Remarks on Agreement and Incorporation Phenomena

Stephen R. Anderson
Yale University

In previous work (see Anderson 1992 and references cited there), I have developed a particular approach to the issue of “Lexicalism” in syntax. I have argued for a view of the relation between morphology and syntax on which a specific kind of feature complex (the Morphosyntactic Representation, or “MSR” of a form) constitutes the only interface between morphological and syntactic structure. The syntax, on this view, does not manipulate actual morphological elements, but only the featural content of the MSR of a form. Further, the range of possible manipulations of features within the syntax is constrained by a principle of Monotonicity which limits such manipulations to the addition of features to an existing MSR. In turn, the morphology of a form can only be affected indirectly by the syntax, to the extent that rules of word formation depend on specific features in the MSR. Apart from these effects, the syntax has no access to morphological structure, and the morphology similarly has no access to syntactic organization. While a variety of (quite distinct) positions have been characterized as “Lexicalist,” it is this very narrow (but not absolute) limitation on the interaction of word form and syntactic structure that I will regard as the most restrictive form of lexicalism that can plausibly be maintained. For further discussion, see Anderson 1992.

In this paper, I will discuss a rather different view of the relation between these two components, that of Mark Baker as presented in his recent book (Baker 1995). That book presents a detailed analysis of the syntax and inflectional morphology of Mohawk, comparing it with a number of rather diverse languages that Baker feels have something significant in common with Mohawk precisely in the interaction of morphology and syntax. The theory Baker assumes involves rather free access in the syntax to parts of words, and also the formation of words in the syntax by syntactic (head) movement processes, and is thus quite different from the view I have just outlined. Accordingly, it is interesting to ask what would be involved in deriving the facts Baker discusses within a lexicalist framework. The exploration of these problems will take us into a variety of domains of grammar, and will lead to proposals concerning the general nature of agreement relations, among other issues. These points do not arise centrally from the analysis of clitics, but an understanding of the proposals below is important to the conception of (especially pronominal) clitics discussed in various papers in this volume.

1 The Polysynthesis Parameter and the Grammar of Mohawk

Baker (1995) builds his analysis on a characterization of a class of languages he calls polysynthetic, where his usage of the term is rather non-traditional. The rather loose sense of “polysynthesis” in traditional grammar is little more than that of “having really complicated words, with lots of things present in a single word that would correspond to separate syntactic elements in more familiar languages.” Baker, in contrast, uses the term in a rather specific sense to refer to a class

*The work represented here was supported in part by grant number SBR–9514682 from the US National Science Foundation to Yale University. This paper has benefited from discussion in seminars at Yale during the past several years. I am especially grateful to the members of my seminar on Clitics at Yale during 1996–97 (David Harrison, Lizanne Kaiser, Matt Richardson and Jennifer Vanloon), some of whom also participated in a seminar devoted to a prepublication version of Baker 1995 that was kindly provided to us by Mark Baker. Their comments and criticisms have been very helpful.
of languages that display the characteristics in (1) below. These represent a set of properties that are claimed to go together and all to follow from a single basic parametric choice within Universal Grammar.

(1) a. “Rich” obligatory agreement of the ‘head-marking’ sort (cf. Nichols 1986);
   b. “Robust” Noun Incorporation (productive, referentially active; cf. Mithun 1984);
   c. Free order of sentence constituents;
   d. Free phonologically null arguments (‘pro-drop’)

This is a sub-set of the languages that have been called ‘non-configurational’ (cf. Hale 1983), and Baker wants to claim that they are characterized by a single basic property. This can be stated relatively informally as a parametric choice which defines the class of languages in question, or somewhat more explicitly as a requirement that must be met within the grammars of such languages:

(2) **Polysynthesis Parameter:** Every argument of a head element must be related to a morpheme in the word containing that head.

**Morphological Visibility Condition (MVC):** The only way a phrase can be ‘visible’ for θ-role assignment is if it is co-indexed with an element in the head word via either agreement or incorporation.

Mohawk and languages like it are subject to the condition in (2); English and other languages are not. In some languages, only the ‘agreement’ part of the MVC may hold, and not the incorporation part: that produces another sub-set of non-configurational languages, perhaps including Algonquian, Navajo, Warlpiri and others. Baker has little further to say about this case, and it will not be addressed here.

