Modern grammars of case: a personal history

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0 Preamble

My sub-title is 'a personal history'. For I can't pretend that what I'll be providing in what follows doesn't represent the perspective of someone very much involved in many of the developments described; I don't offer the dispassionate views of the outsider. What you have offered me here is a personal opportunity for re-discovery and for discovery. I hope this will be so for you as well.

I've described the area that I want to look at with you as 'modern grammars of case'. I've chosen the label 'grammars of case' rather than, say, 'case grammar' to signal that it is misleading to see the tradition that came to be called 'case grammar' in isolation from other developments in the study of case with which this tradition interacted. And the boundaries between different traditions are fluid. Certainly, I think one can establish something distinctive about the core of the 'case grammar' tradition that has evolved since the mid sixties of last century; and this is one of the main aims of what I want to do here. But this can be established most transparently against the background of other work of the same period – and before. Such a view has always, in intention, informed my own work.

So, I am focusing on '<u>modern</u> grammars of case', theories primarily of the twentieth century; but work of the preceding decades, which embodied traditions going back some centuries, has a role to play in the development of modern theorising. This is recognised, at least symbolically, in the title of one of the earliest publications in 'case grammar' – Charles Fillmore's 'Toward a modern theory of case' of 1965/1969. In modern work, much of the acknowledgment of the contribution of earlier work is, as in this title, implicit only, though Fillmore (1968) does offer a brief critique of the practice of some previous grammars of case. But I shall try to make this debt a bit more overt as we proceed – and, indeed, from the very beginning. I apologise to those of you to whom this history is familiar and who may very well know more about it than I do.

1 The classical tradition

As is familiar, the category of case occupied a central position in grammars of the classical tradition that dominated linguistic theorising in Europe before the twentieth century. The study and example of Latin dominated much of this tradition for many centuries. But many of the elements of the tradition were drawn from the Greeks, particularly the stoics; and the tradition of philosophical grammars liberated itself to some extent from the example of Latin. I shall refer to it as the classical tradition, while recognising that this term includes a wide variety of different approaches and purposes, ranging from pedagogical grammars to philosophical.

Within the core of this tradition case was conceived of as a morphological category, its members expressed in the form taken by nouns and related categories. But a transparent characterisation of the category and its function does not emerge in antiquity or in subsequent work in the tradition – except perhaps negatively: not gender, not number … . Rather, we get recognition of a distinction between two kinds of cases: the casus rectus, the nominative, which marks the subject of the finite verb, and the oblique cases, which at least in some uses signal a semantic relation to the verb, illustrated in (1):

(1)   Missī   lēgātī   Athēnās   sunt
         sent   envoys+*nom* Athens+*acc* are
         ('Envoys were sent to Athens')

(Gildersleeve & Lodge 1968: 214). Here the accusative marks the spatial goal of the movement signalled by the verb. The nature of this alleged distinction and variants of it underlie much of the debate within modern grammars of case. Not so much debated of late has been the problematical status of the vocative. As observed by the ancients, the vocative seems to belong paradigmatically with the cases, but functionally has little in common with them. Perhaps we can see in the classical

tradition a generalisation that covers at least the rest of the cases: if subjecthood is a relational notion, we can say that case marks a relation of some sort between the noun and some other element.

1.1 The syntax of case and adposition

Despite some uncertainties concerning the category, in the classical tradition case occupied a crucial place in the syntax. It's not just that case was seen as a defining property of word class. So, for Varro, for instance, the word classes of Latin were defined as in (2) (Robins 1951: 54):

(2)

		inflected for Case	
		+	÷
with tense forms	÷	nouns	conjunctions, etc.
	+	participles	verbs

Here, 'nouns' include 'adjectives' as a subclass, and 'conjunctions etc.' is clearly the ragbag of categories lacking case and tense.

But in addition to case having this role in defining word classes, reference to distinctions in case was seen as fundamental in formulating the syntax of a language. Gildersleeve's Latin grammar, revised by Gonzalez Lodge, i.e. what we know familiarly as Gildersleeve & Lodge (1968), comes late in this tradition. But still its description of the syntax of the cases occupies a large part of the segment of the grammar devoted to 'qualification of predicate', as well as their being invoked elsewhere in the syntax of the 'simple sentence', as in the discussion of the subject. 69 out of the 94 pages of that segment alone deal entirely with case syntax. Tense, on the other hand, occupies only 9 pages of the syntax, compared with 14 devoted to mood, which is not for Varro a word-class-defining category. Case is central to the description of the syntax. A classical grammar is a 'grammar of case' to this extent.

As is typical in descriptive grammars of the classical tradition, prepositions in Gildersleeve & Lodge belong to the rag-bag of the upper-right box of (2). Most of their syntax is, however, discussed as ancillary to the syntax of the cases. So, Gildersleeve & Lodge observe that the use of the accusative in (1) is limited to 'Names of Towns and small Islands', whereas 'Countries and large islands being looked upon as areas, and not as points, require prepositions' (1968: 213-4), as in (3):

(3)   In Graeciam   pervēnit
             in Greece+*acc*   s/he+arrived   ('S/he arrived in Greece')

The tradition recognises here the notional basis for the distinction in usage: whether the goal is conceived of as an area or not. And the joint role of the preposition and the case inflexion in signalling the semantic relation is also acknowledged. There is a perception that the descriptions of case and preposition are linked.

According to Hjelmslev (1935: 24, 40-3) it is, however, only in the nineteenth century that the equivalence of adposition and case in signalling relations of some sort is given full recognition (in the work of Bernhardi 1805 in particular). This is slightly misleading: the case/preposition relationship was already familiar to the tradition of humanist grammars (such as that of Linacre 1533 – see Padley 1976) and subsequent philosophical grammars. It is dwelt on at some length in the Port-Royal grammar (Lancelot & Arnauld 1660: ch.VI), as well as in Lancelot's *Nouvelle méthode latine* (1644). The grammar essentially suggests that nouns inflected for case are

abbreviated prepositional phrases. It also notes that the relations expressed by case can also be signalled by word order.

The analysis of prepositions is not pursued further, however, either by Bernhardi or Lancelot & Arnauld. And neither in the seventeenth nor in later centuries is there confrontation of the problem posed by (3), namely, the articulating of the combined role of adposition and inflexion in expressing the semantic relation. Are the adposition and the case the same kind of entity, despite their different morphosyntax? How is their co-occurrence regulated? I shall be suggesting that even modern grammars of case have failed to adequately address these questions.

This is already pointed out, however, by Kuryłowicz (1949). He comments:

> L'analyse incorrecte des tours prépositionelle nous semble avoir été un des obstacles les plus sérieux à une analyse adequate de la catégorie des cas. Dans les essais récents consacrés aux cas (L. Hjelmslev [(1935/37)], R. Jacobson [(1936)], A.W. de Groot [(1939)]) les tours prépositionnels sont soit passés sous silences soit traités d'une manière autre que les formes casuelles «synthétiques». En établissant la *valeur générale* d'un cas M. Jacobson découpe les tours prépositionnels en *préposition + forme casuelle …*, en détruisant ainsi l'unité morphologique formée par la préposition et la désinence qui en dépend.

(1949: 20). I shall return to Kuryłowicz's proposals subsequently, when I take up this problem, which, it seems to me, remained unresolved through the twentieth century. By the nineteenth century there is acknowledged recognition of the adposition/case relationship; but this relationship is not well articulated. And the case/adposition equivalence is again recognised in the conjunction of the titles of two early papers of Fillmore's, 'Toward a modern theory of case' (1965/1969), already alluded to, and 'A proposal concerning English prepositions' (1966). But the relationship is not explicitly formulated.

1.2 Grammatical vs. *local cases*

What apparently does belong specifically to the nineteenth century is the firm establishment of a distinction between grammatical and notional or 'local' cases, not just between nominative and the oblique cases. The suggestion that other cases as well as the nominative should be defined syntactically we can associate particularly with the name of Theodor Rumpel (1845, 1866). For him the nominative is the case of the subject of the verb, the accusative that of the 'direct object', the dative that of the 'indirect object', and the genitive marks subjects or objects of nouns. The cases are defined by grammatical relations allegedly borne by the nouns. It is clear, however, that not all cases can be so defined. There are also notional or 'local' cases.

This distinction is most fully developed in the first place by Holzweissig (1877), based on work of Ahrens, though their system excludes the nominative, as well as the vocative: the grammatical, or 'logical', cases in the early Indo-European languages are the accusative, dative and genitive, as shown in (4):

(4)   a.   *grammatical cases:* accusative, dative, genitive
        b.   *local cases:* ablative, locative, instrumental

However, the boundary between the two types of case does not seem to be strict: there are doubtful cases (in both senses). All of this can be illustrated from Finnish.

Finnish has at least the set of cases listed in (5):

(5)   a.   nominative, genitive, accusative
        b.   essive, partitive, translative

    c.   inessive, elative, illative – adessive, ablative, allative

Traditionally, (5.a) are the 'grammatical' cases, and (5.c) the 'local': the first three in (5.c) are 'interior' cases, the latter are 'exterior'. So the accusative, for instance, can be interpreted as representing the 'direct object', and the illative and allative spatial (internal or not) goal, as in (6):

(6)   a.   Liisa sai rahan
               Liisa got money+*acc*   ('Liisa got the money')

        b.   Marja pani kirjan   laatikkoon
               Marja put book+*acc* box+*ill*   ('Marja put the book into the box')

        c.   Jussi meni asemalle
               Jussi went station+*all*   ('Jussi went to the station')

(examples from Rigler 1992: 93-5). Though the illative and allative have other uses than those illustrated in (6), none of them can be interpreted as grammatical. Not all cases can be grammatical, then.

    This mixed-relational view of case – some grammatical, some local, notional – is basically what twentieth-century grammarians inherited. As I've observed, the division is not strict, abrupt; some cases do not fall easily just into one category. The cases in (b) in (5) that I haven't mentioned so far illustrate this. The essive, for instance, marks predicatives, a grammatical function; but it does so only if they are contingent, temporary, thus introducing notional considerations into its syntax. Otherwise the nominative is used, as in (7.a):

(7)   a.   Kivi on kova
               stone is hard+*nom*

        b.   Marja oli   sairaana
               Marja was ill+*ess*

        c.   Tyttö oli kotona
               girl   was home+*ess*   ('The girl was at home')

        d.   Jussi lähti maanantaina
               Jussi left Monday+*ess*   ('Jussi left on Monday')

And as well as (7.b), illustrating the predicative use of the essive, we also find 'local' essives such as (7.c) and (d) (Rigler 1992: 94, 108).

    Moreover, the partitive, which has the 'local' use in (8.b), also alternates with the accusative as a marker of 'direct object', where it signals partial involvement of the object, as in (8.a), which should be compared with the example with accusative in (6.a):

(8)   a.   Jussi sai rahaa
               Jusii got money+*part*   ('Jussi got (some) money')

        b.   Jussi tuli   kotoa
               Jussi came home+*part*   ('Jussi came from home')

(Rigler 1992: 94).

Comparison of (6.a) and (8.a) shows that even the 'grammatical' cases of (5.a) are not purely so: accusative marks only a semantic subset of objects. Similarly, the predicative nominative in (7.a) is associated only with a non-contingent interpretation. The contingent status of the predicative noun in (9.b) is signalled by the presence of the essive inflection, rather than the nominative with the same noun in (a):

(9)   a.   Pekka on   opettaya
                Pekka is   teacher+*nom*

        b.   Pekka on   opettayana
                Pekka is   teacher+*ess*

(Rigler 1992: 108). Rigler comments: '<(9.a)> implies that Pekka is a teacher by profession, and <(9.b)> that he is working as a teacher at the moment'.

And this duality of function of a 'grammatical' case is (if anything) even clearer in the case of the Latin accusative. We have indeed already witnessed the 'local' use of (1). The same case can also be interpreted as marking the direct object in (10):

(10)   Rōmulus urbem   Rōmam   condidit
                Romulus city+*acc* Rome+*acc* founded
                ('Romulus founded the city of Rome')

All cases other than the nominative have 'not-purely-grammatical' uses, analogous to the use of the accusative in (1).

Work within the 'case grammar' framework of the twentieth century indeed supports the elimination of grammatical relations such as 'direct object' and 'indirect object', and so of the description of cases such as the accusative and dative as 'grammatical'. The nominative emerges as distinctively 'grammatical' (though with notional restrictions on even its predicative use). This, it can be argued, is what underlies the exclusion of nominative from Holzweissig's system in (4) and from discussions by other nineteenth-century treatments. And it continues to be treated distinctively in much of the classical tradition. But this is to anticipate quite a bit of the journey we've still to make.

