which it does not seem possible to deal with fully within our grammar. We can term these compounds 'phrase compounds' or 'string compounds', and they are illustrated by examples such as son côté m'as-tu-vu, hon hade komochtagmigomdukanminen på sig, hvorfor-skal-man-op-om-morgen-stemme and a don't-tell-me-what-to-do look. We can actually distinguish two types of string compound. Those, like the examples quoted above, where the string modifies a head noun contrast with those -- much rarer examples -- where there is no head noun, and the string replaces a noun.

Examples of this type are le qu'en dira-t-on, forgetmenot, et farvel. This second type Söderbergh (1968:10) terms 'imperative compounds'. They are exocentric and completely lexicalised, which endocentric string compounds rarely become.

At first glance it appears that the Hallidayan concept of rank shift is applicable here: that in each case we have a complete sentence -- whether declarative, imperative or interrogative -- taking the place of a noun. If this were the case, then there would be no real problem in generating them, although the question of case assignation would be raised in a Fillmorean framework. In an Andersonian framework, however, a structure like the following would be perfectly possible:

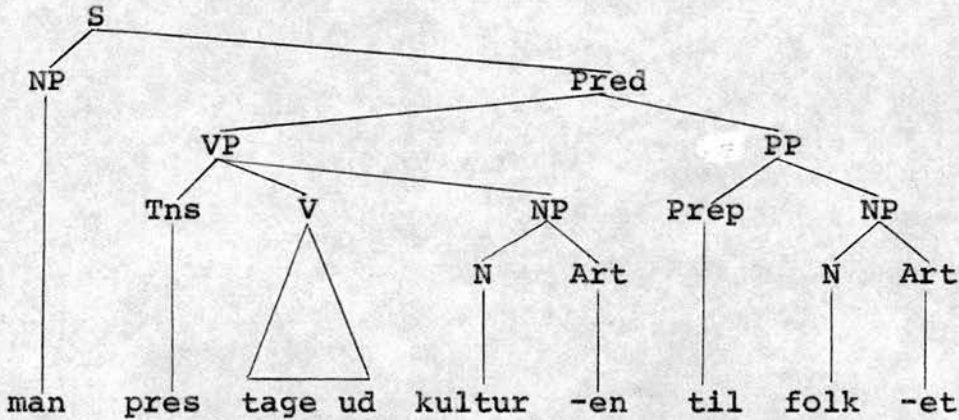


However, it turns out that this cannot be the only type of derivation, since Hansen (1967:320) quotes the example kulturen-ud-til-folket-idealister where, so far from being a sentence, the modifying part of the compound is not even an immediate constituent in a sentence, whether one uses a case grammar or a Chomskyan or a Bloomfieldian analysis.

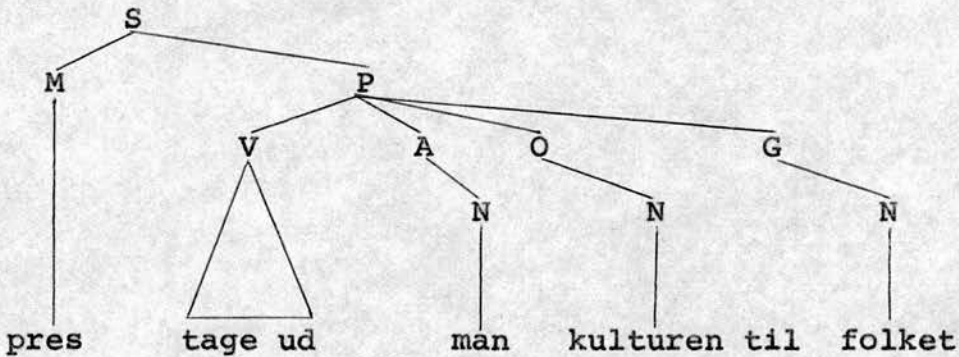
The sentence underlying kulturen-ud-til-folket, if there is a sentence there at all, must be something like

Man tager kulturen ud til folket

which in a Chomskyan grammar would be analysed something like this:



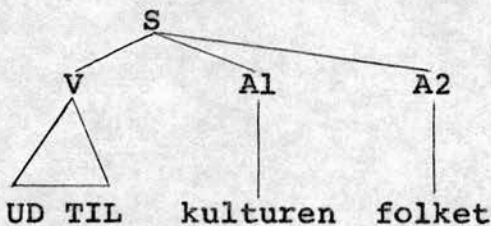
and in a Fillmorean grammar like this:



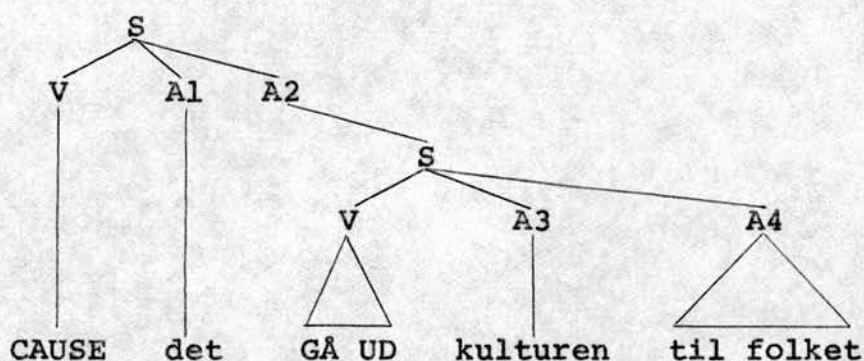
It may be the case that any surface string of words can be lifted from a (presumed underlying) sentence and rank-shifted as a string into modifier position. This would account for the forms attested -- an apparent counter-example like vi-alene-vide-indstilling being accounted for historically (vide being the third person plural, not the

infinitive form) -- but seems to be rather too powerful. If it is true, why do we not find compounds like would-account-for-N, for example? There would seem to be some syntactic as well as semantic restrictions on permissible strings, but it is not clear what these restrictions are. They seem to be responsible for ruling out compounds of the form very-little-matchbox, as well, where an IC is the modifier.

In an example like kulturen-ud-til-folket-idealister there are, however, ways in which the modifier can be seen as an IC, though these imply much more abstract analyses than the Chomskyan or Fillmorean ones provided above. The first is if prepositions are regarded as predicates. (On this subject, see above, §5.3.2.) This proposal would give a structure something like:



(or rather a lexically decomposed variant of this) and the rank shift possibility mentioned above would then be applied. Another possibility would be if a causative decomposition analysis were provided. This would give a structure of the type



(a merger of the two approaches would, of course, also be possible). In this second analysis GÅ would be deleted in the way that many verbs of motion can be when they are not psychologically necessary. Consider Icelandic

Eg ~~ætla~~ til Islands

I intend to Iceland

or Danish

Jeg skal til København

or German

Ich muss nach Berlin.

In this instance, too, the rank shift analysis would be applicable. This second analysis would seem to be possible in an Andersonian framework, and might allow phrase compounds to be explained by the same set of rules as other compounds in that model.

5.4 COMPOUND PHRASES.

5.4.1 Our attitude to compound phrases has been largely dictated by our decision to take as being a compound in French a form in which two elements were isolable (see §2.3.0). Yet it is not clear that compound phrases can be dismissed as easily as this from any complete survey of French compounding. Indeed, we have already concluded above (§3.7.4) that there were good reasons for considering a compound phrase to be a type of compound. Wandruszka (1972) classes compound phrases as being a third group, functionally parallel to "Relationsadjektiv" or "Qualifizierendes Adjektiv" + noun (cp. §3.6.5) and noun + noun compounds. There is a certain amount of evidence which tends to support this view.

Noun + preposition + noun compound phrases tend to have a certain degree of cohesion, as is pointed out by Carlsson (1966). Where Carlsson falls down, as Andersson (1968:71) notes, is in failing to investigate the fact that some compound phrases -- chemin de fer, pomme de terre, boîte de vitesses, for example -- have a far higher degree of cohesion than others -- morceau de gâteau, kilo de bananes, for example. We have already drawn attention to this point (§2.3.0), using Benveniste's (1966) term 'synapsia' to cover the more cohesive cases. In the light of our discussion in §3.3, we may now view synapsia as a type of lexicalisation. But if French compound phrases can be lexicalised or non-lexical-

ised in the same way as Germanic compounds, then we want to ask whether they can have received readings, and from there whether they can be structurally ambiguous. We have already seen (§3.4.3) that this is in fact the case, although the number of occasions on which this is made clear or upon which this is exploited might not be as high in French as it is, for example, in Danish.

Moreover, French compound phrases are productive in a way in which French compounds are not, but in a way which is reflected by the use in Danish or German of new compounds. It would appear to be very largely this factor which gives rise to what one might term the 'translation equivalence' of the French compound phrase and the Germanic compound: the misguided lady who demanded "un jus de fruit de raisin" from a waiter in Calais might not have had a large French vocabulary at her disposal, but she had grasped the fact that an English compound (grapefruit and grapefruit juice) is normally translated into French by inverting the elements and linking them by de.

Then, as is pointed out by Wandruszka (1972), compound phrases contain the wide range of semantic relationships which we have come to associate with compounds. Moody (1973) further attempts to show that these relationships are of the same types as occur in compounds: he accepts the proposals

outlined in Hatcher (1960: see above §2.4.2) and applies this framework to French noun + de + noun phrases. Unfortunately, the results which he arrives at -- that these phrases fit the classification ideally -- must be called into question when one considers the large numbers of noun + de + noun phrases which he summarily excludes from the survey. He states (op.cit:1-7) that only phrases which conform to the following limitations are used in his corpus: "the referent of the expression must be a concrete entity"; "the complement noun must always have a generic reference"; they must be of "only one formal type, that of A de B"; they must not be "examples of what might be called 'fanciful' creations" nor "examples involving metaphor". One is left with the feeling that Moody has only dealt with a fraction of the data available.

This semantic factor of the wide range of relationships expressed in compound phrases is presumably related to the syntactic fact that the prepositions most often used in these phrases, à and de, are ones which frequently neutralise the meanings of other prepositions. It is presumably this which has given rise to the myth still propagated by Grévisse (1936)⁴ that de, in particular, is an 'empty' preposition.

⁴ The date of the first publication is misleading here since the 'still' refers to the 7th revised edition of 1959.

Eringa (1942) debunks this theory, and his article provides a good representative sample of the arguments used to support it, which look extraordinarily weak out of their original contexts. For example, one reason that Eringa rejects is that in some phrases de cannot be translated into Latin, German, or English. Bruneau claims that it is the verbs, not the prepositions, which express the relationships in Je vais à Paris, Je suis à Paris and it is left to Eringa to point out that these are still meaningful because they can contrast with other prepositions, dans for instance; because, it is claimed, le roi Louis is grammatical the de in the equally appositional la ville de Rome must be without any significance. Eringa produces counter-arguments to these and a whole series of other motivations for calling some prepositions 'empty'. Related to this point would seem to be the fact that some French grammars (e.g. Wartburg & Zumthor, 1947:§10; Wagner & Pinchon, 1962:§541) consider de + noun groups as being adjectival in nature, an analysis which finds some support in the fact that many noun + de + noun phrases can be paraphrased as noun + adjective, as for example

formalités de douane::formalités douanières.

It is the weight of evidence like this which might lead us to conclude that compounds and compound phrases are different surface realisations of a single deep structure

category, along with the denominal adjectives we discussed above (§3.3).

