ADJECTIVE MOVEMENT

G.G. Corbett
University of Surrey

The aim of this paper is to demonstrate the existence of a highly restricted movement rule which operates after agreement rules. Syntactic and semantic evidence is given, and the data are taken from Russian, French and English.

A frequent assumption in work on agreement, whether implicit or explicit, is that agreement operates within the smallest possible domain. Thus we assume subject-predicate agreement will operate in its smallest possible domain, the clause; that is, a predicate will agree with the subject of its own clause, rather than that of, say, a clause embedded below it. (One way this has been captured in transformational theory is by making subject-predicate agreement a cyclic rule.) Similarly, given that attributive agreement operates within the noun phrase (NP), in a complex NP we expect an adjective to agree with the noun in the NP immediately dominating it. Thus, in structure (1):

(1)

we expect the ADJ dominated by NP₀ to agree with the N similarly dominated, rather than, say, the N dominated by NP₁. A similar assumption is made in semantics; interpretation involves combining the meanings within constituents, beginning with the smallest constituents and working hierarchically to larger constituents. In the famous phrase:

(2) the pen of my aunt

'my' is interpreted as referring to 'aunt' rather than to 'pen'. With these assumptions in mind let us turn to data which appear to be inconsistent with them.

Russian

Most Russian numerals, when in the nominative (or accusative identical to the nominative), are followed by a noun in the genitive plural. Modifiers preceding the phrase stand in the nominative or accusative plural, while those immediately preceding the noun stand in the genitive plural.
For example:

\[(3) \text{ d\'ti} \quad \text{pjad'} \quad \text{xoro\'sik} \quad \text{stolov}
\]
\[(\text{nom.pl.}) \quad (\text{nom.}) \quad (\text{gen.pl.}) \quad (\text{gen.pl.})\]
\[\text{these} \quad \text{five} \quad \text{good} \quad \text{tables}\]

The phrases of particular interest have the following form:

\[(4) \text{ celyx} \quad \text{pjad'} \quad \text{\'cacosv}
\]
\[(\text{gen.pl.}) \quad (\text{nom.}) \quad (\text{gen.pl.})\]
\[\text{whole} \quad \text{five} \quad \text{hours}\]

The most common alternatives to celyx in these phrases are dobryx 'good' and polnyx 'full'. We would expect the preceding modifier in \((4)\) to be in the nominative, yet it stands in the genitive.

Any explanation of this apparent anomaly will depend on the postulation of a plausible structure for quantified expressions. The most promising suggestion is that of Perlmutter and Orošnik (1973:448-457): a structure consisting of two NPs, the second marked as genitive. It has been argued elsewhere (Corbett, 1978c:359-362) that a more general account of quantified expressions can be given if the genitive marker is not assumed to be present in underlying structure. The main reason is the considerable differences which exist between and within languages as to whether a genitive is required or not. For example:

\[(5) \text{ Danish: et glas vand}
\]
\[\text{cf} \quad (6) \text{ a glass of water}
\]
\[\text{pjad'} \text{ stolov (gen.pl.)}
\]
\[\text{cf.} \quad (8) \text{ five tables}
\]

We therefore postulate a simpler underlying structure \((9)\) for numeral phrases, and a rule of genitive insertion which operates on NP, under specified conditions, the specification varying from language to language:

\[(9)\]

The main factors which determine the applicability of genitive insertion in Russian are the 'nouniness' of the numeral and the case of the expression. The higher, nounier numerals (like \text{million}) always require genitive
insertion, whilst lower, less nouny numerals (like pjad') require genitive insertion only when they stand in the direct cases. (In the oblique cases numeral and noun stand in the same case: these forms would be difficult to generate if the NP were already marked as genitive as proposed by Perlmutter and Orešnik.)