To see how this is supposed to work, we first have to explore the syntax of polysynthetic languages, using Mohawk as the typical example. Baker argues that Mohawk represents a language type where all of the actual argument positions (at least in S-Structure) are filled by pro (or t, in the special case of wh-movement, or a complement S). Overt NP’s do not appear in A-positions, but rather as adjuncts adjoined outside of the nuclear clause (or in the case of wh-expressions, in COMP).

This is a variant of a traditional line recently revived by Eloise Jelinek (1984 and elsewhere): she argues that the agreement material contained within the Verb in a non-configurational language actually constitutes the Verb’s argument(s), rather than merely an index of the argument(s). Accordingly, any overt NP expression referring to an argument is just a sort of appositive expression. Such a language actually has no A-positions in syntactic structure, on this approach, apart from the the Verb-internal agreement morphology. Baker’s line is similar in treating overt NP’s as appositional adjuncts rather than actual arguments, but it allows for a much more conventional notion of syntactic structure, since it posits actual structural A-positions of a standard sort, even if these are uniformly filled by empty pronominal elements. As a result, it brings the proposal into a context where a good deal of more or less well established syntactic argumentation actually bears on it, in contrast with Jelinek’s analysis.

The claim that A-positions in a polysynthetic language (one subject to the MVC as in (2)) are uniformly filled only by empty pronominals (perhaps including traces) follows from the MVC itself is not, perhaps, self-evident. Baker’s reasoning is approximately as follows: The MVC guarantees that for each argument, there will be a Verb-internal element (agreement morpheme or incorporated N), because otherwise the argument could not be assigned a θ-role and would thus fail to meet the θ-criterion. Now if we say further that these Verb-internal elements absorb Case, then their presence
will ensure that no phonetically non-null NP’s could appear in A-positions in S-structure, because there would be no Case to assign to such an element, and it would thus violate the Case-filter.\(^1\)

As will be evident, this account requires as a stipulate the claim that the relevant Verb-internal elements (such as Agreement) absorb Case, since that property does not seem to follow from anything else (and of course agreement does not always absorb Case in all languages). Having said that, however, the only elements that will be able to appear in A-positions are those that do not require Case: specifically, phonologically null elements like pro or t (trace).

Let us Ignore the incorporation case for the moment. We can now see that in such a language, all A-positions will necessarily be filled by null pronominals of one sort or another. An overt NP\(^2\) expression can only appear as an adjunct, outside the core of the clause and licensed separately from the A-position itself. Free pro-drop then corresponds to the fact that such adjunct expressions are always optional, and when they are absent, there is nothing but the phonetically null pro related to a given argument of the Verb. Free constituent order corresponds to the fact that adjuncts are freely ordered with respect to one another.

The logic above is supposed to establish that the properties in (1) above go together, and are mutually implied by way of the MVC. Unfortunately, the connections among them are not so clear. Kaiser 1997 establishes that for one of Baker’s candidate polysynthetic languages, the properties which are supposed to be accounted for by the MVC are present, but on the other hand, overt NP’s occur configurationally in A positions. If that is true, the MVC cannot have Baker’s proposed clause structure as a consequence. Despite this evidence that the connection between (1) and (2) does not have the character Baker attributes to it, however, we agree with Baker about the clause structure of Mohawk, and it is the consequences of that structure that interest us here, rather than the principle(s) from which it might follow.

Baker argues in considerable detail that overt NP’s in Mohawk do not occupy clause-internal A-positions, but rather are adjuncts occupying clause-external A-bar positions. The details of his arguments are interesting, but not essential for our purposes: I have included a summary of some of Baker’s point as an appendix to the present paper, and of course the interested reader can consult Baker’s original work. For the remainder of the present discussion, let us simply assume that the proposed clause structure can be justified.

2 The Nature of Agreement Relations

In Mohawk, then, argument positions are in general occupied by phonologically null pro elements, and overt NP expressions systematically occur in adjoined (or dislocated) positions. This accounts for the basic non-configurational facts: adjoined expressions are non-obligatory, and the order of adjunction is non-significant. The latter is a bit of a stipulation, but a plausible one.