This is the conclusion to which Wandruszka comes. He relates the difference between the various groups to the order of the constituents in a sentential deep structure. Thus (op.cit:155) he says, for example:

" ... Dem französischen 'Subst. + Subst.'-Kompositum im allgemeinen keine inverse Topikalisierung zugrundeliegen kann, das heisst, dass die Reihenfolge von Determinatum und Determinans innerhalb dieser Konstruktionen derjenigen der entsprechenden Glieder des unterliegenden Satzes parallel ist."

And later, in greater detail (op.cit:186/7):

"Zusammenfassend ist also in diesem Bereich zwischen folgenden zwei Hauptgruppen zu differenzieren:

a) prinzipiell auf inverser Topikalisierung (Topikalisierung des Prädikatsnomens) basierende, aus universellen, analytischen Urteilen erzeugte Syntagmen, die durch folgenden Verfahren wiedergegeben werden: Relationsadjektivkonstruktion, titre princier, système planétaire; de-Verbindung, titre de prince, (système des planètes). Aufgrund dieses Topikalisierungsverhältnisses erscheinen

keine 'Subst. + Subst.'-Komposita.

b) Aus partikulären, synthetischen Urteilen erzeugte Syntagmen, deren Determinatum entweder dem Subjekt des zugrundeliegenden Satzes entspricht (Topikalisierung des Subjektes), habitation-témoin, bâtonnier-escroc, etc.; oder die ebenfalls auf inverser Topikalisierung basieren, fripon d'enfant, chaîne d'hôtels"

This presumably does not work for English, since we have already (§3.7.5) seen that certain of phrases in English are predictable from a compound structure on grounds of lexical conditioning, or even sub-lexical conditioning, in the sense that the presence of a semantic feature may be a sufficient trigger. Furthermore, in English there are, as we mentioned (loc.cit), certain pairs such as viewpoint:: point of view. In these, as opposed to the examples like architecte-escroc - cet escroc d'architecte quoted by Wandruszka (loc.cit), the same element remains the head of the construction. Wandruszka's theory, then, applies only to the French examples.

Now, if Wandruszka is correct, and if this is the most suitable way of looking at the problem, then our theory of compounding fails for French, since Wandruszka's theory requires an underlying sentence which we have specifically ruled out in our theory, (a) for reasons concerning tense,

etc. (see §§4.1.2-4), (b) by our use of a case grammar model whose deep structure is in principle unordered, while Wandruszka's theory demands an ordered deep structure. Though the necessity for an ordered deep structure may in itself be sufficient reason for rejecting Wandruszka's theory, since the strongest arguments seem to be against this proposal, we shall consider Wandruszka's point in its own terms. From that point of view, Wandruszka's theory is of some importance to the status of our own in its application to French, though not necessarily in its application to Danish and English, since it is possible that different languages may best be described using different morphological models.

However, it would seem that Wandruszka's theory will not stand up to closer examination. Although it seems to be true by and large that noun + noun compounds do not allow inverse topicalisation -- though there are some counter-examples, usually containing nominalisations, like descente dames (les dames descendentes), coin lecture (on lit dans le coin) -- it is by no means the case that compound phrases and denominal adjectives demand inverse topicalisation. Consider the following examples, taken from Wandruszka's own corpus, along with sentences one might posit as underlying them:

industrie charbonnière	l'industrie produit le charbon
vache laitière	la vache produit du lait
(cp. Wandruszka, op.cit:41, where this derivation is given)	
navire pétrolier	le navire transporte le pétrole
four mural	le four est dans le mur
bain matinal	on se baigne le matin
travail manuel	on travaille de ses mains
journal féminin	le journal est pour les femmes
manuel scolaire	le manuel est pour l'école
informations économiques	les informations concernent l'économie

(see op.cit:42/3)

relations verbo-adverbiales des relations lient les verbes
aux adverbes

(Wandruszka, loc.cit, says this is derived from a passive
(sic) sentence in the deep structure)

panneau publicitaire le panneau est pour la publicité
also

gaz lacrymogène le gaz fait couler les larmes.

There are also large numbers of examples where a noun +
noun compound is paralleled by either a compound phrase or
a noun + denominal adjective, where the order of the head
and modifier is unchanged; one of the items must therefore
be unable to fit in with Wandruszka's theory. Consider the
following lists:

descente-femmes	descente féminine
messages-touristes	messages touristiques
panneau réclame	panneau publicitaire
mode-hommes	mode masculine

(see Wandruszka, op.cit:159)

chemise coton	chemise de coton
blazer velours	blazer en velours
évier double bac	évier à double bac

and in general all those compounds which Etienneble (1964:161/2) claims

"Gardent l'ordre des mots en français et se bornent à supprimer la préposition."

It would seem then that Wandruszka's theory is not sufficient to explain the difference between these three groups and that we have to look elsewhere.

5.4.2 In fact, if we accept that these three surface strings are realisations of the same underlying structure, then it is by no means clear how they are to be distinguished, or what factors influence the choice of one rather than another. Syntactic or semantic correlates do not appear to have any sway, and one might postulate that register or style is one of the major influencing factors (see above,

§4.2.3), but this is something which is extraordinarily difficult to measure. We present here something which may be taken as a hypothesis for consideration, though the suggestions we shall make are extremely tentative, particularly since it is difficult to see even what kind of evidence might be adduced to support some parts of the hypothesis.

In dealing with Danish and English compounds, we have taken it that the noun + noun form is basic, but that under certain conditions the modifying noun may be transformed into an adjective (§3.6.5) or an of phrase (§3.7.5). On the whole this system works extremely well for Danish and quite well for English, though we saw (§3.7.5) that it cannot account for all of phrases in English (even if we do not take into account the genitive or partitive of -- the palace of the queen, a pound of apples). So far we have assumed that the same principle applies in French.

However, it may be that this is not the case and that the adjectival or compound phrase form is actually primary in French, particularly since, as we have seen (§4.2.3), the use of actual compounds in French seems to be limited by register and also limited in productive power. This raises the question of which of these two is to be primary, especially as both types are productive. As we shall see below, of the two forms the compound phrase seems to be

the less marked semantically and this might be one reason for selecting it as the synchronically primary form (unlike Hatcher, 1946:219, we would not necessarily wish to imply that this has any diachronic justification). Also there is the fact that a larger number of de + noun phrases is possible than corresponding adjectival phrases, because there are so many nouns which do not have corresponding adjectives. If we assume, then, that the compound phrase is primary, we can formulate a tendency -- 'rule' is too strong a word to use in this context -- similar to the one Levi (1973:334) formulated for English (see above, §3.6.5) such that de + noun functioning as a qualifier (i.e. not as a genitive of possession, as a partitive, etc.) is replaced by an adjective in just those cases where an adjective is available in the lexicon for French. So *promenade de matin always gives promenade matinale, *calendrier de lune gives calendrier lunaire, *déportement de bête gives déportement bestial.

But this is clearly not the whole story. First of all there are cases (as there were in the English examples) where the syntactic distinction is used to carry a semantic distinction. Maison de campagne and maison campagnarde, for example, are not usually synonymous, the second referring to the building style while the first refers purely to the location. Similarly a bouteille familiale is a size, whereas a bouteille de famille would be an

heirloom. Tache solaire is a sunspot, tache de soleil a dappling effect. Then there are some cases where the adjective does not occur. Poisson-marin, for example, is unusual if not non-occurrent, while vie marine is perfectly normal, poisson de mer being normal and vie de mer out of the ordinary. This may be at least partially due to the homonymy of marin (adjective or noun) and mer, mère, maire which might give rise to some peculiar misunderstandings, but this cannot be a complete explanation as the existence of monstre marin shows. However, even when these pairs are not taken into consideration there remain a number of doublets whose function we must ascertain, pairs like

vie d'étudiant	::vie estudiantine
formalités de douane	::formalités douanières
panneau de publicité	::panneau publicitaire
livre d'école	::livre scolaire
crise de foie	::crise hépatique.

Native speakers of French do not seem to agree on the difference between these two series, at least not when asked specifically to clarify the problem pedagogically. Two types of answer were obtained, but no single informant claimed that one of the functions was applicable throughout. This may mean that the two factors apply in conjunction, or alternatively that they apply in disjunction. A wider-

base experimental survey would be needed to discover which was the case. We may note, however, that the native speakers were not consistent as a group in assigning one of the interpretations to any given doublet, though each individual speaker was consistent.

The first of the factors which seems to distinguish these two series is register. Rose automnale, for example, is on a higher register, a more formal level of language, than rose d'automne. Similarly, though the speakers varied considerably in their reactions to this pair, the difference between vie d'étudiant and vie estudiantine seems to be largely one of register.

The second factor is one which we may term 'focus'. Some speakers felt that to talk about un panneau de publicité was to stress the purpose of the board, while to talk about un panneau publicitaire was to stress the fact that one was dealing with a board or hoarding which only incidentally happened to be used for advertising.

If we now turn to consider the difference between compound phrases and compounds, we find that this difference is very often one of register. One would talk about une jupe de coton, un évier à double bac, but in the registers of advertising and journalism these are abbreviated to une jupe coton, un évier double bac. This is not, however,

the only factor operating here. There are some relationships which are not easily expressed in a compound phrase. The two obvious cases here are metaphor and the equative relationship. If these are expressed in a compound phrase they tend to have very strong emotive connotations. Consider, for example, Wandruszka's examples: un escroc d'architecte, un playboy de diplomate. Note that here at least -- and this contrasts to some extent with our second factor above -- it is the first element which is important, which receives semantic emphasis. Un diplomate de playboy is only acceptable if it is considered evil to be a diplomat, but all right to be a playboy. To remove the emotive connotations one has to have recourse to the compound. Diplomate-playboy and playboy-diplomate are equally acceptable. In these cases, then, it is semantically marked not to use the compound form. This will presumably explain the point that we noted above (§4.2.22) that appositional compounds are relatively much more frequent in French than in the Germanic languages.

There remain a few doublets like solution miracle:: solution miraculeuse where a compound alternates with a **noun** + denominal adjective. Our hypothesis would predict that either these are distinguished semantically (as is indeed the case in assurance vie:: assurance vitale)

or in terms of style as in miracle::miraculeux⁵. The hypothesis would also explain why de + noun is considered in some grammars to be adjectival and why the compound phrase is the least marked, semantically or syntactically, of the three possibilities. It might even be said to go some way toward explaining the translation equivalence of French compound phrases and Germanic compounds.

It must be pointed out at this juncture that this hypothesis would need a lot of further elaboration before it could be fully accepted. As it stands it would presumably allow French constructions to be generated from a base which functioned the same way as the one we have proposed to deal with Danish and English compounds, since the HIP feature, for example, (see §3.2) still applies in French. But in taking the compound phrase as basic it raises the problem of the status of the preposition in the compound phrase -- is it a case-marking preposition, or does it need to be generated separately? -- and also, and far more importantly,

⁵ Although the paraphrases one would give the members of the pair solution miracle, solution miraculeuse would differ, the former being paraphrased as la solution est un/ miracle, the latter as la solution ressemble à un/ miracle, one cannot really claim that this distinction between metaphor and simile is a semantic difference. The underlying relationship is the same, but the stylistic impact is different.

the problem of the difference between the compound phrase, noun + prep + noun, and phrases whose structure is noun + prep + article + noun or noun + prep + noun plural. These seem also to be able to give rise to noun + denominal adjective groups

greffe du coeur :: greffe cardiaque

(Wandruszka, op.cit:175 erroneously uses the form greffe de coeur)

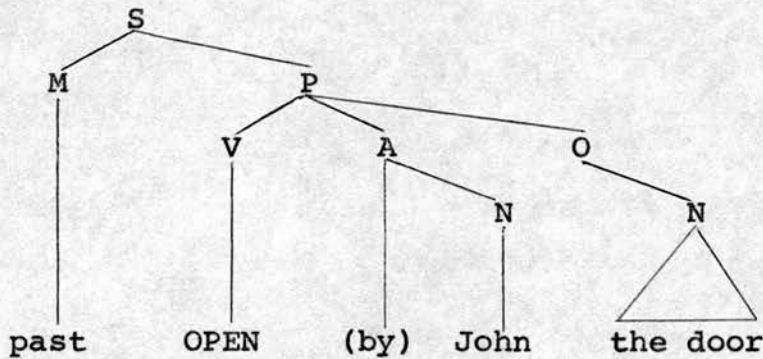
journal de femmes :: journal féminin

(Wandruszka, op.cit:199 erroneously uses the form journal de femme, which is not synonymous).