The derivation of phrases like (7) is now possible: pjad' is dominated by NP, stol- by NP, the conditions for genitive insertion are fulfilled, NP is marked as genitive, and, after pruning of redundant nodes, phrase (7) results. The node immediately dominating pjad' is a problem: pjad' shows some features of adjectival behaviour, some of noun-like behaviour. As the treatment of such 'squishy' elements has received little attention we shall tentatively label such a node ADJ/N. If we now turn to the fuller phrase given as (3) the following underlying structure is postulated:

(10)

```
DET
| et-
NP_0

NP_1 [+nom]

NP_2 [+nom]

NP_3 [+nom]

ADJ/N

| ADJ

| pjad-
xoroš-

| [ +pl ]

stol-
```

Genitive insertion will apply, labelling NP_3 [+gen] and both adjective and noun will take this feature. The adjective will further agree with its noun in number. However, the agreement of sti is more difficult. Clearly it will agree with NP in case. While we might assume NP would be marked [+pl] this seems unlikely as numeral phrases do not necessarily take plural predicate agreement. It seems therefore that the head noun of the NP provides the necessary agreement feature. Pjad' cannot provide this feature - it is not specified for gender or number - therefore the N in NP is scanned. This must occur before genitive insertion operates. (In other Slavonic languages, for example Serbo-Croat, the opposite rule-order obtains. See Corbett, 1978a:10.) The rule-order must be:

1. attributive agreement: xoroš - marked as [+pl], sti - also marked [+pl] after scanning for a noun in the NP;

2. genitive insertion (marking NP_3).
This mechanism enables us to account for:

\[(11) = (3) \quad \text{ети} \quad \text{вень} \quad \text{xorоsих} \quad \text{столов} \]
\[(\text{nom.pl.}) \quad (\text{nom.}) \quad (\text{gen.pl.}) \quad (\text{gen.pl.})\]
these five good tables

It cannot, however, cope with:

\[(12) = (4) \quad \text{вель} \quad \text{вень} \quad \text{часов} \]
\[(\text{gen.pl.}) \quad (\text{nom.}) \quad (\text{gen.pl.})\]
whole five hours

The solution suggested is a rule which moves the adjective 
цельцы after it has obtained the features of number and case. 
The operation of the rule is indicated below.

\[(13) \quad \text{NP}_1^+ \quad \text{NP}_2^+ \quad \text{NP}_3^+ \]
\[(\text{+nom}) \quad (\text{+nom}) \quad (\text{+gen}) \]
\[\text{ADJ/N} \quad \text{ADJ} \quad \text{N} \]
\[(\text{+nom}) \quad (\text{+gen}) \quad (\text{+gen}) \]
\[\text{вень} \quad \text{цельцы} \quad \text{часов} \]

\[(14) \quad \text{NP}_1^+ \quad \text{NP}_2^+ \quad \text{NP}_3^+ \]
\[(\text{+nom}) \quad (\text{+nom}) \quad (\text{+gen}) \]
\[\text{ADJ} \quad \text{ADJ/N} \quad \text{N} \]
\[(\text{+gen}) \quad (\text{+nom}) \quad (\text{+gen}) \]
\[\text{цельцы} \quad \text{вень} \quad \text{часов} \]

This rule, which we will call ADJECTIVE MOVEMENT, allows us to maintain the constraints on agreement rules which we assumed to be valid.

There is further evidence to support it. Though this is less usual, the adjective may remain in the postulated underlying position:
(15) Yes't' polnyx raz
   (acc.) (gen.pl.) (gen.pl.)
six full times
   (Sol'nyicyn)

Both positions may, exceptionally, be occupied at once:

(16) celyx dva polnyx kodeksa
    (gen.pl.) (nom.) (gen.pl.) (gen.sing.)
whole two full codes
   (Sol'nyicyn)

Perhaps the most convincing example is the following:

(17) te poslednix tridcat' metrov
    (nom.pl.) (gen.pl.) (nom.) (gen.pl.)
those last thirty meters
   (Simonov, quoted by Gallis, 1947;72)

Here two modifiers appear before the numeral but in different cases. Te remains in its underlying position where it was marked as nominative while poslednix stood before the noun and gained a genitive marker before being moved. The structure of (17) may be represented as follows:

(18)

Before leaving the Russian data we should mention an alternative analysis. Crockett (1976:345-7) suggests that adjectives like celyx modify only the numerals rather than the whole phrase. It is difficult to see why they should therefore stand in the genitive rather than the case of the numeral modified. However, there is more concrete evidence which shows the proposal to be inadequate. It involves constructions with 'two', 'three' and 'four' in Russian. When they are themselves in the nominative (or accusative identical to the nominative) these require the
following noun to stand in the genitive singular (as in 16 above); this is a survival of the dual number. Adjectives modifying such a noun may stand in the nominative or genitive plural. Thus (19) and (20) are both grammatical:

(19) tri svobodnye nedeli
    (nom.) (nom.pl.) (gen.sing.)