1.3 Primary and secondary functions

I want to note further refinements of the systems of Rumpel (1845, 1866) and Holzweissig (1877), associated with de Groot (1939) and Kuryłowicz (1949), before trying to sum up what emerges as 'common ground' from the classical tradition. They maintain the distinction between 'grammatical' or 'syntactic' cases and 'concrete'. But among the 'concrete' uses of cases de Groot recognises a hierarchy of 'centrality' in their relation to the verb. Kuryłowicz makes a distinction between 'primary' and 'secondary' functions of a case (a distinction pursued more recently by Fischer & van der Leek 1987, for instance): a case whose 'primary' function is 'syntactic' is a 'syntactic' case, such as the Latin accusative, whose 'primary' function for Kuryłowicz is to mark the 'régime direct'; a case whose primary function is 'concrete' is a 'concrete' case, such as the Latin ablative.

A 'secondary' function is one associated with verbal government: the 'concrete' use of the accusative is 'secondary' because it is determined by a particular (notional or lexical/idiosyncratic) subclass of verbs, 'verbs of movement', as in (1) vs. (10); in (10) the accusative signals the 'régime direct'. The ablative, however, is 'primarily' 'concrete' in use, with 'secondary' uses again associated with particular subclasses of verb. This is illustrated in (11), with a governed use

(a), marking 'cause' with verbs of emotion, and a use that is not governed (b), a time 'adverbial', or adjunct:

(11) a. Ōdērunt peccāre bonī   virtūtis amōre
          they-hate to-sin   the-good of-virtue love+*abl*
          ('The good hate to sin from (their) love of virtue')

      b. Quā   nocte   nātus Alexander est, eādem   Diānae
          which+*abl* night+*abl*   born Alexander is   that-same+*abl* of-Diana
          Ephesiae   templum   dēflagrāvit
          of-Ephesus temple   burnt-down
          ('On the same night on which Alexander was born, the temple of Diana of Ephesus
          burned to the ground')

      c. Nēminī   meus   adventus labōrī   aut sūmptuī   fuit
          no-one+*dat* my   arrival burden+*dat* or expense+*dat* was
          ('To no-one was my arrival a burden or an expense')

(Gildersleeve & Lodge 1968: §§408, 393, 356).

However, the 'syntactic'/'concrete' distinction still seems not to be clearcut. For instance, Kuryłowicz (1949), contrary to the Rumpelian tradition, groups the dative with the 'concrete' cases. Kuryłowicz appears to regard its 'primary' uses as those which are illustrated in (11.c): namely, in Gildersleeve & Lodge's terms, 'the Dative of the Object for which (to what end), and often at the same time a Dative of the Personal Object For Whom, or To Whom'. But Gildersleeve & Lodge regard these as verb-governed. And though Kuryłowicz regards its use as marking the 'régime indirect' as 'secondary', he comments:

> Quant au datif la tradition grammaticale le groupe avec les cas à fonction syntaxique (nom. acc. gen.) en tant que *cas du régime indirect*. Le terme *régime indirect* est justifié là où le groupe (verbe + régime direct) régit un cas oblique. Or c'est normalement le datif de la personne à laquelle l'action s'adresse (*donner à, dire à* etc.). Bien que dans ses constructions le datif soit régi, il est moins central, c.-à-d. plus adverbial, que l'accusatif, étant restraint aux substantives désignant une personne.

It is unclear why, in Kuryłowicz's own terms, the marking of 'régime indirect' is not a 'primary' use. True, it is governed by the construction '(verbe + régime direct)', but this does not in itself involve specification of a semantic subclass of verbs, any more than government by simply verb does, in the case of the 'régime direct'.

Finally – and this applies to the whole tradition that recognises grammatical cases other than the nominative: the notions 'régime direct' and 'régime indirect', 'direct' and 'indirect' object, are not transparent. And they are called into question in the development of 'case grammar', as we shall see.

1.4 Conclusion: what is a grammar of case?

At this point, against this brief sketch of a historical background, we can perhaps give a rough characterisation of what I shall call a level 1 grammar of case. I suggest something along the lines of:

Grammar of case level 1
A grammar of case gives an account of the syntax of the relations that in some languages are expressed by case inflexions.

This leaves the identity of the relations vague; but they presumably include both grammatical relations and semantic relations. Grammatical relations are notionally empty, as is usually assumed of the subject relation signalled by the nominative; semantic relations have notional content, as do the 'local' cases of Finnish. However, the division is controversial, as we have seen.

This formulation of what constitutes a grammar of case requires that such a grammar should be able to express a certain kind of generalisation; and it seems to me to represent a reasonable requirement. It is, in some respects, so bland that it could apply to any grammar written within the classical tradition. What the tradition gradually came to add to its concern for these relations was the explicit recognition that the syntax of these relations involves adpositions as well as cases. So that by the nineteenth century there seemed to be agreement within the tradition that the formulation just given could be amplified to give explicit reference to adpositions, at least:

Grammar of case level 2
A grammar of case gives an account of the syntax of the relations that are typically expressed by case inflexions or adpositions.

None of the grammars in the classical tradition provide an adequate articulation of a grammar of case. The role of prepositions, for instance, remains sketchy. But something like a grammar of case of level 2 is often explicitly recognised as a desideratum within the classical tradition that continued into the twentieth century (in which we can include Hjelmslev 1935/37).

However, both the formulations just given are based on the assumption that these relations, grammatical and semantic, have a syntax. And this offends against any assumption that syntax is autonomous, that it makes no reference to semantic properties. And this offence came to be pilloried.

2 The autonomists and other critics of the tradition

In some twentieth-century work, perhaps ultimately the most influential of it, there was a reaction against the classical tradition, and specifically its notionalism, more specifically still the inclusion of reference to semantic relations in the syntax. Syntax is seen as autonomous. This began with the 'new grammar', which from the 40's, particularly in the United States, began to challenge the school grammars of English of the time. If the classical tradition failed to articulate the case-preposition relationship, then the 'new grammarians' abandoned any attempt to do so. It was not part of syntax.

2.1 The 'new grammarians'

The critiques by the 'new grammarians' of aspects of the tradition certainly had some force. The vernacular grammars that came forth in the seventeenth and subsequent centuries, and particularly the school grammar tradition of the nineteenth and twentieth centuries, made only marginal innovations to cope with differences between the vernaculars and Latin. Moreover, the classical tradition was applied with little understanding or consistency; so that, for instance, in establishing word classes there was inconsistency in whether notional properties or functional or distributional properties were to be appealed to. Thus, the same grammar might define a noun as 'the name of a person, place or thing' and an adjective as 'a word that modifies a noun or pronoun'. And the definitions themselves, particularly the notional ones, cannot be applied unambiguously. These points are made rather forcibly in the flagship of the 'new grammar', Fries (1952: ch.V), and in

other works such as Nida (1960: ch.II). And Gleason (1965: part I) provides a survey of these various developments.

However, in their reaction, and in line with the assumptions of the American structuralists of the middle decades of the twentieth century, the 'new grammarians' set themselves unrealistic goals, illustrated by the following quotation from Fries (1952: 8):

> It is my hope … that the linguistic specialist will not … impatiently discard the book with a hasty skimming, assuming that it is a popularization of well-known materials, and miss my effort not only to challenge anew the conventional use of 'meaning' as the basic tool of analysis in the area of linguistic study in which it has its strongest hold – sentence structure and syntax – but also to illustrate the use of procedures that assume that all the signals of structure are formal matters that can be described in physical terms.

It is difficult to see what could be the physical correlates of structural ambiguity, for instance (despite attempts to provide it with phonological indicators – e.g. by Hill 1958).

Moreover, the failure of Nida's (1960) 'immediate constituency' notation to provide, for example, a means of distinguishing between complement and adjunct – they are both for him 'modifiers' – allows him to ignore the conclusion that the distinction, though syntactically relevant, can be drawn only in semantic terms, as is acknowledged later by e.g. Jackendoff (1977: 264):

> complements [= 'modifiers'(an unfortunate terminological mismatch) – *JMA*] can in fact be divided up on essentially semantic grounds, corroborated in part by syntactic evidence.

Complements satisfy the semantic valency of a predicator, though given ellipsis, either anaphoric or indefinite, a complement in many cases need not be present, as in (12.a):

(12)   a.   Have you eaten (the oysters)?
        b.   I ate the (oysters) (this morning)

The second post-verbal phrase in (12.b) is an adjunct; it is not prescribed by the valency of the verb. In terms of the crude distributional indicators deployed by the 'new grammarians', such adjuncts share the distribution of complements.

Such attitudes of the 'new grammarians' are relevant to our present theme. In Fries (1952), for instance, 'case' is not mentioned, and prepositions figure only as 'group F' among the parts of speech, on the basis of an indicator that involves the ability to occur in the frame in (13):

(13)   A   1   F A   1   2 F A 1
                The concerts *at* the school are *at* the top

                A   1   F A   1   2   3   F A   1
                The dress *at* the end is dirty *at* the bottom

The numerals represent classes of 'lexical' words established in the same way; the capital letters are groups of 'function words'. This is, of course, quite non-explanatory (which seemed to be a virtue for the 'new grammarians – see again Nida 1960: ch.II). It is not clear how such grammars could capture the generalisation required of a grammar of case of level 1 or 2.

2.2 Jespersen vs. Hjelmslev on case

It is easy, and not just for the 'new grammarians', to find faults with the practice of traditional grammarians who wanted to attribute to Present-day English nouns various cases. The only obvious candidate as a morphologically-marked case is the genitive; and it is rather marginal as a morphological element, given its well-known capacity to attach to the end of phrases, as in (14):

(14)   the girl I met's handbag

But this is only partially fair to the intentions behind these proposals, which were designed to acknowledge that not just prepositions but also word order can signal the relations otherwise marked by cases.

We can associate such developments of the tradition with a refinement of a grammar of case of level, which I shall formulate as characterising level 2':

> *Grammar of case level 2'*
> A grammar of case gives an account of the syntax of the relations that are typically
> expressed by case inflexions or adpositions or position.

This other possibility was already recognised in the Port-Royal grammar. But the intention of acknowledging the role of position in signalling relations is not generally consistently pursued.

However, it is such an intention that motivates Hjelmslev's suggestion concerning English (1935: 118-9):

> Ainsi dans la série *the boy sent his mother a letter* il y a trois cas distincts reconnaissables par l'ordre des éléments: un subjectif (*the boy*), un translatif (*the letter*) et un datif (*his mother*). Remarquons en passant que les distinctions constatées ne sont de rigueur que dans l'usage neutre (style normal prosaïque); en d'autres usages les syncrétismes admis par le système sont déjà réalisables. Mais là où il y a distinction dans l'expression, le case subjectif est marqué par sa place devant le verbe; le translatif et le datif sont marqués par leur place après le verbe, et ils sont distingués mutuellement par leur ordre respectif.

The qualification 'style normal prosaïque' is important. And there are obviously other questions to be raised. And they were.

Jespersen, for instance, in the course of his criticism of apparently similar suggestions (1924: ch.XIII), lists the sentences in (15.a) alongside an alleged dative-accusative sentence such as (15.b):

(15)   a.   I asked the boy a few questions
                 I heard the boy his lessons
                 I took the boy long walks
                 I painted the wall a different colour
                 I called the boy bad names
                 I called the boy a scoundrel

        b.   Peter gives Paul's son a book

And he comments (1924: 174) on the suggestion that the post-verbal sequence in (15.b) contains a dative plus an accusative:

> If we are to speak of separate datives and accusatives in English, I for one do not know where in this list the dative goes out and the accusative comes in, and I find no guidance in those grammars that speak of these two cases.

However, there are syntactic differences between alleged 'dative-accusative' sentences and those in (15.a). Jespersen cites, and dismisses, phenomena to do with passivisation. But the range of alternative systematically related structures, including passives, in which (15.b) can occur is, nevertheless, unique. And it is a pity that Jespersen devotes so much of his attention to the scarcely taxing demolition of the easy target of Sonnenschein (1921), the product of his favourite 'bad guy'.

Moreover, if we interpret the relations involved here as semantic, as does Hjelmslev, in the case of the post-verbal elements (at least), then their identification is ensured by the semantic valency of the verb. This, I shall suggest, is the crucial insight of 'case grammar'. But, again, this is to anticipate too much. All that I have tried to establish here is, in the first place, the development of a set of grammars, the 'new grammars', that are apparently not grammars of case, even at level 1. Secondly, I have tried to show that criticism by the 'new grammarians' and others are not always well-founded.

2.3 Early transformational-generative grammar

Early transformational-generative grammar was in many respects transparently the offspring of the 'new grammarians' – despite its overt embracing of very different philosophical attitudes. Such grammars of this period, in particular, are clearly not grammars of case. In this respect there is a seam-free transition from Roberts' pedagogical 'new grammar' of 1956 to his pedagogical transformational grammars of 1962 and 1964: the only major innovation is the introduction of transformations. And this is little changed in Chomsky (1965).