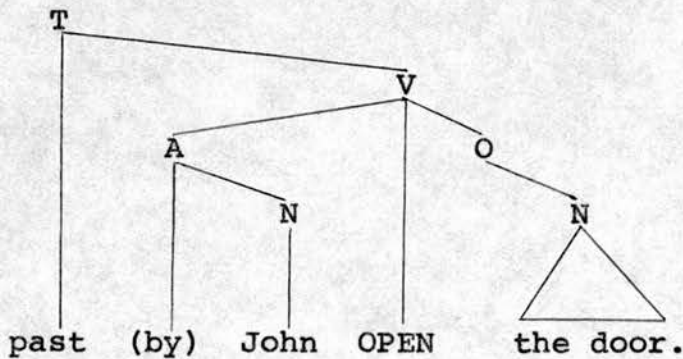
This might seem to imply that the rules which form the adjectives in French apply nearer the surface than the equivalent rules in Danish or English. The problem would have to be investigated more carefully: the hypothesis we have presented here is merely a jumping-off point which seems plausible in the light of the work we carried out into compounds.

5.5 A LOCALISTIC ALTERNATIVE.

5.5.1 In §1.2.2, when discussing the use of a dependency notation in a Fillmorean grammar, we stated that we would keep Fillmore's labels of S, M and P to allow the way our proposals fitted with a Fillmorean grammar to be seen more easily. We also said that we could -- and that this would perhaps be a more consistent move -- use V in the position of Fillmore's P and have the case nodes dependent on the V, and merge Fillmore's S and M into one node T (following Robinson) which would govern the V. If we look at the configurations in which these changes would result, we find that for a sentence John opened the door, instead of



we would have a structure



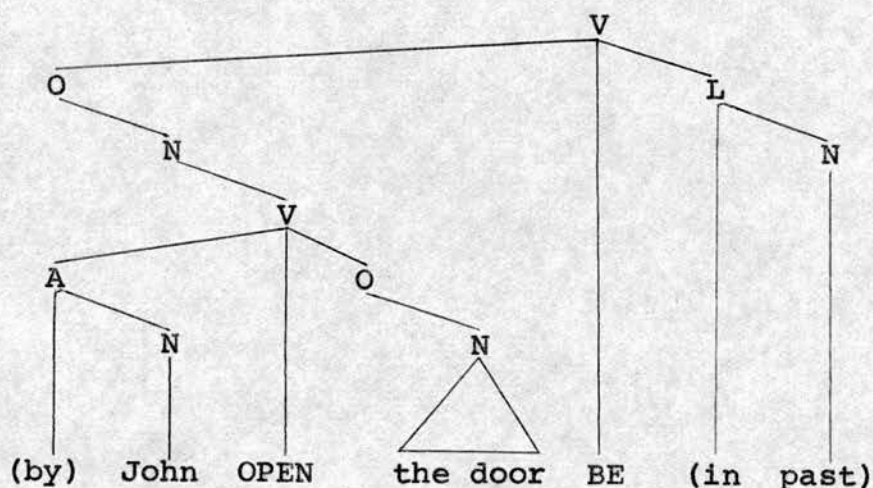
This is a simpler configuration in the sense that one does

not have the problem of the precise nature of the realisations of S and P.

Now, Lakoff (1970c:157) argues that

"Time and locative adverbs do not occur in deep structure as parts of the sentences that they modify. Rather they appear to be derived from predicates of other 'higher' sentences"

and Anderson (1973c:40f, 62ff) takes this one step further and derives tense from a higher predication, and from a locative node. If we apply this modification to our second tree above, we obtain



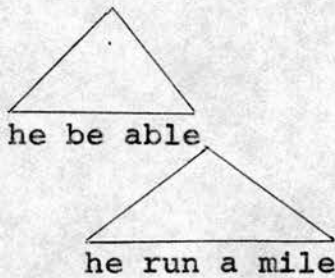
By this time it is becoming clear that we are, without in any way influencing whatever judgements we may have made in the framework of a Fillmorean grammar, moving well away from Fillmore's original ideas and getting much closer to an Andersonian grammar. If we further bear in mind Miller's

(lectures, University of Edinburgh) contention that Fillmore's cases may be reduced to a small limited number of local cases without any loss of explanatory power (see §1.2.4) then the grammar looks even more like an Andersonian grammar than ever: indeed, it becomes questionable whether the two are distinct. In the light of this observation it is worth enquiring what modifications would be required for our theory if it were to be set in an Andersonian framework, and what advantages or disadvantages this transfer of allegiance might have.

5.5.2 The first place where it might seem that we would lose a generalisation in adopting an Andersonian framework is in the loss of the distinction between P and S, since a large part of our theory hinges on a distinction we have drawn between embedding a P and embedding an S. In fact, we stated above (§4.1.4) that this was a generalisation which could be captured only in a Fillmorean grammar. As far as this goes, it is true, but if we transfer to an Andersonian grammar the distinction can still be maintained, though in a slightly different way. Instead of embedding a P, as we did in our Fillmorean model, we now have to embed a V, since V is equivalent in an Andersonian grammar to P in a Fillmorean

grammar. Furthermore, this V must have propositional content (i.e. must not be a tense/aspect/negation predication). Where we embedded an S in our Fillmorean model we again have to embed a V in the Andersonian, but this V must not have propositional content itself, but must have a predication with propositional content embedded in it, either directly or indirectly. That is, a tensed predication gives rise to a sentence, an untensed predication to a compound⁶ (or agentive, navigable class adjective, etc.). Lakoff (1970c) also argues that negation should come from a higher predication, and Anderson (e.g. 1973e) follows this theory. Anderson (1973c:76) also puts aspect into a higher predication. Further, any grammar which deals with predications rather than underlying constituent structure, and this is the case for both Anderson's grammar and Generative Semantics, is almost bound to put modality into a higher predication, so that

⁶ This statement might have to be modified, depending on how one treats generics. Anderson (1973b), for example, takes generics to be precisely tenseless sentences. If this analysis is accepted, then one has to say that the difference is that generic sentences make up a speech act, while compounds do not. That is, compounds do not have a higher performative immediately dominating them.

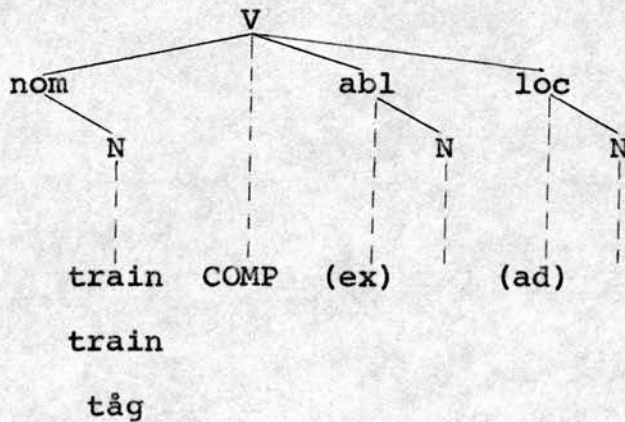


would underlie he is able to/he can run a mile. In fact this analysis has been proposed in Anderson (1972). Thus all the information which we discussed above (§§4.1.2/3) as being in Fillmore's modality component and as being irrelevant to compounding comes, in an Andersonian grammar, in higher predications not in what we might term a 'propositional predication' (what Anderson, 1973c:98 calls a 'basic' proposition; our choice of label should not be taken as implying any theoretical standpoint). This is not necessarily the lowest V, since a propositional predication may have relative clauses, for example, embedded in it. An Andersonian grammar or a Generative Semantics grammar are thus both capable of capturing this generalisation though it is not as obvious that this is being done in either of these models as it is in a Fillmorean model. One might even claim that the Andersonian and Generative Semantics models have an advantage over the Fillmorean model here, since they only require that one type of unit be embedded, while the Fillmorean model as developed here requires that two separate categories should be able to be embedded, and thus provides, at least at this level, a

more complex grammar.

The other place where there is a marked difference between the Andersonian and Fillmorean models is in the number of cases available. It is by no means self-evident that we can redistribute the seven cases of our Fillmorean framework round the four cases of the Andersonian framework, particularly if we wish to retain the condition of only one occurrence of any one case node per proposition (read, predication) (although, as we have seen, Anderson does allow two noms). Nonetheless it does seem that this is possible, although in some cases some slight re-allocation is required. For example, we classified coin-lecture as Locative head, Goal modifier above (§4.5.3), on the grounds that the corner was the place where the reading was carried out, the reading the purpose of the corner. Now generally speaking, Goal translates into local terms as an allative, and in an Andersonian grammar an allative is the variety of locative present when there is also an ablative in the same predication (Anderson, 1971:§8.2). If the analysis Locative + Goal were transferred to an Andersonian grammar we should thus have two locatives in the same predication. However, we have already pointed out (§§3.4.1, 4.5.3) that there are many examples of compounds where the analysis and correct assignation of cases is extremely difficult, and coin-lecture may be seen as being a case in point. One may

concentrate on its locational quality and say it contains a loc and a nom (in that order) or on its purpose quality and say it contains an abl (empty), a nom and a loc. This use of an empty case node might seem to be a disadvantage with this model, but in fact it is not exceptional. First of all, it is, Anderson claims, present on every occasion when we have an allative, and secondly, it is in any case exactly the same procedure as was used in the Fillmorean model where there is, according to Fillmore, an empty Experiencer node in resemble sentences (see above, §4.2.21). Furthermore, one might consider such compounds (compound phrases) as the London train, le train de Paris, Stockholmståget which are ambiguous between an ablative and an allative reading for the town, where this ambiguity might be attributed to the node under which the town name is generated in a single structure:



The major generalisation we obtained from our work in the framework of a Fillmorean grammar was that a compound

must contain either a Locative or an Objective or both. It will be remembered that we had a single counter-example to this generalisation which was air-mer in missile air-mer. Now in an Andersonian grammar this type of compound -- and they exist in all the languages we are considering -- is made up of an abl and a loc (i.e. an allative) and thus falls within the generalisation. There is, however, a peculiarity of this type of compound which we have not mentioned: it can only occur as a modifying element in a further compound, never in isolation. This is not true of all compounds containing an abl and a loc. It will be recalled that we argued above (§1.2.3) for resemble compounds containing an ablative and a locative in a localistic framework. It rather looks as if there is a constraint on compounds which contain concrete ablative and locative (for this use of the term 'concrete' see Anderson, 1971:§1.1) such that they may only occur as parts of other compounds.