A key role in Baker’s explanation is played by the assumption that Agreement elements in Mohawk absorb the structural Case which the Verb would otherwise assign. This is obviously a fact about Mohawk, at least in part, since agreement is not universally incompatible with the appearance of NP’s in A-position. Something extra thus needs to be said. An alternative to Baker’s assumption would be simply to say that Mohawk Verbs do not assign structural Case at all — or rather, that the only principle of structural Case assignment in the language is the one licensing NP’s in adjoined position. Mohawk Verbs do, however, sub-categorize A-positions, which can then only be filled by pro with some appropriate set of features (in this language, [±me], [±you], [±sg], [±pl], [±masc], [±fem], [±zoic], where dual = [−sg, −pl] and neuter = [−masc, −fem, −zoic]).

\(^1\)How these NP’s eventually do get assigned Case in adjunct position is not discussed by Baker, and indeed the assignment of Case to adjuncts is largely ignored in the literature. We assume that either (a) the Case filter does not apply to adjuncts, or (b) adjuncts get Case automatically by virtue of position.

\(^2\)For expository purposes, we ignore the distinction between the NP and DP analyses of nominal expressions (see Abney 1987) and refer to such expressions uniformly as NP’s.
By virtue of the MVC, A-positions must also be indexed in the Verb by agreement. The relation involved, according to Baker, is one of co-indexation. He believes that what is at work here is the presence in syntactic representations of functional categories (AGR) which bear indices, where these are subsequently incorporated (via adjunction) into a single word with the head Verb, in order to satisfy the MVC.

The notion that Agreement relations are mediated by functional elements (AGR$_S$, AGR$_O$, etc.), each of which projects a full phrasal structure and which enter into some sort of “checking” relation with an NP in their Specifier, has become a staple of the generative syntactic literature over the years since Pollock’s (1989) argument for the structural decomposition of the functional content of a clause’s inflectional material. More recently, however, a number of syntacticians have proposed structures of a rather flatter sort, with fewer syntactically autonomous functional heads: in particular, without AGR heads (e.g., Chomsky 1995, chap. 4, Williams 1994 and elsewhere). On such a view, the nature of Agreement might plausibly be that of a specific rule of grammar: a rule which establishes an agreement relation directly between an agreeing element and some other phrase in its (local: cf. Anderson 1992, pp. 103ff.) environment.

If we believe that agreement is not an independent functional category, but rather the consequence of a grammatical rule, we must clarify the nature of this rule. Since it operates over a syntactic structure, it must be a syntactic rule; but since it has consequences for the overt morphological form of the agreeing element (at least in the general case), it must operate within the limitations on such effects imposed by the lexicalist hypothesis as interpreted above. The morphological effect, accordingly, must follow from an operation that adds features to the Morphosyntactic Representation of the agreeing word, generally by copying some set of features from an argument to the head.$^4$ As a result, the MSR of the predicate will contain those features, and they can trigger the introduction of overt morphological markers in the PF derivation of the appropriate word form.

If this were the end of the story, we might expect the existence of a grammatically enforced relation of Agreement to have consequences for the form of the agreeing element, but no direct consequence for the syntax itself. If that were true, of course, this relation could not play the rôle it apparently needs to in Baker’s account of Mohawk and other “polysynthetic” languages.

We might say that agreement rules come in two flavors. In some cases, an agreement rule simply adds agreement features to the Morphosyntactic representation of the agreeing element, merely “registering” $^5$ In other cases, however, an agreement rule can also establish a relation of co-indexation between the argument position in question and the MSR itself. Such a relation is obviously very similar to what Baker assumes, except that the co-indexation is not with a ‘morpheme’ internal to the Verb, but rather with a sub-set of the featural content of the Verb’s MSR. In Mohawk, then, we could say that agreement is of this second, co-indexing sort. Where some _pro_ is co-indexed with a layer of agreement features, the two must agree in those features.

Now suppose we take seriously the fact that, as a result of agreement, the Verb (though its MSR) is co-indexed with its A-positions. Let us further assume that the resulting indexed MSR is inherited by the various projections of the Verb. This will clearly allow the MSR to appear in a position which dominates the VP-internal arguments of the Verb, but the status of the subject is less clear. We clearly need to be able to establish an indexed agreement relationship between a Verb and its subject, so the issue arises of how to do that on the line suggested here.