The framework advanced in Chomsky (1965) is difficult to reconcile with Chomsky's (1966: 44-5) enthusiasm for the treatment of case systems by the Port-Royal grammarians and others:

> The identity of deep structure underlying a variety of surface forms in different languages is frequently stressed, throughout this period, in connection with the problem of how the significant semantic connections among the elements of speech are expressed. Chapter VI of the Port-Royal *Grammar* considers the expression of these relations in case systems, as in the classical languages, or by internal modification, as in the construct state in Hebrew, or by particles, as in the vernacular languages, or simply by fixed word order, as in the case of the subject-verb and verb-object relations in French. … Notice that what is assumed is the existence of a uniform set of relations into which words can enter, in any language, these corresponding to the exigencies of thought. The philosophical grammarians do not try to show that all languages literally have case systems, that they use inflectional devices to express these relations. On the contrary, they repeatedly stress that a case system is only one device for expressing these relations.

One transparent interpretation of this passage is as a blueprint for a grammar of case level 2'. Recall:

> *Grammar of case level 2'*
> A grammar of case gives an account of the syntax of the relations that are typically expressed by case inflexions or adpositions or position.
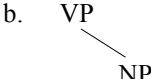
But Chomsky (1965) provides no such grammar.

It contains no direct account of the semantic relations expressed by prepositions or case – unsurprisingly in the latter instance, of course, given the paucity of case inflexions and their not-obviously-semantic character. And there is indeed only one indexed mention of 'case' in Chomsky (1965), which contains a formulation (reminiscent of Hjelmslev's 'style normal prosaïque') in which 'case' is signalled by word order:

> Case is usually determined by the position of the noun in surface structure rather
> than in deep structure, although the surface structures given by stylistic inversions
> do not affect Case.

(Chomsky (1965: ch.2, note 35). This is not a very precise, or generalisable, suggestion. But it must be conceded that case inflection is certainly not prominent in English.

However, in this work, even the grammatical relations are excluded from the syntax, despite the positing of two sets of these, one associated with 'deep structure', the other with 'surface structure. Grammatical relations like subject are defined on categorial configurations, so that, as is familiar, the 'deep subject' and 'deep object' of a sentence is the noun phrase that in 'deep structure' appears in the respective configurations in (16.i):

(16)   i.a.   S   ii.a.   *Subject-of*   [NP,S]

                    NP

        b.   VP   b.   *Direct-Object-of* [NP,VP]

                    NP

Linearity is not relevant to the definition of these relations at 'deep structure', so the definitions reduce to (16.ii). Chomsky concedes that 'somewhat different definitions are needed for the surface notions' (1965: 221). This immediately raises the question of whether the same relations are indeed involved in that case. And other questions have arisen.

The relations defined in (16) play no role in the syntax. Indeed, it is unclear what role they might have anywhere. Katz (1972: 109-11) suggests that the have a semantic role. But any semantic generalisations can refer directly to the defining configurations rather than having to invoke the relations (Anderson 1977: 17). The only apparent motivation for their inclusion in the grammar is the desire to show that the grammar presented in Chomsky (1965) can accommodate all the kinds of information provided by 'traditional' grammars that Chomsky regards as 'without question, substantially correct' and 'essential to any account of how language is used or acquired' (1965: 64). But his suggestion reverses the traditional conception of the relationship between the relations and the structural properties that signal their presence.

Despite the relations allowed for by Chomsky apparently being superfluous in his framework, problems with such definitions have been much discussed. Issues include: the invocation of two sets of relations, 'deep' and 'surface', which involve different kinds of definitions (Chomsky 1965: ch.2, note 32); the questions raised by 'double-object' constructions; the intractability of 'non-configurational' languages and other indications that subjecthood may have a more independent role; the possible non-universality of these relations; and so on. But most relevant to our present concerns is the observation that the grammar of Chomsky (1965) is inconsistent in its treatment of relations.

Included in the 'illustrative fragment of the base component' given in Chomsky (1965: ch.3, §3) are the rules in (17):

(17) a.   Predicate-phrase → AuxˆVP (Place) (Time)
      b.   VP → V (NP) (Prep-phrase) (Prep-phrase) (Manner)
      c.   Prep-phrase → Direction, Duration, Place, Frequency, etc.

The rules provided do not offer an expansion of the 'Place' and 'Time' categories of (17.a); but presumably one possibility is (18):

(18)   Place, Time → Prep-phrase

By combination of (17) and (18), Place, at least, both immediately dominates and is immediately dominated by Prep-phrase, as seen in (19):

(19) a.   Place   (by (17.a) + (18))
                 |
             Prep-phrase

      b.   Prep-phrase   (by (17.b) + (17.c))
                 |
                Place

This is one kind of inconsistency, one that is damaging enough. But it is clear that yet another inconsistency underlies this.

    For the alternative expansions in (17.c) all involve relations, in this case semantic relations (Fillmore 1965/1969). Within the syntax categorial recognition is given, paradoxically, to semantic but not syntactic relations – though it is not acknowledged there that this is what is involved. The primary motivations for including these categories are apparently semantic; they are given no syntactic motivation. One problem here is that the semantic distinctions among Place and the rest are signalled by prepositions and the lexical items in the noun phrases that complement them, even though, according to (17.c), the preposition is outside the Place phrase itself. The semantic properties of Place are carried by elements outside the Place phrase. This suggests that this is not the way to characterise semantic relations grammatically – by the back door, as it were. And this failure is a consequence of an attempted autonomist attitude.

    Moreover, the semantic properties associated with Place, Direction etc. do have syntactic consequences. Thus, as is familiar, in German adverbs of Time and Manner normally precede those of Place:

(20) a.   Er geht jetzt nach Hause
              he goes now to home   ('He is going home now')

      b.   Er fährt mit dem Zug nach Hause
              he travels with the train to home   ('He goes home by train')

There are reasons for thinking that Place and Time, for instance, are composites that have in common their relational structure: relationally, they are instances of location in different dimensions, as is discussed later. It's the substance of the dimension rather than the relation in which they differ. But the relations themselves also have a syntax, as well as these composites. Let me give an illustration.

    It is not implausible to distinguish between a semantic relation Source and a semantic relation Path, presumably sub-types of Chomsky's Directional. These are respectively illustrated in (21.a) and (b) – where we're not concerned whether the post-verbal phrases are complements or adjuncts:

(21) a.   *Fred came from Birmingham ((and) out of the Midlands/North)
      b.   Fred came through the valley (via Stirling)(and across the plain)
      c.   People came from Birmingham and from Leicester

(21a/b) also show that only the Path can be duplicated with or without coordination. Of course, the Source can be coordinated without difficulty if this is compatible with the subject, as in (21.c); but an uncoordinated version is not available. All of this ties syntactic possibilities to semantic relations, as assumed in a grammar of case.

From what I have described here one gets the impression of a grammar of case struggling to escape from the bonds of Chomsky (1965). It was a time to return to grammars of case, to explore the aspirations of the philosophical grammarians. What I've said so far is intended to illustrate something of the extent to which what happened at this point was a return. And this is apparent in Anderson (1971b) already.

3 Early 'case grammar'

A return to a concern with grammars of case was attempted in a variety of work in the late 60's and 70's that came to be referred to as 'case grammar'. What further distinguishes 'case grammar' from the tradition of grammars of case, however, is the adoption of a more restrictive view of the relationship between semantic and grammatical relations than is embodied in a grammar of case of level 2. A level 2 grammar, indeed, doesn't specify any relationship between the different kinds of relation. Such a development is first evident in Fillmore (1965/1969, 1966, 1968a), but it is also manifested, independently, in a range of other work, including Anderson (1968, 1969, 1971b) and Brekle (1970). I shall concentrate to begin with on Fillmore's work.

What comes to be envisaged at this point is what I shall refer to as a grammar of case of level 3:

> *Grammar of case level 3*
> a) A grammar of case gives an account of the syntax of the relations that are typically expressed by case inflexions or adpositions or position.
> b) Among these relations semantic relations have primacy.

This characterisation adds to that for grammar of case level 2' (= (a) here) the stipulation (b) that semantic relations have primacy over grammatical. This distinguishes 'case grammar' from other grammars of case. As we shall see, 'primacy' can be articulated in various ways, depending on other properties of the grammar.

3.1 The Fillmorean initiative

Against the background of transformational-generative grammar, Fillmore (1965, 1966, 1968a) suggested a transformational relationship between semantic relations and grammatical. Gone are the 'deep' grammatical relations of Chomsky (1965): instead, the identification of 'surface' grammatical relations is based on structures derived from 'underlying' structures which crucially contain nodes corresponding to different semantic relations. Thus, Fillmore suggests 'underlying' structures like the respective representations given in (23) for the sentences of (22):

(22) a.   The door opened
      b.   The girl opened the door

(23)   a.
```
                        S
                   ┌────┴────┐
                   M         P
                   :     ┌───┴───┐
                   :     V       O
                   :     :    ┌──┴──┐
                   :     :    K     NP
                   :     :       ┌──┴──┐
                   :     :       d     N
                   :     :       :     :
                   :     :       :     :
                   :     :       :     :
                  Past  open    the   door
```

b.
```
                        S
                   ┌────┴────┐
                   M         P
                   :     ┌───┼───────────┐
                   :     V   O           A
                   :     :  ┌─┴─┐       ┌─┴─┐
                   :     :  K   NP      K   NP
                   :     :    ┌─┴─┐       ┌─┴─┐
                   :     :    d   N       d   N
                   :     :    :   :       :   :
                   :     :    :   :       :   :
                   :     :    :   :       :   :
                  Past  open the door    the  girl
```
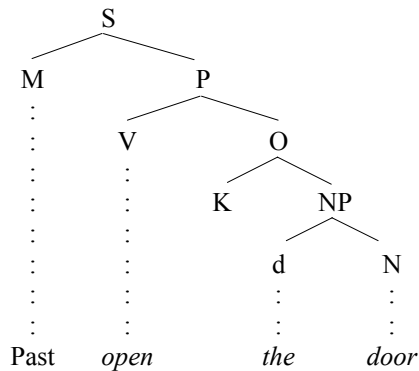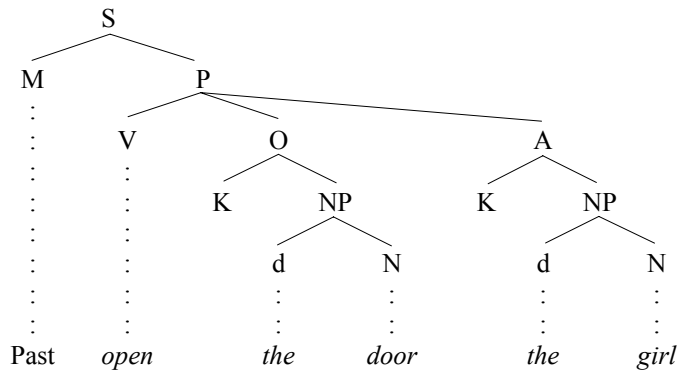
(cf. Fillmore 1968a: §3.1). The S consists of a M(odality) constituent and a P(roposition); the former is realised by various sentential modalities, including tense, and the latter contains the verb and its arguments. O and A are semantic relations, what Fillmore calls 'cases'. I shall return in due course to the identification of the semantic relations O(bjective) and A(gentive). K is a 'kasus', a non-phrasal category that in English is usually realised by a preposition; a preposition is a kind of 'case form'.

Part of the restrictions on a verb's arguments is specified in terms of the set of semantic relations it can co-occur with in a proposition, its 'case frame'. In this instance we say that the frame for *Open* is at least as in (24):

(24)   *Open*   O (A)

(I'm not concerned at this point with whether (24) is exhaustive or not.) The content of the 'case' node percolates down into its K and NP constituents.