There is also another counter-example to the generalisation within a Fillmorean framework which is no longer a counter-example within an Andersonian framework. In Danish a compound like øksemorder is quite possible, where økse is in the Instrumental, and morder is an Agentive. That is, there is neither a Locative nor an Objective. In an Andersonian framework, however, it has been suggested that

økse would be a locative (Anderson, 1971:§11.11(1)) and the generalisation is upheld. But this example is, in any case, a strangely marginal one. Though øksemorder is quite acceptable, if a murderer preferred to strangle his victims with a nylon stocking, the word nylonstrømpe-morder could still not be applied to him, since it sounds as odd as its English translation. The set of Instrument + Agent is thus of very limited productivity. Axe-killer does occur in English as well, though possibly only in newspaper headlines (cf. §1.1.4), and the series is of equally limited productivity.

However, if this aspect of the Andersonian grammar allows us to retain our generalisation about the occurrence of certain cases in compounds, it is not at any low price, because the strength of the generalisation is inevitably lessened by the fact that the number of cases has been lowered. Ceteris paribus, a generalisation which says that one of a subset of two from a set of seven cases must be present to make a compound is stronger than one which says that one of a subset of two from a set of only four cases must be present.

But if this were the only factor which had to be taken into consideration, then it would argue in favour of a model which had a larger number of cases, whereas in fact there is

much to be said for a smaller number of cases in a model, though the choice between the models ultimately depends upon how much data they account for. But to take an extreme hypothetical example, it is clearly nonsensical to postulate that a grammar which requires 106 cases is a 'better' (in whatever sense) grammar than one which requires only 6, other things being equal. It might be, then, that the loss of generalisation in the grammar of compounding is a direct result of a gain in generalisation in the grammar as a whole.

On the other hand, there is nothing in a Fillmorean grammar that would make us single out Objective and Locative as cases which are likely to occur together, while in an Andersonian framework this is a natural alliance in that *nom* and *loc* are the simpler non-local and local cases respectively. The occurrence of these two cases is thus much better motivated in an Andersonian framework.

But there is another point which means that our generalisation is weaker in an Andersonian grammar than in the Fillmorean model. Anderson (lectures, University of Aarhus, spring semester, 1974: this suggestion is foreshadowed in, for example, Anderson, 1971: §§3.1, 10.21, 12.1) suggests that *nom* should be an obligatory case element in any proposition. In fact, the grammar of compounds does not provide

very much support for this hypothesis, since similia compounds (cour puits, frost shadow, goplehånd) contain a loc and an abl (see §1.2.3) but no overt nom. On the other hand, the more recent of Anderson's papers (see Anderson, 1973a:fn 13, 1973c:62) do not allow a V to govern another V without an intervening case node, usually a nom, so that many of our compounds including nominalisations (see above, §5.3.4) would require two noms by this process. This is a matter of which Andersonian grammar one is to take as one's model. But if we assume that there must be a nom in a predication, then it is obviously of little interest to say that a lot of compounds contain a nom: it would in any case be expected that a nom should be present in every predication which gives rise to a compound. A stronger generalisation in an Andersonian framework would be one which made no mention of nom. Unfortunately, it does not seem possible to make any generalisation of this sort without modifying one's viewpoint significantly. For example, one might say that any compound locates one element with respect to the other, but this would be to use the term 'locate' in a far wider sense than it has been used in so far, so that commandos were being located with respect to raids in commando raids, a starling in respect of a song in kantatestar and so on. This extension of the notion of locating seems to us to be indefensible in terms of the

grammar we are dealing with, although if Anderson's (1971: §11) "most radical localist proposal" were adopted such a view might be more acceptable. We must therefore conclude that the generalisations that can be made about compounding are more forceful in the framework of a Fillmorean grammar than in the framework of an Andersonian grammar. It is possibly worth pointing out specifically that, although a Generative Semantics model can, as we have seen, deal with our HIP feature, it is totally incapable of capturing a generalisation which relies on a notion of case.

But if the generalisation is more attractive in terms of a Fillmorean grammar than an Andersonian grammar, this does not, of course, imply that an Andersonian grammar cannot deal with the problems we have raised in our discussion, nor does it mean that the Andersonian model must be written off, for this or other purposes. It remains a viable alternative. As a result, it is worth considering some of the consequences the choice of an Andersonian model would have on our grammar of compounding.

5.5.3 It is interesting to note the localistic nature of the generalisation we have made about compounds (that they must contain either a Locative or an Objective, either

a loc or a nom) particularly in the light of Anderson (1971: §11.6) where it is suggested -- but not sufficiently supported -- that there may be some common source for loc and nom. In this context we must also draw attention to the local natures of the prepositions most commonly used in French compound phrases: de (chemin de fer) and à (pot à lait). These prepositions more usually occur as (respectively) ablative and allative. Consider

Il conduit de Paris à Rome.

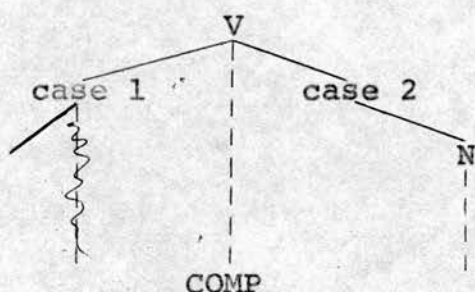
Of course, it is not impossible to make a localistic statement within a non-localistic framework, but the generalisation looks more at home, as it were, in an Andersonian grammar. This is also true of other more or less localistic decisions we have taken (e.g. §5.3.2, to consider adverbs as locatives; §1.2.3, to consider equative sentences as containing a locative) though these other cases are less convincing being, as they are, more ad hoc devices for the solution of specific problems.

In our discussions above (§§4.3, 5.3.4) we have tended to assume that where we have a noun and a verb of identical form the verb is primary. Thus in sun-worship we have said that worship should be generated as a verbal element, even though there is a homophonous noun, and we have seen that this avoided a problem of having two Objective case nodes in one proposition.

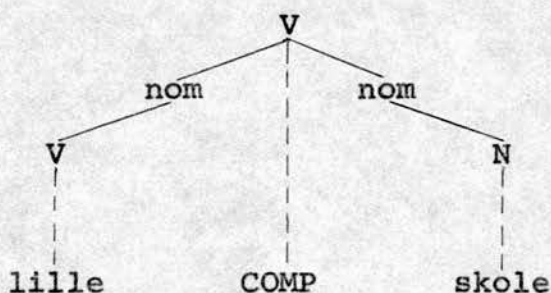
However, this position is inconsistent with that taken by Anderson (1971:§9.5). Anderson claims that to help s.o. has the same deep structure as to give s.o. help, and that the former is derived from the latter, in which the local structure is more apparent. Anderson claims that this is even true in cases where the noun is clearly morphologically derived from the verb. He cites to guide (as opposed to, presumably, to give guidance to). If we assume that Anderson's hypothesis here stands, then worship in sun-worship, development in language development and so on, must be noms, and this means that we have two noms in our structure. But Anderson (1971:§10.2 et passim) specifically allows two nominatives in a single predication, one of them obligatory, the other optional. So that although the Andersonian grammar, in a sense, creates a problem here, it also solves it.

We pointed out above (§5.3.43) that if we take a compound made up of two nominalisations, the grammar can only generate it if one of the nominalisations is embedded under an Objective node. In an Andersonian grammar, because of the two noms permitted and because a V is always dominated by a case node when it is embedded (see §5.5.2) this problem disappears, and the two elements have the same status. In fact, these two factors combined mean that all compounds containing a verbal element can be generated in the same way as compounds containing two nominal elements.

If we consider the compounds we discussed in §§4.2/3 they can all be generated in an Andersonian grammar in the following configuration:



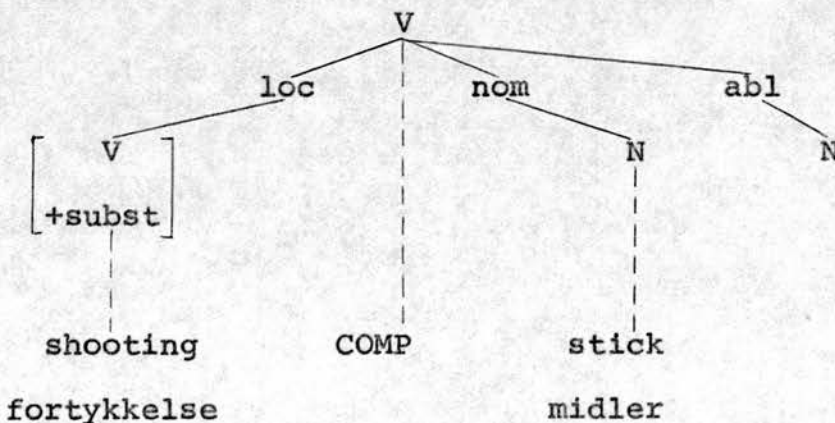
where case 1 and case 2 may be identical only if they are both nom, and the difference between sunshine, legeklub and satin shirt, dragekimono etc. is merely one of whether an N or a V occurs below case 1. It may be that a case can be made for generating adjective + noun compounds in a similar way, treating the adjective as equal to the verb in all respects. Lilleskole would then not be generated as we suggested in §4.1.5, but thus:



This would have the effect, virtually, of making the two types of compound with which we have been dealing throughout (those with one verbal element and those with two nominal elements) one, and as such would be a simplification of the grammar. Note that this new suggestion would not alter our argumentation in §§3.2, 4.1, but merely provide an alternative means of expressing the factors discussed there. It would also fit in with Anderson's (1971:§11.63) proposal to generate adjectives in a lower predication, or even

with Anderson's (loc.cit) "interpretation ... that the predicative ... adjective of state originates as a dependent of an abstract locative" if this is accepted. Then, instead of a nom governing the embedded V (as we have above) a loc would govern a further N, and yet another group of compounds would be found to contain a loc.

To consider again compounds including nominalisations, we have assumed that the case dominating the nominalisation will always be a nom, and in the Fillmorean grammar we have developed here it can only be dominated by an Objective or by no case node at all, only V. Semantically, however, this is not always very satisfactory. If we consider examples like shooting stick or fortykkelsesmidler we find that the nominalisation shows, respectively, purpose and result, both of which may be seen as abstract kinds of goal, i.e. as allatives. We can mark this in an Andersonian grammar by allowing loc to dominate the V which provides the nominalisation, with an empty abl node in the predication to allow the allative interpretation. Thus the structure for these two examples would be:

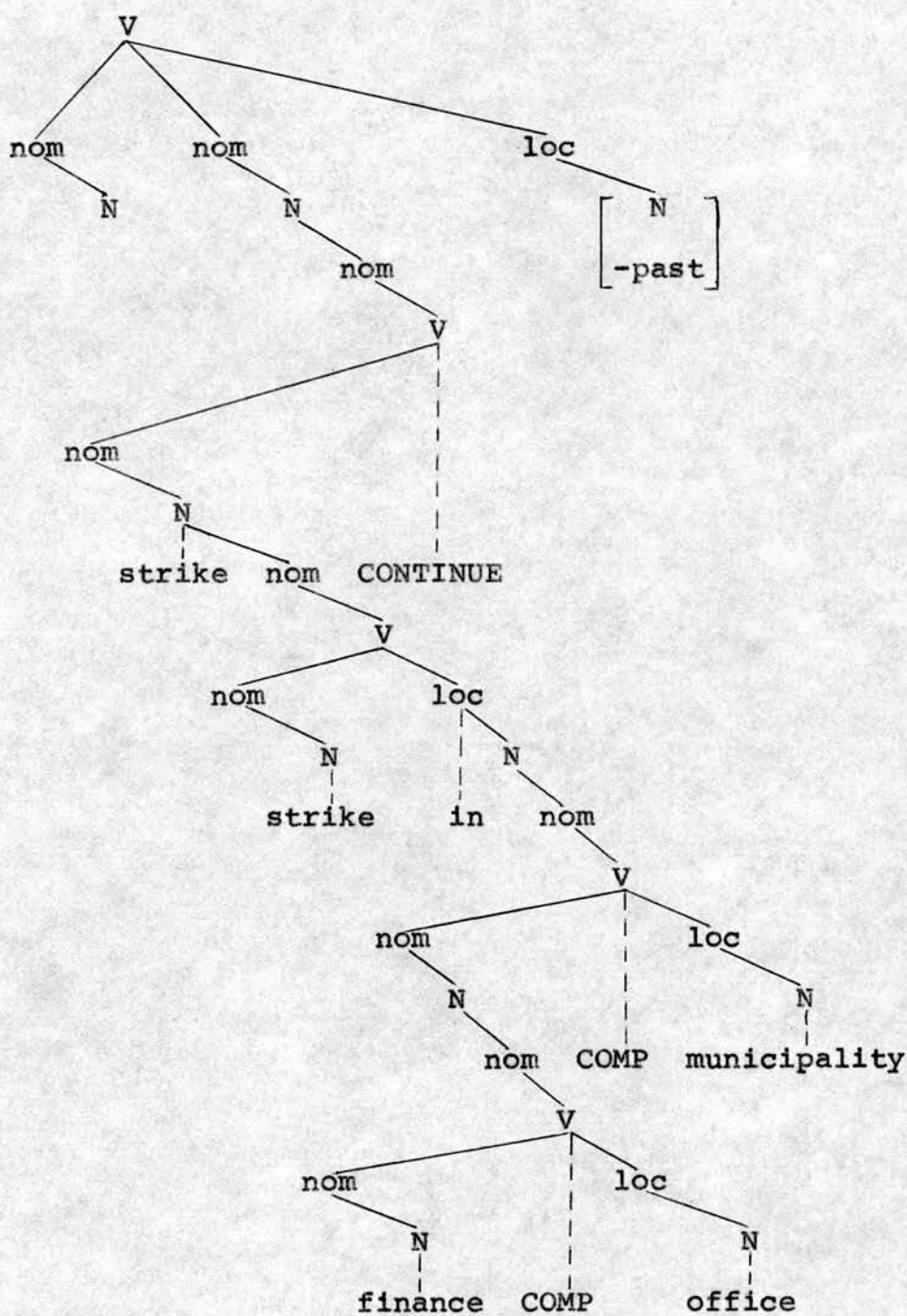


The Andersonian grammar is thus able to include more semantic information in its deep structure than the Fillmorean.

The final point for consideration here is a technical one. Fillmore (1968:27) inserts verbs into a case array which has already been generated, each verb being marked in the lexicon for the case arrays into which it may be inserted. Anderson, on the other hand, (lectures, University of Aarhus, spring semester, 1974) allows the verb to generate a suitable case frame by marking it in the lexicon with a series of features which are used as the input to a series of generative rules. These systems are not merely notational variants, since Anderson's system automatically prevents the repetition of case nodes in a single predication, for example, while Fillmore needs an external constraint to do this. In the Fillmorean model, then, we will have to list all combinations of cases which contain either an O or an L and for each combination note that it allows COMP to be introduced into it. In the Andersonian model, on the other hand, we only have to list COMP once, and so the Andersonian model produces a simpler description on this point. It also, incidentally, means that we have to have case nodes in compounds, if there was any real doubt remaining on this subject (see above, §§4.2.1, 4.5.3).

Reasons like these lead us to suspect that in many ways an Andersonian framework may actually be preferable for the generation of compounds ^{to} ~~than~~ the Fillmorean model with which we have mainly been working. Certainly, an Andersonian model cannot be ruled out as an alternative way of displaying the information.

To conclude, we shall show how a sentence including a compound would be generated in the Andersonian framework. We will use the sentence The strike in the municipal finance office continues.



CHAPTER VI

CONCLUSION

Gleitman & Gleitman (1970) repeated an experiment described by Livant (1962), and presented to three groups, which were defined by their level of academic achievement, a corpus of 144 invented three-term compounds in which two of the terms were constant and the third term varied both within and over categorial boundaries, and in which the order of the terms was also varied. They wished to discover to what extent their subjects were able to interpret these compounds and give paraphrases of them. In their conclusion they say:

"We have found massive differences in the ability of the three population groups to provide syntactically determined paraphrases of the compound noun stimuli. The less-educated groups make more errors, and to a significant extent make different errors than the most educated group."

At first sight this result might seem to argue against the productivity of compounding in language: if one has to be well-educated to understand a productive process of the language then there is something wrong somewhere. But Gleitman & Gleitman presented their stimuli in isolation, and we have seen (§§3.3, 3.4, 3.5) that the context in which a compound is used has a great influence on its

interpretation. This changes the significance of Gleitman & Gleitman's conclusion, because all it shows now is that the most educated group were able to see situations in which a given stimulus would have to occur for it to be meaningful. In other words, they showed more imagination, and it is probably a truism, though psychologists might not use quite these terms, that imagination is a part of intelligence. In this case, all that Gleitman & Gleitman have shown is a correlation between education and intelligence, a correlation which one might have suspected anyway.

This is one, at least partial, interpretation of the information provided by the Gleitmans. Other factors which might be relevant are that better educated people might be more used to abstracting information from obscure constructions, might be more used to learning new processes, might be more used to giving paraphrases, and so on. In short, it is not at all clear what conclusions can be drawn from Gleitman & Gleitman's results, since it is not even clear exactly what they are measuring.

However, if we can discount the apparently contrary conclusion reached by Gleitman & Gleitman for these reasons, it still does not mean that the whole thing is perfectly straightforward. The whole area seems to be a 'fuzzy' one, and although a general consensus of opinion

has been obtained from native informants for the comments and generalisations we have made, not all speakers would necessarily accept all the points we have made. For example, we can quote the widely variant reaction of French speakers to compound phrases as opposed to noun + adjective groups (see §5.4.2), or the fact that in some dialects there is no difference in stress pattern between shooting stick and shooting star. We seem, all in all, to be dealing with an area of grammar where the reactions of the native speaker are strangely unsure.

This may be because of the fact, which we have noted at various stages, that it is difficult when discussing compounds to talk in terms of fixed rules. Rather, one has to speak of tendencies, since very often syntactic differences, which look as if they are purely syntactic or fully conditioned (either lexically or phonologically), are exploited by the language as a means of expressing semantic differences. There is also the problem which we have come up against several times (see esp. §5.5.2) that it is not always possible to give one clear definite answer to the question: what cases are the arguments in this particular compound in? This problem need not necessarily militate against any case grammar analysis, but it does mean that a case grammar analysis will inevitably be open to question on this point. But this uncertainty of classification seems

to afflict all studies of compounding, in whatever framework (see, for example, Householder, 1962:344) and should perhaps not be taken as theory-destructive.

Nonetheless, despite these difficulties, we have managed to draw a number of generalisations and a number of conclusions. We have not discovered any 'mini-grammar' (see §1.1.1), but we have seen that the same grammar, the same components, can be used for compounding and for other syntactic processes, and so have gained the generalisation that Rohrer (1973) aimed at, and yet we have incorporated into this description, to gain a further generalisation, the points noted by Brekle (1970, 1973) on the lack of modality in compounds, which at first glance are inconsistent with Rohrer's claim. We have found it necessary to take into consideration a far wider range of data than we expected, and a far wider range than is usually considered under the title of compounding, and yet, despite this, we have simplified the description of compounding so that instead of having a hundred types of compound to deal with (as does Brekle, 1970) we have two, or, if one accepts the localistic alternative put forward in §5.5, only one. Admittedly, exocentric and endocentric compounds are held apart by the presence or absence of the PROP element, but the syntactic processes underlying both can be seen as identical.

Yet, despite these gains, we still do not seem to have proceeded much further than we had in §2.3.3 in finding a definition of a compound (though see also §3.3.4). We cannot now define a compound as anything which is generated by an embedded P (or in the localistic model, anything generated by an embedded propositional V not immediately dominated by tense and aspect predications) because far more is produced by these configurations than just compounds: preposed navigable class adjectives, noun + denominal adjective groups, synecdoche, and so on. In fact, it seems probable that the applications of the theory we have developed here are even wider than this. An interesting hypothesis for its extension is that this type of configuration deals not only with compounds (and it may well be the case that verbal and adjectival compounds can be included in this statement, though we have not investigated the possibility) but with the whole field of word-formation. It is fairly easy to see how this would work, and the way in which the ideas which we have expounded would have to be extended to account for this. If this were to prove feasible, then we would have one grammar capable of dealing with word-formation along with all other syntactic operations using only one set of rules and yet holding the two separate in the configurations produced. This would in many ways seem to be an ideal solution. If this were done, then, although we might be no nearer a

definition of a compound, we could say that the output of a proposition embedded without any modality was by definition a case of word-formation. The different types of word-formation might not then be kept apart, but this might also be a desirable consequence, since the ~~border~~ borderline between compounding and affixation, for example, is not always clear, as is shown by the efforts of Dubois (1962) and Dimitrescu (1969) to move the boundary (see above, §3.6.3) and the difficulties encountered with forms like skomager, husholder, fodganger where the last element is not a potentially free morph (see above, §2.3.1); the lack of any clear border between compounding and derivation is, in fact, commented on by several writers (Carr, 1939:xvii; Koziol, 1937:§75; Söderbergh, 1968:29ff; Teleman, 1970:20).

APPENDIX A

**TRANSLATION OF TEXTS AND QUOTATIONS
IN LANGUAGES OTHER
THAN ENGLISH, FRENCH AND GERMAN.**

CHAPTER I

§1.4 En pige med lange fletninger. A girl with long plaits.

E. Hansen, 1967:§129.

In the compound ... the modifier and head are far more closely bound together, even more so than is the case when the head and preceding modifier are independent words: the plaits appear to be something very important and characteristic of the girl, she would not be the same without plaits, as these form part of her personality: fletningpigen is reminiscent of a name that only belongs to one specific person.

Vinje, 1970:§3.7.1 fn.

In the language of advertising even terser and more unconventional formations are found: kåpesjokk -- see our advert on Monday morning (advert). Kåpesjokk is a highly condensed expression for a content of approximately this nature: 'sale of coats at prices which will give you a shock of delight.'

E. Hansen, 1967:§127.

The advantage of compounds over expressions with a lot of words is self-evident: they are useful because they

are shorter and take up less space.

Åkermalm, 1952:16.

The desire to find new, striking expressions plays a certain rôle.

CHAPTER II

§2.1.1 Kristensen, 1930:71.

In Danish grammars there is usually a chapter on word-formation by compounding, but this chapter virtually always deals with the matter from a purely formal angle, while the question of the meaning of the elements in relation to each other and to the word as a whole remains untouched.

§2.1.2 Teleman, 1970:18.

It is true ... that no lexicon could ever contain all the possible lexemes of a language like ours. This is impossible simply because words of a certain type can be any length at all. Thus the language sets no bounds on the length of compounds with nouns or numbers:

basfiolfodralsmakaregesälls-...

farfarsfarfarsfarfarsfarfarsfarfars-...

...-åttatusentrehundraåttionio komma-...

It is unnecessary to list words like these in the lexicon since they are formed according to general rules exactly like clauses -- which are not listed in the lexicon either.

Hansen, 1967:308.

"Accidental formations," nonce formations.

Hansen, 1938:113.

The possibilities are inexhaustible, and there is also great freedom with regard to length (it has been known for newspapers to start competitions where you had to create the longest word!).

§2.2.11 Andersen & Rehling, 1936:§80.