---

$^3$The processual metaphor of copying is not essential here: some other mechanism that makes sure the relevant featural identity obtains might work as well. On the other hand, if the proposals defended in Anderson 1992, pp. 92ff. about the ‘layering’ of MSRs are more or less right, multiple agreement with the same predicate will apparently be implemented more economically as a set of processes that apply in sequence.

$^4$As argued by many authors (including e.g. Corbett 1986 among other sources), the relation between the features reflected by an agreeing element and those of the item it agrees with may be somewhat more complex than simple identity. We ignore those complications here.

$^5$This is a term originally introduced — but never developed — for such agreement relations by David Perlmutter and Paul Postal in their lectures on Relational Grammar at the 1974 Linguistic Institute.
What is the maximal projection of V? This is generally assumed to be VP, a constituent properly included within the structure of the clause, where the clause itself is taken to be IP, the projection of an inflectional element I. One possibility is to adopt the hypothesis that subjects are base generated within the VP, as proposed by a number of authors (e.g., Koopman & Sportiche 1991). In that case, the subject position — or at least the foot of the chain including the subject — would be within the domain of the Verb’s MSR as inherited by its maximal projection, VP.

Alternatively, we might adopt Grimshaw’s (1991) notion of the “extended projection” of an element, and say that the Verb’s MSR is inherited through its extended projection — which would then include the dominating IP. If we adopt a maximally flat structure, we might well say that these are equivalent: if there is no distinct structural constituent I, but rather the functional content usually assigned to this head (or cluster of heads) is treated as a set of features on the clause as a whole, then IP might be regarded as being simply a VP with associated features such as Tense and Agreement. Whichever of these approaches we adopt, however, the mechanism of featural inheritance through the (possibly extended) projection of a Verb can suffice to establish the necessary relation between the Verb’s MSR and the position of the subject (as well as other associated A-positions, of course).

Now whenever the relation of agreement with a given A-position in a language is of the “referential” sort (true Agreement, as opposed to mere Registration), the appearance of an overt nominal expression in the corresponding A-position ought to produce a condition C violation, since the nominal would then be bound within its governing category (by the co-indexed MSR). This would exclude both R-expressions and lexical pronominals, but might be taken not to exclude empty pronominal elements (pro). In this way, we could derive the exclusion of overt nominal expressions from A-positions from the referential nature of agreement, without further Case-theoretic stipulation. The difference between a language like Mohawk, where overt NP’s are uniformly excluded from all A-positions, and other languages that permit explicit arguments then follows from the characterization of Mohawk agreement as pervasively referential in character.

On this view, phonetically null pronouns are associated with co-indexing agreement, which we can regard as serving to ‘identify’ them. Indeed, we might further suggest that languages never contain lexical null pronouns: the only way A-positions can be phonetically unfilled is when lexicalization is blocked in association with referential, identifying agreement.

We can expand this account to get a sort of typology of argument-agreement relations. English or French represent one extreme, where agreement is always limited to Registration, i.e., non-co-indexing. As a result, A-positions in these languages are never required (or indeed allowed) to be empty. In Italian or other classic pro-drop languages, where the agreed-with position can be optionally empty, we can say that this represents an option in the way the rule of agreement works: it always copies the features of the subject, and it may optionally also co-index. Where co-indexation occurs, the position in question (that of the subject, in Italian; other A positions as well in a language like Georgian) must be left unlexicalized, since it is already identified by the Agreement. In Mohawk, agreement is always co-indexing Agreement, and thus A-positions are always empty. Of course, if it were never possible to mention an overt NP, this would seriously limit the expressive possibilities provided by the language: Mohawk deals with this situation by licensing the formations of chains which relate an empty (but referential) A-position with the content of an NP in adjunct position.