The elements in (23) are not ordered in sequence. It is only after the configurations associated with grammatical relations are created that order is determined, as in (25):

(25) a.

```
                    S
         ┌──────────┼──────────┐
        NP          M          P
       ┌──┐         :          │
       d   N        :          V
       :   :        :          :
       :   :        :          :
       :   :        :          :
       :   :        :          :
       :   :        :          :
       :   :        :          :
      the door    Past        open
```

b.

```
                       S
          ┌────────────┼──────────────┐
         NP            M               P
        ┌──┐           :        ┌──────┴──────┐
        d   N          :        V            NP
        :   :          :        :           ┌──┴──┐
        :   :          :        :           d     N
        :   :          :        :           :     :
        :   :          :        :           :     :
        :   :          :        :           :     :
        :   :          :        :           :     :
       the girl      Past     open        the   door
```
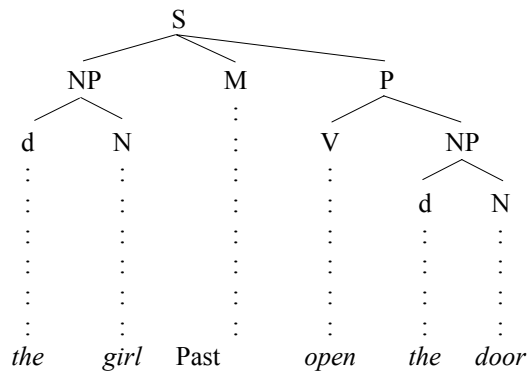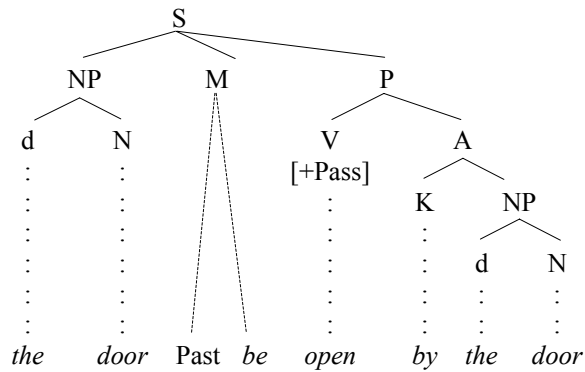
c.

```
                         S
          ┌──────────────┼───────────────────┐
         NP              M                    P
        ┌──┐             ╱╲            ┌───────┴────────┐
        d   N           ╱  ╲           V                A
        :   :          ╱    ╲        [+Pass]        ┌────┴────┐
        :   :         ╱      ╲          :           K        NP
        :   :        ╱        ╲         :           :      ┌──┴──┐
        :   :       ╱          ╲        :           :      d     N
        :   :      ╱            ╲       :           :      :     :
       the door  Past          be     open        by    the   door
```
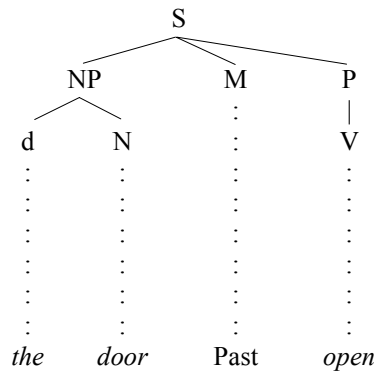
This formulation of passive incorporates the capacity allowed to early transformational grammars to insert lexical items derivatively. This is undesirable on theoretical and (in this case) empirical grounds. Later developments offer interpretations compatible with more restrictive syntactic assumptions.

3.2 Linearity

I should say something about the absence of linear precedence relations from (23). Anderson (1971b) also assumes no initial ordering; underlying structure involves 'wild trees' (Staal 1967), as envisaged by Curry (1961) and Šaumjan & Soboleva (1963); and ordering is derived on the basis of other information, and imposed more superficially. And this view is defended in Anderson

(1977: §1.11), particularly against objections raised by Chomsky (1965: 124-6) and Bach (1975). Bach argues for a universal base which attributes the same order to the elements of all languages, but fails to make a convincing case on either empirical grounds or grounds of restrictiveness: he argues that this hypothesis 'rules out more possible states of affairs within its domain of application' (1975: §1), which is not the case. Such a hypothesis continues to be raised, but not in any way that disturbs the conclusion of Koutsoudas and Sanders (1974: 20):

> The most restrictive and empirically most well-supported hypothesis about constituent ordering is in fact that which asserts that all underlying representations are wholly free of ordering specifications, that such specifications are assigned by rules to the superficial groupings of superficial constituents, and that all ordering relations are derivationally invariant.

(cf. Sanders 1970, 1972).

Linear order in underlying structure is necessary only if it is assumed that subsequent derivation essentially involves manipulation of linearity, transformations that mediate between different orders. It is this assumption that underlies Chomsky's (1971) rejection of transformations involving 'vacuous movement', transformations that affect only constituency. Such a rule is the 'raising' operation postulated to derive the object of *believe* in (26) from the subject of *be*:

(26)   I believe him to be dishonest

The order of elements is unchanged under 'raising'; only the bracketing is altered. This violates the ban on 'non-vacuous movement'. On the assumption of invariance, however, such a ban on 'vacuous movements' is meaningless: all structure changes are 'vacuous', they involve only at most re-attachments.

Derivational invariance is not quite fully adopted, however, in Anderson (1977), which envisages 'post-cyclic' assignment of precedence. But perhaps the major shift in the variant of 'case grammar' that evolved from that work was the adoption of not just derivational invariance in linear position but also of configurational invariance: as well as no movements, there are no reattachments. But again I am anticipating. Let us return to (23) and (25).

The derivation of (25) involves crucially re-attachment: the subject is extracted from the Proposition to attach to S. Linearity is contingent upon this. A (linear) development of such a derivation was to re-surface later as the 'VP-internal subject hypothesis' (e.g. Kitagawa 1986, Speas 1986, Rosen 1990).

3.3 'Cases' and the subject-selection hierarchy

(25.a) and (b) differ in their subject-selection because the A argument is preferred as a subject over the O: there is a hierarchy of semantic relations with respect to selection as subject. (27) gives the relevant sub-part, where A outranks O:

(27)   *Subject selection hierarchy*:   A > O

Passive sentences represent a marked option where the abnormal elevation of the lower-ranking O is signalled by the presence of *Be* and the verb morphology. In (25) subject and object are created by pruning of the case nodes O and A and the associated Ks; and 'surface' subject and 'object' can be defined in this circumstance as in (16). The configurations associated with grammatical relations result from rule-governed neutralisation of semantic relations. The A that doesn't undergo subject-formation in (25.c) is not pruned, and the K is realised as *by*.
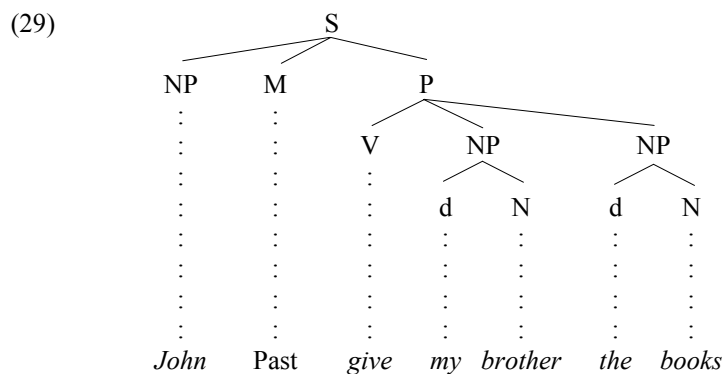
The sentences in (28) all share the Semantic relations O, A and D(ative):

(28) a.   John gave the books to my brother
      b.   John gave my brother the books
      c.   The books were given to my brother
      d.   My brother was given the books

(28.a-b) show that A outranks both D and O with respect to subject-selection, as indicated in an extended version of (27):

(27)'   *Subject selection hierarchy*:   A > D,O

D and O are alternative objects, however, as revealed by (28.a) vs. (b). These object-selections correspond to different passives, (28.c) and (d) respectively. It is not clear, however, why there is apparently no overt K for the O in (28.b), which has been 'passed over' as object. But if it too has been pruned, then we can define various ('surface') grammatical relations in terms of configuration and sequence, as envisaged for 'surface' relations by Chomsky (1965: ch.2, n.32):

(29)
```
                              S
             ┌──────────────┬──────────┐
            NP              M           P
             :              :       ┌───┴──────────┐
             :              :       V     NP          NP
             :              :       :    ┌─┴─┐       ┌─┴─┐
             :              :       :    d   N       d   N
             :              :       :    :   :       :   :
             :              :       :    :   :       :   :
             :              :       :    :   :       :   :
             :              :       :    :   :       :   :
           John           Past    give   my brother  the books
```

By (16.ii.b) *my brother* and *the books* are both 'objects', but we can distinguish, for instance, an 'indirect object' from a 'direct' in terms of sequence.
        The crucial innovation here with respect to conventional transformational grammar is obviously the introduction into the syntax of semantic relations, in the shape of Fillmore's 'cases'. Fillmore (1968a: 24-5) offers the definitions in (30) for the three 'cases' we have been looking at so far:

(30) *Agentive* (A),   the case of the typically animate perceived instigator of the action identified by the verb.
      Dative (D),   the case of the animate being affected by the state or action identified by the verb.
      Objective (O),   the semantically most neutral case, the case of anything representable as a noun whose role in the action or state identified by the verb is identified by the semantic interpretation of the verb itself; conceivably the concept should be limited to things which are affected by the action or state identified by the verb.

These and the definitions of the other 'cases', and indeed the set of 'cases', have been the subject of much debate, including by Fillmore himself (see e.g. 1968b, 1969, 1971). It is fair to point out, however, that though the invocation of semantic relations in the syntax makes their identification in a

grammar of case particularly important, the same questions arise concerning any appeal to semantic relations, with or without reference to the syntax.

3.4 Conclusion and prospect

I list here the complex of questions surrounding the identification of the 'cases' as one of several basic issues raised by Fillmore's proposals that have been the subject of debate, and which I now want to address. The listing in (31) is intended to provide us with a framework for organising what is to immediately follow:

(31)   *Some issues raised by Fillmore's proposals:*
            i)   the representation of case relations and forms
            ii)   the rejection of 'deep structure'
            iii)   the identification of case and of individual case relations
            iv)   the transformational framework

Different proposed resolutions of these issues have been offered – including again by Fillmore himself; or they have (often) been ignored. And proposed answers to the questions raised by (31), and particularly by (iii), have been the basis for some of the major criticisms of the 'case grammar' enterprise. I am going to look at the components of (31) in order, coming last to perhaps the most contentious areas, represented by (31.iii) and, for different reasons, (31.iv). Let's start, then, with (31.i).

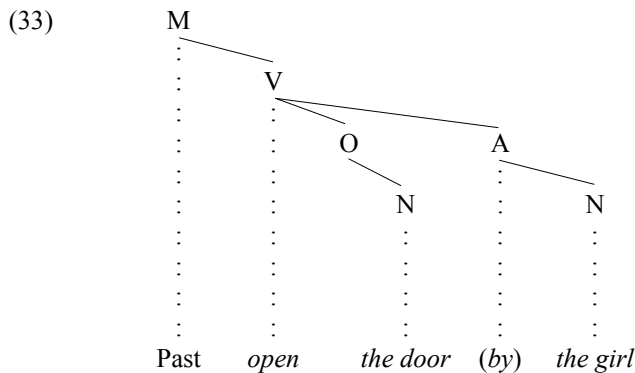## 4 The representation of case relations and forms

Fillmore himself was uncertain about the proper representation of 'case' (1968a: 87); and many workers using his framework have simply ignored the question. This meant that much of what might be expected of a grammar of case was neglected. The crucial relationship between adposition and case inflection is not clarified – and in particular what I shall call the 'Kuryłowicz question', on the basis of the first quotation from his work given earlier: how does one articulate the relationship between adposition and case inflexion when they co-occur, as in (32)?

(32)   a.   Ad   flūmen   iīt   puella
              to   river+*acc*   she+went   girl

       b.   In Graeciam   pervēnit
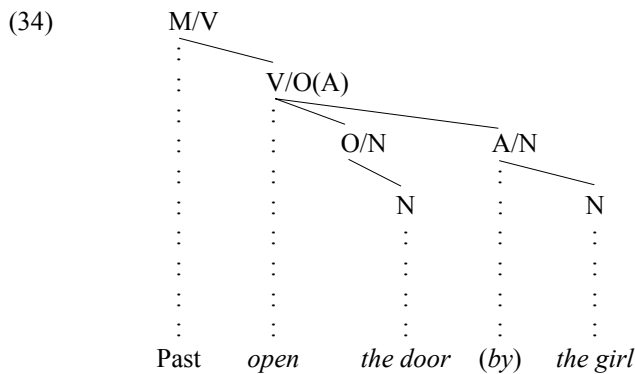   in Greece+*acc*   s/he+arrived

In each instance, the adposition and case inflection collectively express a non-interior vs. an interior goal respectively. If the adposition and inflection are instances of the same category, we need some account of how the division of labour between the two instances is articulated, as well as an explication of the co-occurrence restrictions. This can emerge only from a more explicitly formulated notation. And we return to the problem later.

4.1 Dependency

Robinson (1970b) and Anderson (1971a) argue for characterisations of semantic relations in terms of dependency relationships. In terms of the framework of the latter (though retaining Fillmorean labels), we should reinterpret (23.b) as in (33), where phrases have been replaced by their characteristic element, which governs the others – M for Sentence, V for Proposition, K for 'case', N for NP:

(33)   M
              :⟍
              :   V
              :   :⟍⟍
              :   :   O   A
              :   :   :⟍   :⟍
              :   :   :   N   :   N
              :   :   :   :   :   :
              :   :   :   :   :   :
              :   :   :   :   :   :
              :   :   :   :   :   :
              :   :   :   :   :   :
             Past *open* *the door* (*by*) *the girl*

This ignores the internal structure of the noun phrases. Each node bears a non-phrasal category label, and each category is subcategorised for its dependents. To anticipate a little, we can represent the subcategorisations as in (34):

(34)   M/V
              :⟍
              :   V/O(A)
              :   :⟍⟍
              :   :   O/N   A/N
              :   :   :⟍   :⟍
              :   :   :   N   :   N
              :   :   :   :   :   :
              :   :   :   :   :   :
              :   :   :   :   :   :
              :   :   :   :   :   :
              :   :   :   :   :   :
             Past *open* *the door* (*by*) *the girl*

According to the notation of Anderson (1997), the subcategorisation is indicated to the right of the 'slash'. The subcategorisation of the verb must be included in its lexical entry; but the other subcategorisations can be supplied by lexical redundancy. V is the necessary dependent of M, and N is the unmarked dependent of the semantic relations.