That the first element is no longer felt to be a word in its own right is seen from the pronunciation, first and foremost in the compound stress Furthermore the first element usually has vowel shortening (and loses the glottal stop)

Juul-Jensen, 1934:10-11.

This is a common phenomenon which is due to rhythmical (prosodic) factors also applicable in word combinations (strings of words).

ø island; å river.

Hansen, 1943:76.

Those changes which we have observed in monosyllabic words which become the first elements of compounds can thus only be considered as a method of further clarifying the compounding of the unit.

Juul-Jensen, 1934:11ff.

The tendency to a glottal stop is here also strongest in old compounds and particularly in those where the meanings of the individual elements have faded.

§2.2.21 Hansen, 1967:296.

The first element does not normally take any inflectional morphemes.

Bergman, 1955:65.

In compounds made up of noun + noun or noun + adjective the first element can be either singular or plural semantically The general rule is that the first element, even if it would be plural in a free position, takes the singular form in a compound.

§2.2.22 Hansen, 1967:295.

It is the last element which takes the requisite

morphemes, and the behaviour of the last element is, wherever the word has kept its identity, exactly the same as that of the simple word.

§2.2.24 Togeby, 1965:§24.

The gender of compounds depends upon the main element (i.e. the head. LJB) -- le bas bleu, la chauve souris. Sometimes this main element is understood, as oiseau in bird names: le rouge-gorge.

§2.2.3 Landmark, 1969:159/60.

These linguistic signs (compounds) are expressed so briefly that the relationship between the elements must be understood by the reader himself. A compound word means therefore more than the sum of the meanings for each separate element.

Andersen & Rehling, 1936:§82.

Often the word stands rather for the thought as a whole.

Söderbergh, 1968:6.

In the instant a compound is formed, its parts are perceived by the speaker (writer) and hearer (reader) naturally as independent units within the entirety of the compound: allrum is perceived as a combination of all and rum.

§2.2.4 Mikkelsen, 1897:§37.

The difference between a combination of several words which are pronounced and written separately, and a compound which is pronounced and written as one, can be seen if we compare the phrase en stor Mand with the compound en Stormand. These two expressions differ 1) in MEANING, since the individual words in en stor Mand have kept their particular meanings: a) en Mand (a man), b) der er stor (who is big) (in either the literal or the metaphorical sense), whilst en Stormand (magnate) denotes a single new concept; 2) FORMALLY, since in en stor Mand the word stor is inflected: den store Mand, store Mænd, whilst stor cannot be inflected in en Stormand: Stormanden, Stormænd; 3) in PRONUNCIATION, since in en stor Mand both words receive stress, in en Stormand on the other hand the syllable Stor is stressed, the syllable mand only half-stressed.

§2.3.1 Giurescu, 1972:§1.0.

Let us define a compound as a new lexico-grammatical unit, which appears between pauses, is commutable with a simple word, can only be globally modified and whose elements also occur outwith the said amalgams.

Noreen, 1906:20.

A compound word ... is one which can be analysed into parts which in isolation are independent (free) morphemes of the language.

Landmark, 1969:2.

"Word" is used here in its traditional sense: linguistic sign which in the written language is separated off by a space before and after it.

Hansen, 1938:109.

In separating a compound from a complex word it is usually said that the former is made up of two words which occur independently in the language, while the latter contains a word and an element which does not occur independently. But a division of this type is not completely sufficient. According to this, cigarmager, for example, would be a derivation, because -mager does not occur as an independent word. A comparison of cigarmager and, say, cigarfabrikant allows us to feel the injustice of separating the cases.

jomfru virgin; bomuld cotton; hip som hap six of one and half-a-dozen of the other; ligegyltigt immaterial.

Hansen, 1938:111.

Compounds are combinations of two elements (each of which may contain several words) which syntactically and semantically are on a par with a clause consisting of two (or more) words, but which morphologically and/or phonetically (especially stress-wise) display other properties.

§2.4.2 Landmark, 1969:160.

Are expressed so briefly that the relationship between the two elements must be understood by the reader himself.

Noreen, 1906:383.

One of the elements acts as a modifier to the other.

Western, 1929:50ff.

1. Subject relationship
2. Object relationship
3. Place relationship
4. Time relationship
5. Purpose relationship
6. Cause relationship
7. Relationship of coherence
8. Freer relationship

These various relationships must naturally be understood in their widest sense.

Western, 1929:62.

In many cases it is impossible to give a definite logical relationship between the two elements, since the compound may either be an analogous formation on some pattern or other, or it may be based on a thought ellipse, or both these causes may be united.

Hansen, 1967:304ff.

a) A compound ... may correspond to the different types of genitive (which are listed. LJB).

b) The first element of a compound may correspond to a predicative (with or without as) or an appositional element.

c) The first element may contain something with which the second element is compared.

d) ... Compounding may correspond to a combination of two elements (dvandva compounds).

e) Compounding may correspond to a so-called quantity entity.

f) The first element says what the second element is made up of, contains.

g) ... The compound corresponds to a combination of a noun ... and a prepositional phrase.

h) More complex expressions can form the basis for compounds.

i) Finally we have compounds behind which there does not appear to lie any linguistic expression.

§2.4.3 Söderbergh, 1968:23ff.

1. the goal, the intention, the aim

6. someone or something which that which is expressed by the head is to the advantage of or for the protection against

9. owner of something or bearer of a certain trait
2. material or content
5. the goal or the result of an activity
7. subject of an activity or event which is expressed by the head.

§2.4.4 Landmark, 1969:161.

It is reasonable to presume that those adjectives which can be paraphrased by an analytic expression which follows from the above-mentioned deep structure patterns are also formed on the basis of the appropriate analytical expression.

Teleman, 1970:37.

We shall express the meaning relationship between the first and last elements through relative clauses which have the last element as correlate and in which the first element appears as the (non-relativised) clausal element.

Teleman, 1970:41.

17. N2 has aim (N2 cause N1)
tårgas, sömpulver, glassmaskin
18. N2 has aim (N2 prevent N1)
malkula, brandkår, strejklag

CHAPTER III

§3.2.6 Rødvinen er lilla. The red-wine is lilac.

Den røde vin er lilla. The red wine is lilac.

Landmark, 1969:201.

"Bilfull" (car-full) seems more or less to express a state (of high density of cars, heavy traffic), while "full av biler" (full of cars) has the effect of giving a nonce picture of a situation (compare: Oslo is a car-full town -- How full of cars the street was today!).

§3.3.2 Söderbergh, 1968:6.

We look upon the words bostad, handduk, riksdag and värnplikt as units, even if we can, upon reflection, analyse them into their constituent parts.

Giurescu, 1970:§2.1.

On the synchronic plane we find words of the kind
Roum. floarea-soare^ulei (flower-the sun: sunflower)

Fr. chien-loup

It. boccadilupo (mouth of wolf: running bowline)

which are also a part of the deep structure of Roumanian, French or Italian, and which we shall consider as genuine compounds independently of the period in which they were coined as long as their elements continue to exist independently.

§3.4.2 Context 1.

But the lightning-lighter was on holiday, and there was nothing he could do about it.

Context 2.

The pocket-lighter will be very useful.

The police wanted to catch the pocket-lighter before he burned someone seriously.

Rasmussen, 1964:74.

All anemone-men
with stalk and corolla
have a little sweet and friendly
anemone-wife.

When they drink the morning dew
with their green tongues
they get many thousand cheeky
anemone-children.

They have no trousers on.
And when they fool about,
you can see the wet, bare
anemone-bottoms.

ATS 9/10-73

Miss Malice does not see what mayor Wassard can

possibly have against the street-vendors since it isn't actually his street they are vending.

Rasmussen, 1964:90.

The smoking-table stood and smoked.

The cough-medicine coughed.

The sick-bed got so poorly
that it fell down panting.

The chopping-block chopped.

The frill/fuss tick(1)ed.

a pun on dikke,
unanalysable in the
first.

The sugar bowl sighed.

sukker means sugar
or sighs (vb).

The mechanism nodded.

pun on nikke.

The clumsy clot took on tick.

another pun.

The lawn-mower (lit. cutting-machine)

wanted a fight (lit. to fight)

playing on the
polysemy of slå. The
passive form can mean
to fight or to be cut.

And the old desk (lit. writing-table)

wrote a verse to little brother.

§3.4.4 De små lilleskoler. The small little-schools.

§3.5.2 Johannisson, 1958:8.

It is true of both old and new words that context has a decisive influence on their comprehensibility.

§3.5.3 Hjelmslev, 1943:19.

Avoiding the hitherto dominant transcendent point of view and seeking an immanent understanding of language as a self-subsistent, specific structure (p.2), and seeking a constant within language itself, not outside it (p.4), linguistic theory begins by circumscribing the scope of its object. This circumscription is necessary, but it is only a temporary measure and involves no reduction of the field of vision, no elimination of essential factors in the global totality which language is. (Taken from F.J. Whitfield's translation.)

§3.6.3 Giurescu, 1970:§1.3.

Another element which interests us is the existence in the last few years in French, Italian and Roumanian of some series of compounds made up of two elements of which one is repeated, as for example,

Fr position-clef
mot-clef
industrie-clef
problème-clef.

Dansk Sprognavn, 1972:11.

Productive first element. Productive second element.

§3.6.41 Et pund smør. A pound of butter.

§3.6.5 Østergaard, 1974:7.

These adjectives have the same function as nominators (i.e. attributive nouns. LJB), i.e. they classify, they limit the reference of the head, but do not describe the head and can therefore neither be inflected for comparison nor modified by very. Typical endings for E4 adjectives are -ish, -ch, -al, -en and typical meanings are geographical origin, profession and material.

§3.7.1 Iversen, 1924:11.

Thinks then that not only theoretical but also practical considerations force us to discard both the semantic content of the compound's elements and the logical-grammatical relationship between them as classificatory principles.

Diderichsen, 1946:246.

Nouns appear most frequently in the root form when no special state of affairs is applicable.

Hansen, 1967:296.

Of the three main forms of the first element the unchanged form is the normal one.

Skautrup, 1968:264.

There are no completely clearly demarcated rules for the use of the three main types: root composition, s-composition and e-composition. Analogies (on older formations), influence from outside (especially German) and phonetic difficulties can all play a part. Semantic reasons for a form can now only be faintly traced in e-composition.

Teleman, 1970:52.

Book shelves for schools. Shelves for school books.

Hansen, 1967:298.

With compounds in mand- all three possibilities are exploited: mands- corresponds particularly to a subject genitive: mandsansigt, -arbejde, -dragt, -sang, -stolthed, -støvler, -væsen, etc.; mand- corresponds inter alia to an object genitive: manddrab, mandtal, but is also found in other cases: mandfolk, mandkøn ; mande- is partly used in compounds like mandebod, -fald, -hul, partly where the first element has the function of a quality-giving adjective: a mandecigar, a mandesjus, etc..

§3.7.2 Mikkelsen, 1897:§39.

A compound is called 1. PROPER when it has arisen through the conjoining of two stems, e.g. Byfoged, Graavejr ... 2. IMPROPER when it has arisen through the conjoining of two or more words which were originally collocated elements in conjoined speech, e.g. Forglemmigej (a whole sentence), Bysbarn (added genitive case), Hvidtøl (added adjective).

Hansen, 1967:302f.

In the first a morphological unit of two words is forged which together cover the content one wishes to express. The unit builds on a linguistic expression which contains the two words either together or separated.

The other method of proceeding is to use a syntactic combination of two or more words unchanged as a unit (juxtaposition): en præstegårds have en præstegårdshave; en mands stemme en mandsstemme; min moders mål mit modersmål (compounds with moder otherwise have moder-).

