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Agreement Features: Layers or Tags?*

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Among the many issues in morphological theory considered by Anderson (1986) is the question of how best to represent multiple agreement features on a single constituent - how, for instance, to represent the fact that a single V might exhibit morphological marks conveying information about both its subject (SU) and its direct object (DO) and so must bear distinguishable features for the relevant categories of its SU and DO. The position taken by Anderson, here and in other papers over the past decade, is that representations should distinguish such features via a scheme of *layering*, according to the following principle (cited here as given in Anderson 1986): 'When a rule assigns features from a paradigmatic dimension D to a morphosyntactic representation R that already contains values from D, the result is that the previous values are made hierarchically subordinate to the new values.'

Let F_{SU} and F_{DO} stand for the agreement features on V for SU and DO, respectively, and G for other, non-agreement, features associated with V. Then on the layering proposal, assuming that 'a rule of *object agreement* applies first and is followed by a rule of *subject agreement*' (Anderson 1986), intransitive and transitive verbs have the representations in (1).

(1) a. intransitive: $[G, F_{SU}]$
b. transitive: $[G, F_{SU}, [F_{DO}]]$

In representations like these, which features agree with the SU and which with the DO is not represented directly. Instead, SU features can be picked out as those on the top layer, DO features as those on the layer below the top. In contrast, a number of linguists--among them me, in Zwicky (1986)--have proposed systems of representation in which grammatical relations are *tagged* directly. On this view, intransitive and transitive verbs have representations along the lines of those in (2). (This is not my actual proposal, but the details are not important here.)

(2) a. intransitive: $[G, F_{SU}]$
b. transitive: $[G, \text{SU}:F_{SU}, \text{DO}:F_{DO}]$

At first glance, neither approach would appear to have a clear advantage; the innovation of feature layering is balanced by the innovation of tags referring to grammatical relations. The layering proposal must stipulate that the DO features are assigned to V before the SU features are, but this might reasonably be taken to be a consequence of the fact that DO is an 'internal argument' of V and is more closely bound to it syntactically than its 'external argument', SU. (Though I must point out that this rule ordering will not follow automatically in approaches to agreement that rely entirely on conditions requiring feature identity between certain sister-sister and mother-daughter pairs of nodes, as in GPSG.)

Anderson (1986) observes that the layering approach seems to have a notable advantage in the way it treats agreement with ABs (absolutives), a phenomenon which is not unusual in languages with complex morphological systems and which can co-occur with SU and/or DO agreement (as in the Kubachi Dargwa data Anderson cites).

An argument that is a nuclear term (SU or DO) is ER (ergative) if it is SU of a transitive verb, AB otherwise. Anderson notes that in (1) the features agreeing with AB are simply those on the *lowest* layer: F_{SU} in (1a), F_{DO} in (1b). SU of transitive and DO of intransitive thus can be viewed, according to Anderson, as forming a natural class in the layered representations. In contrast, given the tagged representations, which features count as AB must be stipulated.

Now the universe of discourse here is very small--it comprises only three individuals, SU of intransitives, SU of transitives, and DO of transitives--so that there is no way to tell whether the fact that SU of intransitives and DO of transitives are treated similarly in some way is an elegant prediction of the framework or merely an accident. We need to expand the universe of discourse.

In this light, consider the fact that agreement with ERs is also not unusual. Yet the agreement features for an ER are not picked out by any simple property of the representations in (1). At best, they are the agreement features in the top layer of a representation with at least two layers, a characterization that is just as stipulative as characterizations based on tagged features.

Next, a peculiar consequence of the layered treatment of ER agreement is that a language with ER agreement would have to have an object agreement rule, whether or not there was any morphological manifestation of DO features on V. To see this, note that the ER features are distinguished from the features agreeing with an intransitive SU only by the appearance of an extra layer of features in the former configuration.

Third, consider the possibility that a language has both agreement of transitives with DOs (or with ERs, given the observation of the previous paragraph) and also agreement of intransitives with features of oblique arguments (instrumentals or benefactives, for instance). Then there would be two distinct ways in which two-layer representations could result--one for transitives, with SU and DO features represented, and one for intransitives, with SU and oblique complement features represented--and the layered representation cannot distinguish the two situations except by reference to transitivity.

Finally, consider *ditransitive* verbs in a language that has both AB agreement and agreement with IOs. IO is not a nuclear term, and so far as I know it never plays a role in AB agreement. Then in order to preserve Anderson's generalization that AB features are represented on the lowest layer, ditransitive verbs would have to have the feature complexes in (3).

(3) ditransitive: $[G, F_{SU}, [F_{IO}, [F_{DO}]]]$

That is, it must be stipulated that DO agreement universally precedes all other agreement rules.

So far as I can see, the order of agreement marking Anderson requires here--DO, IO, SU--doesn't follow from any general principle. It is not the Keenan-Comrie (1977) hierarchy of NP accessibility (this is SU, DO, IO), nor is it the hierarchy of agreement controllers (which is also SU, DO, IO, since if DO controls agreement, so does SU, and if IO controls agreement, so does DO). It is not the order of argument combination assumed by categorial grammarians (see Dowty 1982), which is the reverse of the Keenan-Comrie hierarchy--IO, DO, SU. And it cannot be claimed that DOs are universally more closely bound syntactically to their Vs than IOs are; this is not true for English constructions like *give the people a surprise*, for example.

The upshot is that Anderson's treatment of AB agreement, with its requirement that DO agreement marking come first and SU agreement marking last, is just as stipulative as the tagging approach, with its specification of AB and ER in terms of other primitive concepts.

I conclude that layering has no advantage over tagging, in fact that it has a number of problematic consequences. One might have expected this at the outset, since there is no reason to think that 'lowest X' or 'highest X' (or for that matter 'odd-numbered X' or 'prime X'), defined with respect to some scheme of representation, will play a significant role in the substantive theory the scheme was devised for. To think otherwise is to expect the representations to have a life of their own, and that is mere symbol magic.

Consequently, I do not place any significance on the fact that the layering treatment of AB agreement can be mirrored within the tagging framework, mirrored in fact by incorporation of part of the Keenan-Comrie hierarchy. Suppose we assign the index 1 to SU and 2 to DO, thus reflecting the position of these grammatical relations on the hierarchy (and also following the practive of relational grammarians). Then the AB features of a V are those tagged by the numerically highest index within the V (1 for an intransitive, 2 for a transitive). This proposal preserves Anderson's 'generalization' about ABs, but it also reproduces all the problems with the layering treatment of AB agreement detailed above.

Note

*This is the version of 5 May 1986.

References

Anderson, Stephen R. 1986. Inflection. Paper presented at Milwaukee morphology symposium, and to appear in the proceedings of that conference.

Dowty, David R. 1982. Grammatical relations and Montague Grammar. In Pauline Jacobson and Geoffrey K. Pullum (eds.), The Nature of Syntactic Representation (Dordrecht: D. Reidel), 79-130.

Keenan, Edward and Bernard Comrie. 1977. Noun Phrase accessibility and Universal Grammar. LingI 8.62-100.

Zwicky, Arnold M. 1986. Imposed versus inherent feature specifications, and other multiple feature markings. To appear in Indiana University Linguistics Club Twentieth Anniversary Volume.