We should note too that these particular dependency relations are predictable from the pattern of subcategorisation: each element takes as dependent(s) the elements required by its own subcategorisation. These dependents are complements; other dependents are adjuncts. A head is a non-phrasal element which may be accompanied by (possibly phrasal) complements and/or by optional modifiers/adjuncts. There is no need for other, contingent criteria and the controversy these arouse (Hudson 1980a,b, 1987; Dahl 1980; Zwicky 1985; Corbett, Fraser & McGlashan 1993). But that, again, and more seriously, is to anticipate later developments.

Both Anderson and Robinson argue that dependency-based representations (essentially along the lines of Tesnière 1959 and Hays 1964) are in general preferable, other things being equal, to constituency-based (see particularly Robinson 1970a). Dependency representations more severely constrain the notion 'possible construction': each construction is headed, and this doesn't have to be a separate constraint on the representations, as it would be in constituency-based grammars. But Anderson and Robinson suggest that the motivations for a dependency treatment of 'case' are particularly cogent.

Notice, for instance, that (34) avoids the needless duplication of 'case' and *kasus* that necessitates a percolating mechanism whereby its constituents inherit the properties of the 'cases'. This is inappropriate anyway as far as the noun phrase is concerned: though the 'agency' of the
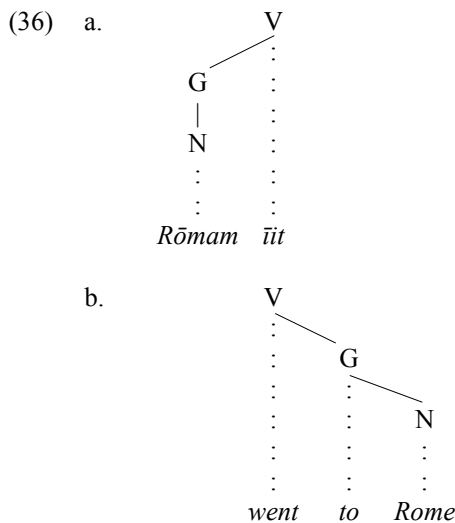
'case' itself may set up expectations concerning nouns functioning as A's (such as 'typically animate'), 'agency' is not a property of nouns. And 'agentive' nouns like *baker* don't necessarily function as A's. But 'agency' can more plausibly be attributed to a preposition like *by*. 'Agency' percolates only to the non-phrasal constituent in (23.b), the head of the construction in terms of (34) – where percolation is unnecessary, because 'case' and kasus are identified.

4.2 The categorial identity of case and preposition

Another motivation for the adoption of dependency representations came from the proposals made at about the same time in Anderson (1971c). These provide dependency representations with the capacity to allow for adposition and case inflection as instances of the same category. What is suggested there is that we should distinguish between dependency relations that are accompanied by potential linear difference between head and dependent and those that are not. Thus, the non-subjective arguments in (35) show the same 'case' – let's call it G(oal) for the moment – despite difference in expression:

(35) a.   Marcus Rōmam   īit
              Marcus Rome+*acc* went

      b.   Mark went to Rome

They differ in that in the Latin example of (35.a) (and of (1)) the semantic relation occupies the same syntactic position as its dependent, as shown in the partial representation in (36.a), which ignores the role of M and of subcategorisations:

(36) a.   V
                     ⋮
               G   ⋮
               | ⋮
               N   ⋮
               ⋮   ⋮
               ⋮   ⋮
             Rōmam   īit

      b.   V
                     ⋮
               ⋮   G
               ⋮   ⋮ ⋮
               ⋮   ⋮   N
               ⋮   ⋮   ⋮
               ⋮   ⋮   ⋮
             went   to Rome

In (36.b) the N is adjoined to the G, as the latter is to the V: its realisation is linearly distinct. In (36.a) the N is subjoined to G; they coincide in linear precedence. The marking of the N as Goal-governed is carried out by the inflectional morphology, which attaches a suffix to the N stem. This provides for the equivalence of adposition and case inflection.

The possibilities introduced by the availability of adjunction vs. subjunction do not yet provide in themselves an answer Kuryłowicz's question: what representations are appropriate in (32), with preposition combined with case inflection? Recall:

(32)   a.   Ad   flūmen   iīt   puella
               to   river+*acc*   she+went   girl

       b.   In Graeciam   pervēnit
               in Greece+*acc*   s/he+arrived

Such a question has remained unanswered through most of the history of 'case grammar'.

     The realisation of semantic relations as both independent word and as morphological affix (or whatever) is one indication that they belong to a functional class – what was later to be called a 'functional category'. This is argued at some length in Anderson (1997). And such a (functional) status for adpositions has recently been acknowledged within non-'case-grammar' developments of the transformational tradition (Baker 2003: App.1), despite the persistent view of them in this tradition as constituting a lexical category on a par with verbs, nouns and adjectives, as embodied in the [±V,±N] notation of Chomsky (1970). Is this a sign that this (central transformational) tradition may eventually develop into a grammar of case? There are other indications of this, as we shall find as we pursue our history.

4.3 'Case' and position

At this point, let's note that by extension (and in accord with the spirit of Anderson 1971c) Anderson (1977: e.g. §2.8.2) argues that a representation such as (36.a) is appropriate even when there is no morphological reflection of the 'case' node, but rather the relation is signalled positionally, as in (22.a):

(22)   a.   The door opened

The relation 'subject' borne by *the door* may be a neutralised one, but it is clear that cross-linguistically ('surface') subjecthood cannot be reduced to a particular position or a particular configuration. All the possible permutations of S, V, and O are found in the languages of the world; and there are 'non-configurational' languages (Hale 1983). Positional or configurational properties may in particular languages be manifestations of the presence of subjecthood; but these cannot be considered definitional properties even within a single language. This would render subjecthood incommensurate in different languages. Contrary to Chomsky's (1965) claims, 'relational' nodes are not redundant.

     Thus, the case phrase in *the door* in (36) and (34) does not lose its case node. Rather, the phrase in subject position has the N subjoined to the semantic relation:

(37)   O
              |
              N
              :
              :
          the door

As is typically the case for subjects, the morphology of English does not support distinctions among the semantic relations of the nouns in subject position: the semantic relations of subjects are morphosyntactically neutralised. And in English even subjecthood itself is for the most part given no morphological expression. I'll return later to the 'mechanism' involved in this.

     There are other motivations for denying a subsequent derivation involving 'pruning' to (34/37) etc. It is undesirable anyway, other things being equal, to incorporate the powerful operation of deletion in accounts of syntax. This brings us on to issue (iv) in (31), to do with

constraining the grammar, and indeed with the appropriateness of postulating transformational derivations. In the main this issue arose at a later date than the main strand of our history has reached; certainly, the other issues listed in (31) became more apparent at a very early stage. So once more derivationality is an area we shall be returning to.

4.4 Conclusion

As concerns the representation of 'case', topic (i) of (31), I've outlined what seems to me to have been the most fruitful approach to this. This involves the treatment of semantic relations as labels on nodes in dependency trees. Semantic relations belong to a functional category whose role is to satisfy the valency of lexical categories. As a functional category, the 'case' category can be given independent expression, as an adposition, or morphological expression, as an inflection, or it may be signalled positionally. This is provided for by the dependency notation, without recourse to deletion. Subject, at least, is a neutralised relation, which can likewise be signalled in various ways.

5 On the demise of 'deep structure'

The suggestions made in ch.4 go some way to the development of a grammar that conforms to the formulation of a grammar of case of level 3. But many questions remain; some of the more important are embodied in (iii) and (iv) of (31). Let us look first, though, at the banishment of 'deep' grammatical relations implied by the relegation of grammatical relations to a role derivative of the semantic relations, as 'surface' relations only, and the kind of counter-arguments advanced.

Perhaps the best-known defence of 'deep' grammatical relations – or, rather, of the presence in 'deep' structure of the configurations in terms of which they can be defined, as in (16) – is S.R. Anderson (1971). The argument presented there leads Fillmore (1977) to a reconsideration of the structure of the grammar that essentially reinstates 'deep' structure and minimises the syntactic role of the semantic relations. Let us now look at this argument.

5.1 The place of holisticness

Fillmore (1968a) had noted pairs like those in (38) and (39):

(38)   a.   John smeared paint on the wall
        b.   John smeared the wall with paint

(39)   a.   John planted peas and corn in his garden
        b.   John planted his garden with peas and corn

And he registers a difference in meaning between the members of the pairs that he describes as a distinction in 'focussing' (n.49); this correlates with choice of 'object'.

But 'focussing' is a rather inadequate label for the semantic distinction involved, which has come to be described in terms of a 'partitive' vs. a 'holistic' interpretation of (in these examples) the *the wall* and *his garden* phrases. In the (b) examples of (38/39) the relative dimensions of the 'object' are presented as being essentially exhausted by the action of the verb; the 'object' is interpreted holistically. This is not the case with the corresponding phrase in the (a) examples.

Further, the holistic interpretation is associated with a phrase with a locational interpretation that, in a grammar of the type described in Chomsky (1965), occupies specifically the 'deep object' position (without necessarily being 'surface object'). S.R. Anderson (1971) is concerned to provide evidence for this, and thus for the combined semantic and syntactic relevance of 'deep objects'. Consider the pairs in (40)-(42):

(40)   a.   John jammed pencils into the jar

        b.   John jammed the jar with pencils

(41)   a.   A pencil would be easy for John to jam into the jar
         b.   A pencil is certain to be jammed into the jar by John

(42)   a.   It's the jar that John is certain to jam with pencils
         b.   It's pencils that John is certain to jam the jar with

(40) exhibits the familiar partitive/holistic distinction ((a) vs. (b)). *The jar* in (41) is partitive and that in (42) holistic. But, unlike in (40), in neither instance is this NP in 'surface object' position. Anderson comments concerning the place of the partitive/holistic distinction: 'the structural level in question must precede the application of more or less well-known transformations' (1971: 390). What the holistic sentences of (40.a) and (42) share is occupation by *the jar* of 'deep object' position. We have a semantic distinction whose formulation must apparently make reference to 'deep object'.

     Further, 'deep structure' is the level at which verbs are subcategorised for their arguments. And verbs are subcategorised for taking both these constructions or only one or the other, as shown in (43):

(43)   a.   John spread/threw/*covered paint on the canvas
         b.   John spread/*threw/covered the canvas with paint

Whereas *spread* takes both constructions, *throw* takes only the partitive, and *cover* only the holistic. This seems to be difficult to reconcile with the 'case grammar' position that verbs are subcategorised for cases, not for the configurations of the 'deep structure' of Chomsky (1965).

     But we must note, in the first place, that this distinction is not restricted to alleged 'deep object' position:

(44)   a.   Bees are swarming in the garden
         b.   The garden is swarming with bees

(45)   a.   Sewage flooded into the tank
         b.   The tank flooded with sewage

The garden and *the tank* are holistic in (44/45.b), where, in terms of Chomsky (1965), they would occupy 'deep subject' position, but they are not holistic in (44/45.a), where they do not occupy this position. And this difference again remains under the application of transformations that destroy the positional affiliations of the two phrases, as in (46):

(46)   a.   It's the garden that bees are swarming in
         b.   It's bees that are swarming in the garden

Any generalisation concerning this semantic distinction must also invoke 'deep subject' (see e.g. Chomsky 1972: §6.8.3; S.R. Anderson 1977: 369-70, 1988: 292-5).

     This does not seem to offer much comfort for the 'case grammar' hypothesis concerning the superficial status of grammatical relations: we now have two 'deep' grammatical relations apparently involved. But this duplication is itself suggestive. There is, recall, a 'case' that characteristically occurs as 'surface subject' and 'object', and is 'object' in the presence of an A, as in (25.b) vs. (a). Anderson (1975, 1977: §1.8) suggests that the holistic argument in these various examples is an O; it is this that they crucially have in common, whether or not they go through a stage of being 'objects'. In (38/39.b) the O occupies 'object' position in the presence of

an A, which outranks it for purposes of subject selection; if not outranked it becomes a 'subject', as in (44.b). The semantic generalisation invokes O. This allows a simpler formulation than via appeal to (two) 'deep' grammatical relations.

And this suggestion is consistent with what we can attribute to O elsewhere. Unless this is over-ridden by the context, an O argument is normally interpreted as participating as a whole in the event labelled by the predicator. Contrast (47.a) and (b) involving the place noun *room*:

(47) a.   Bill searched in the room
        b.   Bill searched the room
        c.   Bill was searching the room
        d.   Bill read the book
        e.   Bill was reading the book

The progressive in (47.c) over-rides our normal expectation that the action exhausts (the relevant dimensions of) a place noun that is an O. The same is true in the holistic (38.b); since the O in the latter also, as locational, introduces a place, the exhaustiveness is associated with the relevant dimension of the entity denoted by the argument. Other dimensions may be relevant with nouns which do not typically denote places. In (47.e) the progressive over-rules our expectation that the book was read as a whole, which we can associate with (47.d).