(20) tri svobodnyx nedeli
    (nom.) (gen.pl.) (gen.sing.)
three free weeks

As has been shown elsewhere (Corbett, 1978b:260-2) the difference between sentences like (19) and (20) is that in (20) genitive insertion has operated while in (19) it has not. Now if adjectives like celyx modify the numeral, then the case of the following adjective should have no effect and both (21) and (22) should be grammatical:

(21) *celyx tri svobodnye nedeli
    (gen.pl.) (nom.) (nom.pl.) (gen.sing.)

(22) celyx tri svobodnyx nedeli
    (gen.pl.) (nom.) (gen.pl.) (gen.sing.)
whole three free weeks

The fact that (21) is ungrammatical is sufficient to disprove Crockett's suggestion. In the movement analysis the ungrammaticality of (21) is expected: if genitive insertion has not occurred, then there is no way in which celyx could have acquired a genitive marker before movement. On the other hand, (23) is grammatical:

(23) celye tri svobodnye nedeli
    (nom.pl.) (nom.) (nom.pl.) (gen.sing.)
whole three free weeks

Here genitive insertion has not operated and so celye stands in the nominative.

We conclude that Russian provides good syntactic evidence for a rule of ADJECTIVE MOVEMENT, which allows us to maintain the constraints on agreement rules which we assumed to be valid. We now turn to French, which also provides good syntactic evidence for such a rule.

French

The French evidence concerns numeral phrases including mille 'thousand'. Mille takes masculine agreement:

(24) vingt et un mille livres de rente
    (masc.) (fem.)
twenty-one thousand pounds income

(Grevisse, 1964:340)
Now consider:

(25) huit mille bonnes livres de rente
     (fem.pl.) (fem.pl.)
   eight thousand good pounds income

(Molière)

(26) vingt-deux bonnes mille livres de rente
     (fem.pl.) (fem.pl.)
   twenty-two good thousand pounds income

(Labiche, both quoted by Grevisse, 1964:322)

Example (25) is analogous to (15): the adjective stands before the noun and agrees with it, in this instance in number and gender. In (26) it stands before mille, yet still agrees with livres. We cannot claim that mille is masculine: as French has only two genders, masculine singular is the default agreement for unspecified elements and this is the agreement we find in (19). Clearly, however, in (26) bonnes does not agree with mille but with livres. The relationship between examples like (25) and those like (26) can be captured by a rule of ADJECTIVE MOVEMENT like that postulated for Russian. So far we have considered syntactic evidence; we now turn to English which provides semantic evidence for the rule of ADJECTIVE MOVEMENT.

**English**

It will be recalled that we made the assumption that semantic interpretation, like agreement, works within the smallest possible domain. Consider the phrase:

(27) a tasty bag of fish and chips

'tasty' is to be interpreted within the domain of an NP: either 'a tasty bag' or 'tasty fish and chips'. Normally, the second interpretation is the one required. If we are to maintain this position we must argue that in underlying structure 'tasty' is a constituent of NP, and that it is moved to NP, by ADJECTIVE MOVEMENT. The English rule applies to more adjectives than that of Russian or French. It is favoured with set expressions:

(28) a nice cup of tea

(29) a cup of nice tea

Here movement is almost obligatory whereas with a 'new' expression it is optional:

(30) an excellent cartload of spinach

(31) a cartload of excellent spinach
However, movement is restricted to qualitative adjectives; relational adjectives may not be moved:

(32) *a China cup of tea (ungrammatical if 'China' refers to the tea)

The best evidence concerns phrases which are ambiguous depending on whether an adjective has been moved or not:

(33) a real piece of Dundee cake (as opposed to the fake stuff they sell in supermarkets); 'real' has been moved.

(34) a real piece of Dundee cake (as opposed to the miserable portion you usually get from Aunt Mary); no movement.