Skuffen til (d)et skrivebord. The drawer for a (the) desk.

Jeg mødte hende i en storby. I met her in a city.
Jeg mødte hende i en stor by. I met her in a big town.
Jeg mødte hende i storbyen. I met her in the city. Jeg

mødte hende i den store by. I met her in the big town.

§3.7.3 Landmark, 1969:35.

As it is scarcely reasonable that s and e here should have any meaning, I shall not call them morphemes. I shall rather take it that they belong to the preceding linguistic symbol which can occur as a word ..., so that these linguistic symbols plus s/e are to be seen as combinatory variants of a morpheme/morpheme sequence which can occur when the morpheme/morpheme sequence is used as part of a more complex word.

Holt, 1956:195.

It is precisely these inflections' (the genitives') disappearance which is peculiar in the first element of compounds.

It must be admitted that there are in Danish several expression variants of the unit genitive: -en- in Amalienborg, and perhaps the -e- which is found in barne- and børne-.

§3.8.2 Landmark, 1969:66.

In some cases it is difficult to decide whether one is dealing with a noun or a verb This is the case in those examples where the first IC can be, from a formal

point of view, 1) both a verb in the infinitive and a weak noun 'ripe/fast', or 2) both a verb without the infinitive morpheme and a strong noun 'styrt/sikker'. It looks as if the distinction between the word-classes noun and verb is neutralised in these cases.

CHAPTER IV

§4.1.3 Det er intet køn. It is no gender. Det er intetkøn. It is neuter.

§4.1.5 30. He goes to a --.

33a. He goes to the little school.

33b. They go to the little schools.

34a. He goes to the lilleskole.

34b. They go to the lilleskole-s.

§4.4.2 -bider biter; -ganger go-er; -rider rider; -mager maker.

Een der digter systemer. One who makes poems of (or dreams up) systems. En der digter efter et system. One who writes poems according to a system. En der arbejder gæster. One who works guests. En arbejder der er gæst. A worker who is a guest.

§4.6 Hun gik med sin franskbrødsfyr under armen.

She was walking arm-in-arm with her franskbrødsfyr.

CHAPTER V

§5.1 Unge dameportræt. Young lady portrait. Venlig landsbypræst Friendly village priest.

Jensen, 1904.

A young lady (late civil servant's daughter) seeks ...

A scholarship for unmarried farmers' daughters.

Rejsebeskrivelse gennem Makadonien. Journey description through Macedonia. Billetsalg til Malmö. Ticket sale to Malmö. Togenes Ankomsttider til København. The trains' arrival time at Copenhagen.

§5.3.1 Et hus til de syge. A house for the sick.

§5.3.42 Hendes franskbrødsfyr gik ned ^daf trappen. Her franskbrødsfyr went down the stairs.

§5.3.5 Hon hade komochtagmigomdukanminen på sig. She was wearing a come-and-get-me-if-you-can look.

Man tager kulturen ud til folket. Someone takes
culture out to the people.

Jeg skal til København. I have to Copenhagen: i.e.,
I have to go to Copenhagen.

APPENDIX B

LIST OF SCANDINAVIAN COMPOUNDS USED AS
EXEMPLIFICATORY MATERIAL IN THE TEXT
TOGETHER WITH AN ELEMENT-BY-ELEMENT GLOSS
AND (WHERE NECESSARY) A WHOLE-WORD
TRANSLATION.

NOTE: Examples from all the Scandinavian languages are given in one alphabetical list: Icelandic, Norwegian and Swedish examples are specifically marked. To allow for the different alphabets used in Scandinavia, the end of the alphabet is taken to be

V W X Y Z F Æ Ø Å Ä Ö.

Examples taken from Danish texts that use aa instead of å are listed in the form in which they appear in the text.

LANG	COMPOUND	GLOSS	TRANSLATION
S	adelsperson	nobility person	nobleman
	afgang	off going	departure
S	akvarellmálare	water-colour painter	general purposes, living room
S	allrum	all room	
	alpakka jakke	alpaka jacket	
	anemonekone	anemone wife	
	arbeiðsplads	work place	place of work
	arbeiðspladsdemokrati	work place democracy	
	arbeiðsvenlig	work friendly	conducive to work
	arvegods	inherit goods	inheritance
	bankekøð	beat meat	stewing beef
S	barnasinne	child mind	child's mind
I	barnaskóli	children school	children's school
I	barnaskór	children shoes	children's shoes
S	barnbiljett	child ticket	child's ticket
S	barndomsminne	childhood memory	
	barnebarn	child child	grandchild
	barnevogn	child vehicle	pram
I	barnsskór	child shoes	child's shoes

LANG	COMPOUND	GLOSS	TRANSLATION
S	basfiolfodralismakare- gesälls-	bass viol box maker	journey-
	betjent-blik	constable look	man the sort of look a constable gives you
N	bilfull	car full	full of cars
	blomsterbed	flower bed	
	blyant(s)holder	pencil holder	
	blyant(s)tegning	pencil drawing	
	Blåtand	blue tooth	
	boghandel	book shop	
	boghylde	book shelf	
	bogstav	book stem, stave	letter (of alphabet)
S	boktryckare	book printer	
	bomuldskjole	cotton dress	
	bondegård	peasant yard	farm
S	bondhustru	farmer wife	farmer's wife
	bordben	table leg	
S	bostad	live town	residence
S	brandkår	fire corps	fire brigade
	brillestel	spectacle frame	

LANG	COMPOUND	GLOSS	TRANSLATION
S	brorson	brother son	nephew
	brødfrugttræ	bread-fruit tree	
	bukseknop	trouser button	
	bybane	town line	metropolitan railway
	byfoged	town bailiff	recorder
S	byggnadsgrund	building site	
	bygmester	build master	master builder
	bysbarn	town child	
	byttehytte	swop hut	hut for swopping (?)
	bøndergårde	peasants yards	farms
	børnebørn	children children	grandchildren
	børnehave	children garden	kindergarten
	børnehjem	children home	children's home
	børnemagtsrepresentanter	children power representatives	representatives of pupil power
S	båtsegel	boat sail	
	chokpris	shock price	very low price
	chokrabat	shock reduction	large reduction
	chokresultat	shock result	unexpected result

LANG	COMPOUND	GLOSS	TRANSLATION
	cigarfabrikant	cigar manufacturer	
	cigarmager	cigar maker	
	cigartænder	cigar lighter	
S	dagorder	day order	agenda
	damekjole	lady dress	lady's dress
	dameportræt	lady portrait	lady's portrait
	datid	then time	past
S	djurplågeri	animal cruelty	cruelty to animals
	dobbeltmord	double murder	
S	doktorspromotion	doctor promotion	promotion to the rank of doctor
S	dotterdotter	daughter daughter	granddaughter
	dragekimono	dragon kimono	dressing gown with dragons on
	dukkebørn	doll children	children dolls
	dummeper	stupid Peter	clown
	dupskoer	button shoes	ferrules
S	dusågende	thou saying	'tutoyant'
I	dýrafræði	animal science	zoology
S	dödsfara	death danger	mortal danger *

LANG	COMPOUND	GLOSS	TRANSLATION
S	dörrknackare	door knocker	
	eftermiddag	after midday	afternoon
	efterår	after year	autumn
	embedsmand	office man	civil servant, official
	eventyrvesen	fairy-tale being	
S	fadersvilja	father will	will (wish) of one's father
S	farfarsfarfarsfarfars-	grandfather grandfather	great ¹⁰ grandfather
	farfarsfarfars-	grandfather grandfather	
	farmor	grandfather	
	farvel	father mother	paternal grandmother
S	femkronesedel	fare well	good-bye
N	fjernseer	five crown note	T.V. watcher
S	fletningpigen	distant see-er	the girl with plaits
S	flickebarn	plait girl-the	
S	fluggift	girl child	
	flyveplads	fly poison	aerodrome
	flyveskrift	fly (vb) place	advertising pamphlet
	fodgænger	fly (vb) writing	pedestrian
		foot go-er	

LANG	COMPOUND	GLOSS	TRANSLATION
	folkebibliotek	folk library	municipal library
	forfatterret	author right	royalties
	forglemmigej	forget-me-not	
	fortykkelsesmidler	fattening means	
S	fotsdjup	foot deep	
	franskbrødsfyr	French bread fellow	white bread boyfriend (i.e. resembling white bread: soft and squishy)
	fremgang	forward going	progress
	fremtidsforsker	future researcher	futurologist
	frueønsker	woman wishes	woman's wishes
	frømand	frog man	
	følelsesliv	feeling life	emotional life
S	föreningsmedlem	society member	
	galgenfugl	gallows bird	
	gastænder	gas lighter	
S	getmjölk	goat milk	
S	glassmaskin	ice-cream machine	

LANG	COMPOUND	GLOSS	TRANSLATION
S	glädjetårar	happiness tears	tears of joy
S	golvmatta	floor carpet	
	goplehånd	jellyfish hand	
	graaben	grey leg	stem canker
	graavejrr	grey weather	
	grønthandler	green merchant	greengrocer
S	gröttallrik	porridge plate	
	guldknap	gold button	creeping buttercup
S	guldring	gold ring	
	gulerod	yellow root	carrot
S	gullgul	gold yellow	golden yellow
	gæstearbejder	guest worker	immigrant worker
	haandværk	hand work	
	halvår	half year	
S	handduk	hand cloth	towel
S	handsbredd	hand width	
	han-hund	he-dog	dog
	havemand	garden man	gardener
S	himmelsfærd	heaven journey	ascension

LANG	COMPOUND	GLOSS	TRANSLATION
S	hjemlif	home life	
	hullemaskine	hole machine	punch
I	húfasmíður	houses builder	house builder
I	húsaþök	houses roofs	house roofs
	husbondur	house peasants	husbands
I	húsbúnaður	house fittings	furniture
	husholder	house holder	
I	húspak	house roof	
I	húspök	house roofs	
S	husägare	house owner	
	hvidtøl	white beer	low-fermented beer
	hverfor-skal-man-op-om-	why-must-one- (get)up-in-	
	morgenstemme	the-morning voice	
	hønsebaer	chicken berries	Swedish dog-wood
S	hårlock	hair lock	lock of hair
S	häxdans	witch dance	witches' dance
S	icke-rökare	not (non) smoker	
	ikke-abonenter	not (non) subscribers	

LANG	COMPOUND	GLOSS	TRANSLATION
	ikke-fagmand	not (non) specialist	
	imellem	in between	
	indfaldspapir	sudden idea paper	paper for writing one's ideas down on
	indkørsel	in driving	entrance, drive
	infinitiv(s)mærke	infinitive mark	mark of the infinitive
	ingenting	no thing	nothing
	intetkøn	nothing gender	neuter
	jord- og betonarbejder	earth and concrete worker	navvy
	julemand	christmas man	Father Christmas
S	järnvilja	iron will	
	kagekone	cake wife	lady who sells cakes
	kalendervender	calendar turner	
S	kaninunge	rabbit young	baby rabbit
	kantatestær	cantata starling	starling who sings cantatas
	karruselmakrel	round-about mackerel	
	kineserdreng	Chinaman boy	Chinese boy
	kitteldeflorations-	overall defloration	the syndrome of wanting to
	syndromet	syndrome-the	rape anyone wearing an overall