The suggestion that *the wall* in (38.b) and *the garden* in (44.b), to take a couple of the examples discussed, are Os raises a number of questions, to be sure. If these are Os, what are the (other) post-verbal arguments, for instance? Anderson (1977: §1.8) regards them as also O. This offends against one of the principles Fillmore deploys in constraining the combination of 'cases' – the requirement that only one (possibly coordinate) token of each case is permitted per proposition (1968a: 22). But O is arguably exceptional in this regard. There is no reason to regard the arguments in simple equative sentences as other than two Os:

(48) a.   The guy over there is my lover
        b.   My lover is the guy over there

Differences in subject-selection here reflect discourse concerns rather than semantic relation. But what then is the difference between (48) and (44.b)? And how do we describe the use of *with* in the latter?

There was an attempt at this point to answer these last questions at least. Note that (44.b) also retains its locational interpretation: it is the dimensions of a space that are exhausted under the 'holistic' interpretation. Given this, Anderson (1977: §1.8) suggests that *the garden* in (44.b) is both O and L(ocative). The pair in (44) differ as in (49):

(49) a.   O,L (the garden) O (with bees)
        b.   O (bees) L (in the garden)

The *with* marks an O that is outranked for subject-selection by a complex O. Elsewhere in English *with* marks 'instruments' or 'comitatives', as respectively in (50):

(50) a.   John smeared paint on the wall with a rag
        b.   John smeared paint on the wall with a friend

((50.b) involves a 'comitative' on a charitable interpretation of John's actions, at least.) That the *with*-phrase in (38.b) is neither of these, is suggested by (51):

(51) a.   John smeared the wall with paint with a rag

b.   John smeared the wall with paint with a friend

In each of these, two *with*-phrases co-occur showing a clear difference in meaning.

To allow for the syntax of (44.b), we apparently need to extend the subject-selection hierarchy, as it affects O and A, as in (52):

(52)   A > O, > O

Similarly, the non-locational O in (38.b) is outranked as 'object'. This, of course, violates another of Fillmore's constraints (1968a: 24): that each NP is associated with only one case label. But again there are motivations for relaxing this, for allowing the role of an argument to be represented by a conjunction of relations. I'll come back to this when we turn to our next topic, the identification of the cases.

Other questions raised by these suggestions awaited the development of explicit accounts of the lexical relationship between the verbs in these 'partitive'/'holistic pairs'. But it is at least clear, I think, that S.R. Anderson's (1971) defence of 'deep structure' is inconclusive, at most. However, the official announcement of the demise of 'deep structure' was not to come for a number of years, with the introduction of the 'minimalist program'.

5.2 The after-life of 'deep structure'

As a sort of apologia for 'deep structure', Chomsky (1995: 187) contends concerning a grammar that postulates a 'deep structure' and a 'surface structure', that 'the empirical justification for this approach … is substantial'. He says concerning 'D(eep)-structure', specifically:

> 'D-structure is the *internal* interface between the lexicon and the computational system, … Certain principles of U<niversal> G<rammar> are … held to apply to D-structure, specifically, the Projection Principle and the θ-Criterion.

But the 'θ-Criterion' regulates the relationship between semantic relations and arguments; and, rightly or wrongly, it embodies Fillmore's constraints. 'Case grammar' argues that it is not surprising that the interface with the lexicon should be associated with the same level as semantic relations are available at; this is basic to the 'case grammar' proposal. There is no need to associate this conjunction of lexical access and the presence of semantic relations with an arbitrary 'internal' level, however. The principles mentioned do not select 'deep structure', but a level containing semantic relations.

Lexical entries are sensitive to semantic relations not grammatical relations, or the configurations that allegedly define them. No verbs are subcategorised as to whether they take a subject or not. Nor are such grammatical-relations-based notions as 'transitive' relevant to subcategorisation. Thus, the partial lexical entry in (24) is appropriate for verbs like *Open*:

(24)   *Open*   O (A)

It obscures the relationship between the two uses of the verb, on the other hand, to describe it as simply optionally 'transitive', as expressed in (53.a):

(53)   a.   *Open* (___NP)
        b.   Have you eaten (the fish)?

This might possibly be appropriate for a verb such as the *Eat* of (53.b), with constant subject and optional object. But what is constant with *Open* is the element that appears as the 'transitive'

'object' and the 'intransitive' subject; the constant is the presence of an O, whatever its grammatical relation. Reference is again to semantic relations not grammatical.

5.3 The delusion of 'unaccusativity'

There are, of course, devices available for avoiding the conclusion given at the end of the preceding section. One can, for instance, adopt the 'unaccusative hypothesis', originating with Perlmutter (1978). He points to two classes of 'intransitives', which are distinguished in Dutch, for instance, by their capacity or incapacity to show ('impersonal') passivisation. Compare (54) with (55):

(54)   a.   De jongelei dansen hier vaak
               ('The young-people dance here often')

        b.   Er wordt hier door de jongelei vaak gedanst
               it is here by the young-people often danced

(55)   a.   De kinderen verdwijnen uit dit weeshuis
               ('The children disappear from this orphanage')

        b.   *Uit dit weeshuis wordt (er) door vele kinderen verdwenen
               from this orphanage is (it) by many children disappeared

On Perlmutter's analysis, the subject in (55.a) is an 'underlying object' ('initial object', in his terms), and as such unavailable for 'displacement' from subject position by passive: (55.b) is unacceptable. The 'underlying subject' of (54.a), on the other hand, is, like 'transitive underlying subjects', a potential victim of passivisation, as witnessed by (54.b) vs. (55.b).

But there is a patent difference in the semantic relations they take between the 'intransitive' verbs of (54) and those of (55): the former take an A, the latter a simple O. Passive fails if what is normally the 'surface subject' is an O. And this applies in the case of 'transitives' also: passive applies to As and Ds, in particular, but not to Os. It is unnecessary to postulate an arbitrary difference in 'deep structure' as well as the semantically motivated distinction in semantic relations.

Perlmutter's analysis requires us to posit a process subjectifying the 'underlying object' of certain verbs. Grounds of economy, apart from anything else, argue against this: we already have a mapping of O onto subject in accordance with the subject-selection hierarchy of (27). Such a process as Perlmutter appeals to would be crucially unlike passive, which involves a marked subject selection, and is morphologically signalled as such. Appearance of the O of (55) in subject position it is not marked, nor signalled as such; it is normal, in accordance with the hierarchy.

Subsequent attempts to provide support for the 'unaccusative hypothesis' have invoked a range of phenomena from 'perfect-auxiliary' selection in various Germanic and Romance languages (e.g. Haider 1984) to the 'smear-paint' alternations of (38) etc. (Levin & Rappaport 1986; for references on 'unaccusativity' see Anderson 1997: §§3.1.3, 3.3, 3.6). Anderson (1997: 179), following particularly Böhm (1993), argues that the former involve more centrally distinctions to do with Aktionsart, and do not correlate neatly with other phenomena associated with 'unaccusativity'; and the latter are compatible with a 'case grammar' interpretation. Böhm (1993: §4.2.2) illustrates the importance of Aktionsart for 'perfect-auxiliary' selection with the pair of 'perfects' in (56) containing the same German verb:

(56)   a.   Molly hat   auf der   Bühne   getanzt
               Molly has on   the+*dat* stage+*dat* danced

b.   Molly ist   auf   die   Bühne   getanzt
           Molly is   on(to) the+*acc* stage+*acc* danced

(56.a) represents an 'accomplishment', 'atelic'; (56.b) is a 'process', 'telic' (see too Steinitz 1990). This doesn't relate in a simple way to other putative 'unaccusative' phenomena. 'Unaccusativity' doesn't seem to be a unitary phenomenon. And it doesn't require reference to 'deep (or initial) objects'. Predicators are subcategorised in terms of the semantic relations of their complements, not in terms of 'transitivity' etc. And other phenomena support the proposed irrelevance of 'deep structure' configurations to the lexicon.

5.4 Lexical evidence for 'case grammar'

If the lexicon were accessed at 'deep structure', one would expect lexical relationships to reflect this. For instance, we might attempt to describe the relationship between the base verbs in (57.a) and the derived adjectives in (57.b) as involving crucially the 'deep object' relation in the case of the verb:

(57)   a.   The alternative can be achieved/believed
        b.   The alternative is achievable/believable

This is the traditional view adopted by e.g. Wasow (1977: §3.2), on the basis of such examples and of his 'criterion 3' for lexical rules:

> Lexical rules … involve only NPs bearing grammatical relations to items in question.

(p.331). So he formulates the relationship in (57) as:

> … the lexical rule relating verbs to the corresponding *-able* adjectives identifies the subject of the latter with the direct object of the former …

(p.336). But, as observed in Anderson (1984: §3.2), the same relationship also involves 'intransitive' verbs and adjectives, as in (58) and (59):

(58)   a.   The solution can work
        b.   The solution is workable

(59)   a.   The rubber can perish
        b.   The rubber is perishable

And there are other *-able* adjectives that could correspond to either a 'transitive' or an 'intransitive', as shown by comparison of (60) and (61):

(60)   a.   The meeting day can be changed/varied
        b.   The meeting day is changeable/variable

(61)   a.   The weather can change/vary
        b.   The weather is changeable/variable

We have a familiar pattern: the argument of *-able* adjectives 'corresponds to' the 'object' of the 'transitive' and the 'subject' of an 'intransitive'. This is the distribution of O, the 'semantically most neutral case' (Fillmore 1968) – in (60-61) introducing the entity that can change or be changed. The generalisation invokes not grammatical relations but the O argument of the verb and the O argument of the adjective. Their distribution as 'subject' and 'object' of the verbal forms follows from this.

Again, we can, instead, invoke the 'unaccusative hypothesis' here (see e.g. Horn 1980). But again it is superfluous to do so. There are no motivations for attributing 'objecthood' to the subjects in (58), (59) and (61). The behaviour of these items follows from their independently motivated semantic relations. I am ignoring here other, minor patterns displayed by some *-able* adjectives (Marchand 1969: §4.2.1; Anderson 1984: §3.2); but these do not affect the argument.

Apparently more problematical for the 'case grammar' assumption that grammatical relations are not available to the lexicon are *-er* nouns in English such as those in (62):

(62)   a.   writer, murderer
        b.   walker, jogger

We have to distinguish these from nouns showing a number of other patterns in *-er*, such as the 'place-of-origin' nouns of (63):

(63)   Berliner, Londoner

What seems to characterise the pattern in (62), however, is noun-formation apparently based on the subject of a verb, whether 'transitive', as in (62.a), or 'intransitive' as in (63.b). This is how the relationship is characterised by McCawley (1968), Moravcsik (1978) and Aronoff (1980: §3.1), for example.

However, not all subjects are available for this formation. In (62) we have agentive subjects; and this seems to be the earliest pattern. In (64.a) we have subjects conforming to the pattern which are in some sense 'instruments' – or 'secondary', non-prototypical agents:

(64)   a.   cooker, container
        b.   believer, experiencer

In (64.b) the formation is extended to 'datives' – or in Fillmore's (1971) revised terminology, 'experiencers'. But we don't find comparable *-er* formations based on O. The examples in (65) are isolated and belong to a distinct pattern involving 'aspectual' properties:

(65)   goner, faller

A 'goner' is someone who has just died (or is about to have), and a 'faller' is a horse that has fallen in the course of a horse-race. Objectives are not susceptible to the *-er* formation exemplified by (62) and (64).

It is thus not very accurate or informative to interpret the formation in (62) and (64) as 'subject-based'; it is available to verbs which take arguments in a particular subset of semantic relations. By virtue of these relations the arguments contracting them normally occupy subject position in the verbal construction, given the subject-selection hierarchy, extended as in (27)'':

(27)''   A > D > O, > O

The D of *believe* and *experiencer* outranks the O that they also take. Subjecthood is contingent on the semantic relations present. And, as we have seen, not all potential subjects are eligible.

This account interprets the forms in (64.a) as non-prototypical As. Otherwise the hierarchy would have to be further extended (to include putative 'instrumentals') – though I shall argue later that there are no 'instrumental' subjects. Or we might interpret these formations as neither subject-based or A-based, but the product of a distinct process, involving the property of 'being used'. In either case, it remains misleading to couch these relationships in terms of reference to subject.

5.5 Raising and the derivative status of grammatical relations

Grammatical relations do not seem to be relevant to the lexicon, then. In a derivational syntax, however, the 'case grammar' claim concerning the relationship between semantic and grammatical relations is less interesting to the extent that subject formation is derivationally early; this limits the syntactic role of the semantic relations and enhances that of the grammatical relations. A 'case grammar' that envisages initial or derivationally early subject selection is minimally different from a non-'case grammar' which embodies UTAH, the 'uniform theta-assignment hypothesis' (Baker 1988: 46):

> *Uniformity of theta assignment hypothesis*
> Identical thematic relationships between items are represented by identical structural relationships between those items at deep structure.