The evidence from English is solely semantic. Even if adjectives agreed in English it is unlikely that we would thereby gain extra syntactic evidence. Consider (35), the Russian equivalent of (28):

(35) vkusnaja yaška čaju
(fem.sing.nom.) (fem.sing.nom.) (masc.sing.gen.)
tasty cup of tea

To maintain our semantic assumption we must claim that here too the adjective has been moved. Unlike the examples discussed previously, it agrees not with the head of the NP from which it was moved but with the head of its new NP. The reason for this difference in behaviour is not hard to find. Neither piat' nor mille is fully specified syntactically; neither has gender or number. When an adjective which is fully specified for agreement is moved into the same NP, it retains these features. However, an adjective moving into the same NP as a noun which is fully specified syntactically is in complete 'disagreement' with its new head noun and so is made to agree with it. Having considered the mechanics of the rule, let us now consider why it should exist at all.

The motivation for ADJECTIVE MOVEMENT

The English examples above suggest that set expressions force the adjective to move. The more like a composite noun the expression is felt to be, the more likely adjective movement. Similarly, numeral and noun behave, in surface structure, like a single NP and the removal of internal adjectives is understandable. Thus part of the motivation seems to be the production of a desired surface structure with adjectives before their (composite) nouns.

Production of a desired surface structure alone is insufficient motivation; not all adjectives are moved. The type of adjectives involved suggests emphasis as a motivating
factor: the Russian dobryx, celyx, polnyx, and the French bonnes are purely emphatic, while the English adjectives most frequently moved tend to be emotive ones used for emphasis: real, proper, genuine, fantastic, etc.

This double motivation (production of a desired surface structure and bringing emphatic adjectives to a position of prominence) appears to be sufficient to account for the examples discussed.

Conclusion

It has been argued that we may maintain our assumptions about agreement and semantic interpretation, providing we postulate a rule of ADJECTIVE MOVEMENT. There is good evidence for such a rule and some indication as to its motivation. It is unusual in that it operates after agreement rules but, unlike scrambling, is sensitive to the category of the element moved and to the configuration into which it is moved. As it is such a late rule, its formulation does not depend on our assumptions as to the source of adjectives; indeed it seems likely that adjectives like cely.j and vkusny.i have very different sources but the rule applies to both. The important thing here is that the postulated underlying orders are normally grammatical even if less natural. We are therefore justified in claiming that phrases which differ only in that in one ADJECTIVE MOVEMENT has applied while in the other it does not have essentially the same underlying structure (possibly differing only by the presence or absence of a marker for emphasis on the adjective). Our postulated rule does not therefore stand or fall on the way in which adjectives are originally introduced into NPs. Further speculation on the nature of ADJECTIVE MOVEMENT must await more data. 3 Though the evidence presented is incomplete, it is claimed that it is sufficient to show that such a rule must be added to the list of 'possible rules', that the rule operates with the same motivation in different languages, and that it merits further research.

FOOTNOTES

1 The numeral tri and the feminine noun nedelja combine to give phrases like (19) and (20) a roughly equal frequency of occurrence. See Corbett (1978a:61-2) for statistics.

2 I am grateful to several informants for these data, especially to N. Bokov and A. Nakhimovsky for eliciting responses from their compatriots as well as giving their own judgements.

3 It may be that a similar rule accounts for the following Uzbek data (Sjoberg, 1963:140). Adjectives can be moved in front of /bir/ 'a', 'one' to emphasise them:
(i) /bir qiz/ a girl

(ii) /guzal bir qiz/ beautiful a girl (a very beautiful girl)

(iii) /bir mačit/ a mosque

(iv) /katta bir mačit/ large a mosque (what a large mosque)

REFERENCES


Corbett, G.G. (1978b) Apposition involving dva, tri, četyre in Russian - a solution to Worth's riddle, Quinquereme - New Studies in Modern Languages, 1, 258-264

Corbett, G.G. (1978c) Universals in the syntax of cardinal numerals, Lingua, 46, 355-368


Gallis, A. (1947) Tallordenes syntaks i Russisk, Festskrift til Professor Olaf Broch, Oslo, 63-75

Grevisse, M. (1964) Le bon usage, 8th rev. ed., Gembloux, Duculot