LANG	COMPOUND	GLOSS	TRANSLATION
	klippevågsansigt	cliff wall face	face resembling those of the American presidents hewn out of a rock face
	knækbrød	crack bread	crispbread
	kommunehospital	parish/town hospital	general hospital
S	komochtagimogmdukanminen	come and get me if you can look-the	
S	kongungamoder	king mother	king's mother
S	kortfattning	short grasping	brevity
S	kortspel	card game	
	køjer	cow eyes	port-holes
	kronprins	crown prince	
	kropsvenlig	body friendly	soothing to the body
	kulturen-ud-til-folket-idealister	culture-the out to people-the idealists	
	kvalitetsvarer	quality wares	
S	kvinnørbete	woman work	women's work
S	kvinnoskønhed	woman beauty	woman's beauty
S	kyrkogång	church going	
	køkkenalkymist	kitchen alchemist	

LANG	COMPOUND	GLOSS	TRANSLATION
N	kønssygdóm kåpesjokk	sex illness coat shock	venereal disease (see p.424)
S	Lafsstrand	Laf's beach	geography
I	landafræði	country science	geography book
I	landafræðisbók	country science book	village priest
	landsbypræst	country town priest	long-eared bat
	langøre	long ears	
S	latíngíammatík	latin grammar	
S	latínstudíum	latin study	study of latin
	legebutík	play shop	
	legeklub	play club	
	legeplads	play place	playing ground
S	lífþálte	life belt	
S	lífsstraf	life sentence	
	lillebil	little car	taxi
	lilleskole	little school	new form of school with high staff-student ratio
	linjeskríver	line writer	line printer
	lommelúgler	pocket lighter	

LANG	COMPOUND	GLOSS	TRANSLATION
S	lundastudent	Lund student	
	lydskrift	sound writing	phonetic script
	lyntænder	lightning lighter	
N	lystløgner	enjoyment liar	person who lies for the fun of it
	læsebog	read book	reading book
	løsrivelsesproces	loose tearing process	process of breaking away
	løvetand	lion tooth	dandelion
S	løksmak	onion taste	taste of onions
	maaltid	meal time	meal, meal-time
I	málfræði	language science	grammar
S	malkula	moth ball	
	manddrab	man killing	murder
	mandebod	man penalty	blood money
	mandecigar	man cigar	man-sized cigar
	mandefald	man fall	slaughter
	mandehul	man hole	
	mandesjus	man whisky-and-soda	man-sized drink

LANG	COMPOUND	GLOSS	TRANSLATION
	mandfolk	man folk	real man
	mandkøn	man gender	masculinity
	mandsansigt	man face	man's face
	mandsarbejde	man work	man's work
	mandsdragt	man costume	man's costume
	mandsperson	man person	man, male
	mandssang	man song	man's song
	mandsstemme	man voice	male voice
	mandsstolthed	man pride	masculine pride
	mandsstøvler	man boots	man's boots
	mandsvæsen	man being	man, male
	mandtal	man number	census
S	mannamod	man courage	man's courage
I	mannanöfn	men names	men's names
I	mannsnafn	man name	man's name
S	manshöjd	man height	man's height
	med menneske	with person	fellow human being
	menneskevenlig	person friendly	humanitarian
	miljøvenlig	milieu friendly	ecologically beneficial

LANG	COMPOUND	GLOSS	TRANSLATION
	missebarak	pussy hut	
S	moderskärlek	mother love	
	modersmål	mother language	mother tongue
	motorlarmen	motor noise-the	
	mælkemand	milk man	
S	måndagsföreläsning	Monday lecture	
S	nattlogi	night lodging	
S	negerslaf	negro slave	
S	nireform	you (honorific pl) form	
	nordvest	north west	
	nylonstrømpemorder	nylon stocking murderer	
	nytår	new year	
	opfinderland	inventor land	
	ostemad	cheese food	open cheese sandwich
	paastande	on stands	claims
	papirkniv	paper knife	
	papir(s)pose	paper bag	

LANG	COMPOUND	GLOSS	TRANSLATION
	pennevennebegrebet	pen friend idea-the	the concept of the pen-friend
S	penningpung	change (money) purse	
	pilblad	arrow leaf	arrowhead (plant)
	plantepind	plant stick	dibble
	pornofabrikant	pornography manufacturer	
	privatbyggeri	private building	
	professoränke	professor widow	professor's widow
S	præstegård	priest yard	vicarage
	præstegårdshave	priest yard garden	vicarage garden
	pumpegris	pump pig	
	påskelykke	Easter happiness	
	raadspørgsel	advice asking	consultation
	redningskorps	saving corps	life-guards
	rejsekompanion	travel/journey companion	travelling companion
	rejseleder	journey leader	courier
N	revolverintervju(er)	revolver interview(er)	
	rigsdaler	empire dollar	rix-dollar
S	riksdag	empire day	parliament
S	ringfingret	ring finger-the	

LANG	COMPOUND	GLOSS	TRANSLATION
N	ripefast	scratch solid	scratch resistant
	ritualtyranniet	ritual tyranny-the	
S	Rom-resa	Rome journey	journey to Rome
	rosenkål	rose cabbage	Brussels sprout
	rødstrømpe	red stocking	feminist
	rødvín	red wine	
	rørag	mix egg	scrambled egg
	rådhuspladsen	council house place-the	town hall square
	saftevand	fruit juice water	squash
	sammenhæng	together hang	connection
S	schweizerost	Swiss cheese	
	silkehale	silk tail	waxwing
S	sjösjuka	sea sickness	
S	skogstrakt	wood tract	tract of forest
S	skolbokhylla	school book shelf	book shelf for schools
S	skolbokshylla	school book shelf	shelf for school books
	skolebørn	school children	
	skolegård	school yard	
	skomager	shoe maker	

LANG	COMPOUND	GLOSS	TRANSLATION
	skovrider	wood rider	forest supervisor
	skrivebord	write table	desk
	skrivebordskuffe	write table drawer	desk drawer
	skriveskrift	write writing	hand writing
	sladderhank	gossip handle	gossip monger
	smagssag	taste thing	matter of taste
	smørrebrød	butter bread	open sandwich(es)
	småbørn	small children	infants
	småkage	small cake	cookie
	småting	small thing(s)	trifle(s)
S	snillefoster	genius foetus	brain child
	socialcenter	social centre	
S	sorgebud	mourning message	news of a death
	sporvognsskinneskidt-	track vehicle rail dirt	tram-line dirt scrapers'
	skraberfagforening	scraper subject union	trade union
	sprogvidenskab	language science	philology
	stationsbygning	station building	
	stenbider	stone biter	lumpfish
S	stenhus	stone house	
S	stenhård	stone hard	

LANG	COMPOUND	GLOSS	TRANSLATION
S	stenkast	stone throw	stone's throw
S	Stockholmståget	Stockholm train-the	the train to/from Stockholm
S	stol(s)benet	chair leg-the	
	storby	big town	city
	storetå	big toe	
	storkenæb	stork beak	crane's bill geranium; pantograph
	storkommune	big local authority	
	stormand	big man	magnate
S	stormhake	storm hook	window stay
S	strejklag	strike law	
	studentterrevy	student revue	
N	styrtsikker	fall sure	crash proof
	sygdomsammenslutning	sickness together shutting end of an illness	
	sygehus	sick house	hospital
	systemdigter	system poet	(see p.442)
	sælger-vrøvl	salesman nonsense	
	søvnighedsgrad	sleepiness degree	degree of sleepiness
S	sömpulver	sleep powder	sleeping draught

LANG	COMPOUND	GLOSS	TRANSLATION
S	tafvelram	board frame	
S	takdropp	roof drip	leaky roof
	taleevne	talk ability	faculty of speech
	tilstande	to stands	conditions
	tilvarelse	to being	existence
S	tiörecigar	ten öre cigar	
S	treårsperiod	three year period	
	triviallitteratur	trivial literature	light fiction
	tronfølger	throne follower	heir to the throne
	træbord	wood table	wooden table
	tømmermand	timber man	carpenter
S	tårgas	tear gas	
S	Uddevalla-Lelången-banan	Uddevalla-Lelången line-the	
	udenumsnak	outside around talk	circumlocution
	uldkjole	wool dress	woollen dress
	uldtrøje	wool jumper	woollen jumper
	undertiden	under time-the	occasionally
	undervisningsministeriet	teaching ministry-the	ministry of education

LANG	COMPOUND	GLOSS	TRANSLATION
	universitetsuddannelse	university education	
S	urkundspublikation	document publication	
S	Vaksalagatan	Vaksala street	
S	vattendrickande	water drinking	
	vendekåbe	turn cloak	vacillating person
	vi-alene-vide-indstilling	we alone know attitude	
	videnskabsmand	science man	scientist
	vidnesbyrd	witness burden	testimony
	voldtægt	violence take	rape
S	väggskåp	wall cupboard	
S	världsman	world man	man of the world
S	värnplikt	weapon duty	national service
S	västfasaden	west façade-the	
	øksemorder	axe murderer	
	øllebrød	beer bread	dish made of stale rye bread boiled in beer

LANG	COMPOUND	GLOSS	TRANSLATION
S	-åttatusentrehundraåttionio- komma-	8,319.-	
S	änglabarn	angel child	
S	änkedrottning	widow queen	
S	änkefru	widow lady	

APPENDIX C

DICTIONARIES AND LITERARY
TEXTS

PRINCIPAL LITERARY SOURCES OF
NONCE COMPOUNDS.

Canard Enchaîné.

The Observer.

- Panduro, Leif (1960). De Uanstændige. Gyldendals Tranebog,
København, 1972.
(1964). Fejltagelsen. Gyldendals Tranebog,
København, 1972.

Politiken.

Paris Match.

- Prévert, Jacques (1949). Paroles. Livre de Poche, Paris.
Rasmussen, Halfdan (1964). Børnerim. Det Schønbergske
forlag, 8. oplag, 1970.

She.

- Skou-Hansen, Tage (1969). Hjemkomst. Gyldendals Tranebog,
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Søndags B.T.

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DICTIONARIES USED.

(Underlinings indicate the way in which the work is referred to in the text.)

Chambers 20th Century Dictionary.

COD Concise Oxford Dictionary.

DMN Dictionnaire des mots nouveaux. Hachette-Tchou.

Daniel Jones, An English Pronouncing Dictionary.

Hamlyn Encyclopedic World Dictionary.

NDO Nudansk Ordbog.

ODS Ordbog over det danske sprog.

OED Oxford English Dictionary.

Penguin The Penguin English Dictionary.

Petit Robert.

Robert Dictionnaire alphabétique et analogique de la langue française; les mots et les associations d'idées.

SOED Shorter Oxford English Dictionary.

REFERENCES

Abbreviations of periodical titles, etc.:

<u>ALH</u>	Acta Linguistica Hafniensia
<u>AmSp</u>	American Speech
<u>APhS</u>	Acta Philologica Scandinavica
<u>BSL</u>	Bulletin de la Société Linguistique de Paris
<u>CLS</u>	Chicago Linguistics Society: papers from the regional meetings.
<u>DF</u>	Danske Folkemaal
<u>DS</u>	Danske Studier
<u>EWPL</u>	Edinburgh Working Papers in Linguistics
<u>FL</u>	Foundations of Language
<u>FM</u>	Français Moderne
<u>IF</u>	Indogermanischen Forschungen
<u>JL</u>	Journal of Linguistics
<u>LAUT</u>	Linguistic Agency, University at Trier
<u>Lg</u>	Language
<u>LI</u>	Linguistic Inquiry
<u>MM</u>	Maal og Minne
<u>NM</u>	Neuphilologische Mitteilungen
<u>NSSt</u>	Nysvenska Studier
<u>RRL</u>	Revue Roumaine de Linguistique
<u>SL</u>	Studia Linguistica
<u>SN</u>	Studia Neophilologica
<u>ZAA</u>	Zeitschrift für Anglistik und Amerikanistik

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