(Compare its predecessor in 'relational grammar', Perlmutter & Postal's 1984 'universal alignment hypothesis'.) The position advocated in Fillmore (1977), in response to S.R. Anderson (1971), comes close to this. Anderson (1975, 1977: §1.8) argued that this was an unnecessary compromise – as emerges from what I have described in the preceding. As far as the *smear-paint* phenomena are concerned, the syntax refers to semantic relations and not to 'deep grammatical relations'.

The syntactic relevance of the semantic relations has already been illustrated by discussion of the Dutch 'impersonal' passive phenomena of (54). But let us look rather more explicitly at the relative syntactic roles of semantic relations and grammatical relations.

In the derivational grammars that developed from the 60's on a major part of the derivation of structure was assigned to a body of rules that applied cyclically. If one maintains this kind of framework, it is possible to show that subject formation is not pre-cyclic. Say subject-formation neutralises (the morphosyntactic expression of) semantic relations; there are cyclic rules that refer to these semantic relations. Thus, at earliest subject formation is cycle-final (or simply cyclic, if the cyclic rules are not extrinsically ordered). We can illustrate this via a consideration of what came to be called the rule of 'raising'.

We are concerned with the controversial history of the sentence types illustrated by (66):

(66) a.   Sheila/she seems to be a fraud
      b.   I believe Sheila/her to be a fraud

There is a familiar range of evidence showing that the *Sheila/she/her* element belongs semantically and syntactically in both cases with the subordinate (infinitival) clause. But syntactically it is linked also to the main clause containing the finite verb: most obviously, the position of this element and the varying morphology of the pronoun seem to reflect its syntactic status in that clause rather than the other. Postal (1974: chs.1-3) charts the early development of transformational analyses of these constructions, and the motivations offered (and he adds arguments of his own subsequently in the volume). Both of these sentence-types were considered to involve raising of the *Sheila* element from the lower into the upper clause, into subject position in one case, into 'object' position in the other.

In the relational grammar tradition (e.g. Perlmutter & Postal 1983) it is proposed, pursuing this kind of analysis, that in (66.a) the subject of the lower clause is raised out of that clause to

become the subject of the upper; whereas the subject of the lower clause is raised to be the 'object' of the upper. Further, these raised elements take over the grammatical relation borne initially by the clause out of which they are raised: the lower clause in (66.a) is initially subject of the main clause, and the element raised out of it becomes subject and displaces it; the lower clause in (66.b) is initially an 'object', and the element raised out of it displaces its original clause as 'object'. The raisings conform to the 'relational succession law' (variously named elsewhere), which requires raised elements to take over the grammatical relation of the construction out of which they are raised.

But, once more, appeal to such an arbitrary syntactic 'law' is unnecessary. We can achieve a simple generalisation with reference to semantic relations. Appeal to subject and 'object' in the main clause obscures this generalisation, and we require recourse to the 'law'. The raised element assumes an O relation, the 'semantically most neutral' relation, in the main clause. In (66.a) it becomes subject, there is no other candidate; but in (66.b) it becomes 'object', being outranked as subject by the 'dative'/'experiencer'. The distribution follows from the semantic relation. Some detailed alternative formulations are given in Anderson (1977: §2.8.2), (1986) and (1992: §3.5). Anderson (1992: §3.5) envisages the raisees as taking over the O relation of their original clauses. They are derived O's, which are not subcategorised-for. But I shall return to this.

That it is the subject of the subordinate clause that undergoes raising is consistent with subjecthood being assigned at the end of each cycle. Subjecthood is then available in subordinate clauses, clauses to which the cycle of rules has applied.

There is no motivation for regarding the two subordinate clauses in (66) as having initially two different grammatical relations – or indeed for regarding them as bearing any grammatical relation at all. The latter problem still arises if appeal is made to the 'unaccusative hypothesis'. In terms of it, both of the subordinate clauses are initial 'objects', and raising confers their objecthood on the raisees, which displace them. Again, this is superfluous. And it envisages a clause, the main clause, which initially has an object but no subject, contrary to the traditional assumption that objecthood is defined in relation to subjecthood.

The main tradition within transformational grammar abandoned any attempt to capture the generalisation underlying the obvious similarities between (66.a) and (b). A raising analysis of such as (66.b) was rejected. No empirical motivation has been offered for this. Rather, there has been offered a series of (sometimes ephemeral) theory-internal motivations. These include, at various times, the fact that a raising derivation for (66.b) would involve 'vacuous movement' (Chomsky 1972), and assumptions concerning 'θ-marking' and movement (Chomsky 1981: 99-130). A raising analysis of (66.b) would involve the recognition of a class of verbs that do not 'θ-mark' their objects, as well as verbs, like *Seem*, that do not 'θ-mark' their subjects. Adoption of an 'unaccusative' analysis of (66.a) would obviously swell the former set, thus rendering the assumption that absence of 'θ-marking' is limited to subjects yet more fragile. But the distribution of the raised arguments in (66) is highly reminiscent of 'unaccusativity' – unsurprisingly, given that both raisees are (derived) O.

A clear conclusion emerges from consideration of the relationship between relations of different sorts and the lexicon and the syntax: the lexicon makes no reference to grammatical relations, and the latter are derivative of semantic relations, which, unlike them, are basic to the syntax. There is thus no basis for Chomsky's (1995: 187) assertion that 'there is empirical justification' for an approach that includes the claim that access to the lexicon and to semantic relations selects a level identical with 'deep structure', at which can be defined 'deep grammatical relations'.

Chomsky points indeed to various problems that the postulation of 'deep structure' incurs (1995: 188). But the superfluity and capacity for obscuration of such a level were already evident two decades before this. However, two decades earlier transformational grammar was unwilling to countenance semantic relations as part of syntax. The position concerning the autonomy of syntax adopted by the 'new grammarians' lingered on in the transformational tradition.

5.6 Excursus on the tortuous history of 'thematic relations'

Semantic relations begin in the 70's to enter into accounts of transformational grammar. But the relations involved are not the 'cases' of e.g. Fillmore (1968) but the confusingly named 'thematic relations' of Gruber (1965/1976), which were introduced in order to articulate lexical structure, and have a role in stating 'selectional restrictions'. Jackendoff (1972: 33-4) assigns the 'thematic relations' a basically lexical role. He does also argue for their relevance to the formulation of some restrictions on syntactic phenomena, including passivisation; there are 'thematic constraints' on various syntactic phenomena. The 'constraints' proposed by Jackendoff are problematical (Anderson 1977: §1.4.3), however; and the syntactic role of 'thematic relations' seems to be at most peripheral at this point in the development of transformational grammar.

This is confirmed by the lack of attention given to them in textbooks produced on the basis of work of the 70's. Radford (1981), for instance, devotes only one tentative paragraph to them (pp.140-1), where he mentions for them only a lexical role. The evolution of the well-known Radfordian textbooks, indeed, provides a measure of the status of 'thematic relations' in the work of the years preceding their respective publications. Thus, by the time of Radford (1988), Jackendoff's arguments for 'thematic constraints' are (belatedly) presented, as well as some of Gruber's and Fillmore's observations concerning semantic relations and 'selectional restrictions' (§7.10); and presence of semantic relations is argued to contribute to the elimination of 'selectional restrictions' from the lexicon. Semantic relations are not part of 'syntactic constituency structure', but there are principles 'correlating' the two (§7.11). And, indeed, there is anticipation that subcategorisation for constituency may be predictable from the array of semantic relations taken by an item (p.384; cf. Chomsky 1986: 86). We are approaching acknowledgment of the UTAH. There is a final anticipation (p.392) that 'in Volume Two, we shall see that thematic constraints such as the THETA CRITERION and the PROJECTION PRINCIPLE have a fundamental role to play in the description of the syntax of a variety of constructions'.

Such envisaged roles for semantic relations are difficult to reconcile with the 'autonomous syntax principle' espoused earlier in the same volume (Radford 1988: 31):

> *Autonomous syntax principle*
> No syntactic rule can make reference to pragmatic, phonological, or semantic information.

(see Chomsky 1977: 42). It is perhaps not coincidental that in Radford (1997) the 'autonomous syntax principle' has disappeared from the index. One might perhaps be able to construe 'thematic constraints' as extra-syntactic filters. But the 'constraints' do not control 'surface' representations as such; rather, they determine the applicability of rules like passive.

In the absence of a 'Volume Two' to Radford (1988), Radford (1997) provides us with an idea of the role of the 'theta criterion' (and thus of semantic relations) in various syntactic restrictions (e.g. 'raising' vs. 'control' – pp.339-41; 'passive' – p.347). The 'projection principle', however, has also disappeared as such between the two volumes. But the essential function of semantic roles in the 'merging' of arguments with a 'lexical category' is described (Radford 1997: §8.4). There is, on the other hand, no role for 'deep structure' in the syntax, and mention of 'grammatical relations', 'deep' or surface', is entirely absent from the index, despite the alleged importance of subjects. We have lost 'deep structure', and semantic roles have been assimilated into the syntax, as Fillmore and others had advocated. Chomsky (1988: 104) envisages that 'in languages that lack actual case endings, prepositions are generally used to indicate case' (which comes close to the assumptions of a grammar of case of level 2). We still don't have here a unified 'grammar of case', however. – But, rather than our pursuing that, it is time to return to the development of 'case grammar' itself.

5.7 Conclusion: where we have reached

In pursuit of an understanding of the prolonged debate about 'deep structure', I have led us into other histories than that of 'case grammar'. Comparative histories are instructive, in themselves and in the light they throw on the phenomena that are compared; but it is time to return to our programme concerned with issues raised by early 'case grammar' proposals. Recall (31):

(31)   *Some issues raised by Fillmore's proposals:*
              i)   the representation of case relations and forms
              ii)   the rejection of 'deep structure'
              iii)   the identification of case and of individual case relations
              iv)   the transformational framework

We have reached issue (iii), which for a number of years attracted more attention than any of the others.

6 The identity of semantic relations

I think we can distinguish three main approaches that have been taken to identification of case and cases. One is atomistic, concerned with syntactic evidence for individual proposed putative 'cases'; this is what I have listed as (a) in (67):

(67)   *The identification of case(s)*
              a) distribution of individual semantic relations
              b) contrast and complementarity
              c) the content of case

The second kind of approach (b) appeals to the distribution of 'cases' with respect to the items which are subcategorised for them; with respect to their role in 'case frames'. The final approach (c) attempts to define what characterises the category of 'case' substantively. All of these have a contribution to make to our understanding; they are complementary. Let me in this chapter first exemplify (a) in (67), before moving on to (b). (c) will occupy the following chapter.

6.1 Syntactic criteria

Certain syntactic constructions depend on the presence of a particular semantic relation. These constructions are rather specialised; but this is not surprising given their restriction to particular circumstances, crucially the presence of a specific semantic relation. One such instance is exemplified in (68):

(68)   a.   Bill was cleaning the car ⎫
       b.   Bill was working   ⎪
       c.   ?*Bill was sleeping   ⎬ when I left, and later he was still at it
       d.   *Bill was feeling good   ⎪
       e.   *Bill was breathing   ⎭

The *be at it* pro-form for the progressive is normally available only under an agentive interpretation, such as is associated with the (respectively) 'transitive' and 'intransitive' sentences in (68.a-b). The O of (68.e) and even the D of (68.d) are not acceptable, even though they involve a human referent. (68.c) exhibits acceptability only under an abnormal, 'active' interpretation of the subject of *be sleeping* – e.g. if Bill was determined to have a sleep.

       Other distributional correlates of the semantic relations involve 'selectional restrictions'. A number of these are discussed by Gruber and Fillmore, for instance. Thus, an adverb like *(very)*

skilfully is normally associated with an A, as illustrated by (69), where the subjects in (a) and (b) are again As:

(69) a.   Bill performed (that)
      b.   Bill laboured
      c.   ?*Bill learnt (that)   } very skilfully
      d.   *Bill knew that
      e.   *Bill expired

(69.c) may be interpreted actively, say on the reading 'Bill got to know about that skilfully'; but often the subject is not interpreted as an A. (69.d-e) again involve human non-agents.

It might be objected – and, indeed, it has been – that (69) exhibits a purely semantic restriction and therefore does not relate to the syntax of semantic relations. This is to miss the point somewhat. These 'selectional restrictions' have to be associated with the relationship between particular syntactic categories; they express an inter-categorial relationship. Let me illustrate this.

Thus, as a rough approximation, the adjective *long* is normally predicated of nouns representing concrete entities which are oriented but not usually vertically oriented, as in (70.a) vs. (b-c), or representing an event that takes place through time, as in (70.d):

(70) a.   The table
      b.   *The woman
      c.   *The sphere   } is very long
      d.   The play
      e.   *The skill

The noun in (70.e) doesn't normally meet either of these criteria. The important point is that the 'selectional restriction' holds between two syntactic categories.

Consider (69) again in the light of this. The 'selectional restriction' holds between a manner adverb and what? The adverb is associated with an agent. But agency is not a property of the entities represented by nouns; to be an agent it is not enough to be human or animate, which are properties of some of the entities represented by nouns. So the 'selectional restriction' doesn't hold between adverb and noun. One possibility is to relate the 'selectional restriction' to the relationship between the adverb and the verb: the adverb requires agentive verbs. But this doesn't account for the fact that *very skilfully* is attributed not to the verb as such but to the manner of participation of one specific argument in the event denoted by the verb: agency – as opposed to agentive or actional – is not a property of the verb itself, either. The 'selectional restriction' holds between the adverb and semantic relations, the relations between verb and noun.

This suggests that semantic relations belong to a category that, like other categories, enters into 'selectional restrictions'. The category may be not be overtly expressed as such, as in (69) or (71.a):

(71) a.   That was performed very skilfully
      b.   That was performed very skilfully by the orchestra

But it may be given overt expression, as in (71.b). In this way, 'selectional restrictions' illuminate the syntax of the sentences concerned, in particular their categorial structure. I do not pursue (a) in (67) further. But we shall come back to further 'selectional' evidence.

6.2 Principles of complementarity and contrast

Fillmore's (1968a) formulation of what came to be called elsewhere the 'theta-criterion' underlies the principles invoked under (b) in (67):

> *Fillmore's proto-theta-criterion*
> Only one (possibly coordinate) token of each case is permitted per proposition (p.22).
> Each NP is associated with only one case label, such that in any proposition there is a one-to-one matching of C<ase> R<elation>s and NPs (p.24).

This can be the basis for the application of proposed principles of contrastivity vs. complementarity.

Given the coincidence between the formulation of Fillmore and the 'θ-criterion', the choice within the transformational tradition of Gruber's (1965/1976) notation (of 'thematic relations') over Fillmore's 'cases' becomes discrepant. Jackendoff (1972: §2.3) is at pains to point out that one (the?) advantage of Gruber's system is that in it 'noun phrases can function in more than one thematic role within the same sentence' (p.34).

Jackendoff argues that though the subjects in (72) share the role of 'Theme' (roughly, O), the sentence in (b) is ambiguous in a way that (a) is not:

(72)   a.   The rock rolled down the hill
         b.   Max rolled down the hill

Max in (72.b) may or may not be also be 'Agent'. On one interpretation it combines the roles of 'Theme' and 'Agent'. On both interpretations *Max*, as 'Theme', is the entity undergoing the movement, but on only one of them *Max*, as an 'Agent', instigates the movement as well.

I subscribe to the Gruberian position (see e.g. Anderson 1971b); specifically, I do not accept the second part of the criterion. But Chomsky, in adopting the 'θ-criterion' (1981: 39, n.14) as a whole, explicitly rejects Gruber's approach in favour of the Fillmorean one, apparently. However, he comments mysteriously on Jackendoff's interpretation of the agentive interpretation of (72.b): 'I will assume that such cases should be dealt with by modification of θ-role assignment rather than by modification of the θ-criterion, though it is not obvious that this decision is the right one'.

On the basis of his proto-theta-criterion, Fillmore (1971: §3(c)) suggests, for instance, that if the subject of a certain class of predicators shows systematic ambiguity apparently in semantic relation, a contrast in semantic relation can be posited. So, whereas the subject in (73.a) shares a putative semantic relation with that in (73.b), we can associate with it a further alternative that is not shared:

(73)   a.   This jacket is warm   P/I
         b.   This room is warm   P
         c.   I am warm   P/D

The interpretation in common between (73.a) and (b) is of 'warmth-possessor'; the subjects are P(laces) for Fillmore. The distinctive interpretation of (73.a) is of 'warmth-giver'. Fillmore labels the latter I(nstrumental). We might note that we can associate a further interpretative distinction to (73.c), involving whether the 'warmth possessed' is a physical or mental attribute: whereas (73.a) is either P or I, (73.c) is either P or D – or, as re-interpreted in this paper of 1971, E(xperiencer). We have provisional distinctions in semantic relation. Subject position involves neutralisation of these.

The proliferation of these distinctions elsewhere is intended to be checked by considerations of complementarity (Fillmore 1970: §3(d)), circumstances where possible distinctions in semantic relation can rather be ascribed to other elements in the structures, as in (74.a):

(74) a.   The ball rolled from the door to the window
      b.   The house changed from a mansion into a ruin

Here, semantic relations are in common, consistent with the case-marking; the difference between 'change-of-place' and 'change-of-class' relates to a concrete vs. abstract interpretation of the predicator (cf. Anderson 1970). There is no neutralisation of semantic relations.

      Application of this notion of complementarity also undermines, however, aspects of what Fillmore has to say about the subject of *warm*. He suggests that the subject of (75) shows a semantic relation distinct from those in (73), which he labels T(ime):

(75)   Summer is warm   T

But complementarity requires that we attribute the temporal interpretation to the noun. It represents a different kind of 'possessor-of-warmth', a different dimension for Place of location of the 'warmth'. Differences in the interpretation of what location involves in the two instances are complementary, and determined by the content of the noun.

      Indeed, to pursue this further, any alleged distinction between P itself and O in the subject position of *warm* seems to fall foul of complementarity. The distinction between (73.b) and, say, (76), if it instantiates an O, is that the noun in (73.b) is more typically construed as a location, as a place noun:

(76)   This stone is warm   O?

The contrasts in subject position of *warm* may reduce to O vs. D/E (one meaning of (73.c)).

      Other aspects of contrastivity are explored in Anderson (1977: §§1.7, 2.6). He suggests that adoption of something like Fillmore's 'proto-theta-criterion' means that if a predicator is subcategorised for more than one 'case' phrase, these phrases must realise different 'cases'; they contrast lexically. If two putative 'cases' do not contrast in this way – i.e. they never co-occur in 'case frames' – they are not in contrastive distribution. Only co-occurrence in the same 'case frame' ensures what we might call lexical contrastivity.

      Thus, trivially, the two arguments in (77) are distinct in semantic relation, whereas the subjects in (73.b) and (75), labelled P vs. T by Fillmore, do not involve a contrastive distinction in semantic relation:

(77)   The girl opened the door

Putative P and T co-occur in a sentence only if one of them is a circumstantial, an adjunct, not part of the 'case frame' or proposition, as in (78):

(78) a.   Summer was warm in Sweden
      b.   Sweden is warm in summer

Here we have one contrastive semantic relation in each sentence, a participant – in both instances P, or rather (I have suggested) O. The circumstantials are marked as P, as in the propositional Ps of (79):

(79)   a.   Bill is in London
        b.   The concert is on Tuesday

    Constraints on circumstantials involve other considerations, however – as raised e.g. in Fillmore's re-consideration of P and T (1971: §8). On this basis, too, the relations borne by the subjects in (73.b) and (75) are semantically the same: P for Fillmore, but probably just (given complementarity) O. There is no case for a 'case' T, on any grounds. Discussions of contrast and complementarity also underline the importance of semantic substance in evaluating distributional evidence, just as reference to phonetic substance is essential in the phonology. (Hence the suggested complementary/contrastive analogy with the phonology, introduced as such by Fillmore 1971.) We need to be able to locate the category to which a particular notion belongs; whether e.g. the Time/Space distinction is relational or nominal in its expression. The primary identification of 'cases' is by their contrastive substance. General applicability of this recognition is what underlies 'notional grammar'. – But that, once again, is to anticipate.

    Insufficient attention to complementarity and lexical contrastivity has led to a proliferation of 'cases'. Recognition of a further instance of this resolves many of the problems that have been attributed to one of Fillmore's proposed 'cases', I (see e.g. Dougherty 1970, Huddleston 1970, Chomsky 1972: §6.8.3). Despite its proposed status as a propositional 'case', there are no predicators that contain both A and I in their 'case frames', no propositions containing both. Thus, the final phrase in (80.a) is a circumstantial, absent in (77):

(80)   a.   The girl opened the door with the/a key
        b.   The key opened the door

Certainly, this is a circumstantial that requires the presence of an A in the proposition. But this, however it is to be expressed, is not unusual: cf. 'circumstantials of purpose' – e.g. with *in order to* – which also require a propositional A.

    The putative 'I' in subject position in (80.b) does not co-occur with a propositional A; they are mutually exclusive. Propositional 'I' and A share the semantic characterisation 'source of the action'. We differentiate between the two in that the human referent of the noun in (80.a) can display volition, intention in her action – though not necessarily. But this doesn't motivate the positing of a distinction in semantic relation here. We can recognise that the A in (80.a) is prototypical, in that it allows or even encourages these interpretational possibilities (volition etc.), as well as allowing modification by instrumental and 'purposive' circumstantials. These are all associated with the humanness of the denotatum. But the subjects in (80) are in both instances presented as sources of the action, with semantic relation A – even if we understand that the A in (b) is not the 'ultimate source' in the 'real world', but most likely should be interpreted as an 'intermediary'.

    Projecting the status of the *with*-phrase in (80.a) on to the subject of (80.b) ignores the fact that the same situation in the world can be conceptualised and represented in different ways. So that the optional phrase in (81.a) is a non-propositional A, that in (b) is a (non-propositional) 'instrument':

(81)   a.   The door was opened (by the key)
        b.   The door was opened (with the key)
        c.   The door was opened (with the key) (by the girl)

(80.c) has a succession of (non-propositional) 'instrument' and A. Whatever the appropriate analysis of such instrumentals might be, they are circumstantial only.

I note in passing that by describing the *by*-phrase in (80.a) as non-propositional I am again anticipating later developments in the analysis of passives. Some of the history of these is recorded in Anderson (1977: §3.3, 1997: §3.5).

The subject of (80.b) represents a type of non-prototypical A, alongside the subject of (82.a):

(82)   a.   The wind opened the door
       b.   The door was opened by the wind

There is no motivation for introducing a further semantic relation, F(orce), in this latter instance either (Huddleston 1970), or for its assimilation to instrumentals (Fillmore 1971: §5(b)). The 'displaced' F in (82.b) is marked with *by*, as a (non-propositional) agent.

6.3 Conclusion

We have looked at the kind of criteria that can be invoked in support of the positing of individual 'cases', and at various principles of contrastivity and complementarity. Implementation of neither apparatus discussed here has always been agreed on.

On the basis of such arguments and others, Cook (1977, 1979) envisages five propositional 'cases', which he presents as in (83):

(83)   (Experiencer)
          (Agent)   (Benefactive)   Object
                        (Locative)

The brackets indicate optional presence in a proposition; Cook assumes that the Object/O is obligatory (cf. Gruber 1965/1976; Anderson 1971: 37; Taylor 1972; Starosta 1988: §4.2.1.4); we shall return to this. But the three 'cases' presented vertically in (83) are regarded as mutually exclusive. This offends against lexical contrastiveness, however. And it does not seem to be correct. Consider, for example, (84):

(84)   Jeff derived considerable pleasure from the expedition

Here we seem to have, from right to left, a propositional Locative, an Objective and a Benefactive or Experiencer. The situation is a little more complex, then, though there is something to Cook's suggestion: these 'cases' are related in some way. This brings us on to (c) in (67), as will emerge eventually – indeed, in the course of the following chapter.

The combination of principles of (67.b) is distributionally based, though they also rely on semantic substance, semantic similarity. If appropriate, the combination should, when applied, lead to the establishment of a set of semantic relations, so that these also correlate with individual syntactic criteria. But in itself this provides no account of why the set is the size it is, why it comprises the semantic relations it does. And it still leaves some scope for the ex tempore proliferation of 'cases'.

7 Localism and the theory of case

Hjelmslev points out the unsatisfactory character of the lack of a theory of case (1935: 4):

> Délimiter exactement une catégorie est impossible sans une idée precise sur les faits de signification. Il ne suffit pas d'avoir des idées sur les significations de chacune des formes entrant dans la catégorie. Il faut pouvoir indiquer la signification de la catégorie prise dans son ensemble.

The mainstream of modern linguistics inherited no unified account of case. As we have seen, the dominant view was that there were two kinds of cases, the grammatical and the local or notional, as displayed in (4), which presents Holzweissig's interpretation of the early Indo-European languages:

(4)   a.   *grammatical cases:* accusative, dative, genitive
       b.   *local cases:* ablative, locative, instrumental

And observe again that nominative and vocative stand outside both of these divisions.

Hjelmslev himself re-introduced the localist tradition (1935/37), side-lined by the end of the nineteenth century. And he interpreted the localist theory of case in a very strong form, so that the content of case was articulated in terms of spatial dimensions: all the cases are 'local'. Anderson (1971b) argued that this offered the most promising theory of case, though his articulation of localism differs from Hjelmslev's. Some of the differences are contingent, depending on the derivational orientation of Anderson (1971b) and (1977). Others are more fundamental. Concern with localism will dominate our consideration in this chapter of (c) in (67), 'the content of case'.