Yet another possibility is represented by languages that display apparent ‘dis-agreement’: a complementarity between the presence of explicit agreement morphology and the occurrence of an

---

6We must still account for the exclusion of lexical anaphors in Mohawk, since such an element could apparently appear in a bound A-position without violating binding conditions. I have no principled account of why these do not occur (either with or without a separate antecedent within the clause), but as noted in this connection in the appendix, many languages lack overt anaphor NPs, and express relations of coreference among the arguments of a single predicate in other ways.
overt NP. An example is furnished by the Cariban language Pemon,\(^7\) as illustrated by the examples in (3).

\begin{enumerate}
    \item a. kamicha ke Antonio-da mure ponte-’po
clothes with Antonio-ERG child dress-PAST
Antonio dressed up the child with clothes
    \item b. kamicha ke mure ponte-’po-i-ya
clothes with child dress-PAST-3-ERG
He dressed up the child with clothes
    \item c. kamicha ke i-ponte-’po Antonio-da
clothes with 3-dress-PAST Antonio-ERG
Antonio dressed him up with clothes
    \item d. kamicha ke i-ponte-’po-i-ya
clothes with 3-dress-PAST-3-ERG
He dressed him up with clothes
\end{enumerate}

As these examples show, a given A-position can be identified either by an overt NP or by verbal agreement, but not both. We can describe this by saying that Pemon agreement is of the co-indexing kind, but Agreement itself is optional. When it occurs, it triggers the associated morphology and precludes an overt NP; when it does not, there is no morphology, and the empty element \textit{pro} cannot appear; but the relevant A-position must be filled with an overt expression.

The difference between two forms of agreement — co-indexing Agreement and non-co-indexing Registration — is a way of reconstructing at least one sense of the classically problematic distinction between “strong” vs. “weak” agreement. Attempts to found this difference on the nature of the overt distinctions made in the forms of words have consistently fallen apart on closer examination. Instead of attempting to derive the “strength” of agreement from the diversity of its overt manifestations, I propose to treat it as a basic distinction in itself: that between an agreement relation that identifies the associated A-position and one that does not (regardless of how — or even whether — this identification is reflected in differences among word forms).

This distinction also provides us with the outlines of a way to treat clitic doubling constructions, if we accept the proposal that clitic pronouns are in fact a form of agreement. This is, of course, a very traditional (if often controversial) idea; it is discussed in Anderson 1992 and presumed in papers on the analysis of clitics deriving from the view presented in that work. If pronominal clitics such as the object pronouns of languages like French and Spanish are the reflection of a kind of agreement with a Verb’s arguments, then, we could go on to say that where the agreement represented by a clitic is of the “strong” (co-indexing) sort, no NP can appear to double the clitic. Where doubling occurs, it reflects the possibility that the corresponding agreement may also be of the “weak” sort (Registration). To the extent clitic doubling is optional, the choice between the two is a matter of optional identification (in the presence of consistent Registration of the object’s grammatical properties, such as gender and number), much as in the case of e.g. subject agreement in Italian on the analysis suggested above.

What we are dealing with here is actually one of the most basic issues to be resolved in syntax, in my opinion. That is, there are a number of places in language where some aspect of a clause (or perhaps other phrasal types) can be identified in one of several ways. In the present instance, we have agreement, or in other cases a clitic, and an overt nominal in competition as ways of indicating the subject, object, or other argument of a Verb. Alternatively, we might have a special Verb (as in Finnish), auxiliary inflection (as in English: see Zwicky & Pullum 1983), or a simple clitic or

\(^{7}\)The data below are from Jose Alvarez, unpublished field notes. The facts in question here were originally reported by Alvarez on the Linguist mailing list, vol 6, number 574.
adverb (English not) as ways of indicating negation. In other languages, there can be (full or partial) complementarity between an incorporated Noun and an overt argument, as we will discuss in the following section. Or Tense might be indicated either as inflection on a main Verb, or by a verbal element that does nothing else (English do, for example). What we see is that in most cases, an individual structure typically has exactly one instantiation from among these alternatives; but sometimes, more than one co-occur.

The co-occurrence of agreement and an overt subject is quite common (but not universal!). Co-occurrence of clitics and corresponding arguments we call “clitic doubling.” We might describe clitic “climbing” (on the now-familiar account that attributes this to restructuring so that an originally embedded clause of certain types loses some of the barriers that separated it structurally from the including matrix clause) by saying that the MSR which triggers the introduction of the clitic can percolate further up the tree in such structures; but then we must explain why the clitic is realized in only one place, and not within any of the intervening categories. Some language prohibit multiple negations, while others allow or even require multiple reflections of the same negative operator, etc. Working out the kind of structural properties on which the choice between co-occurrence and complementarity depends, and doing so in a really general way, is a major problem for (morpho-)syntactic analysis, one which we leave on the agenda of future research.

3 Noun Incorporation

The other important component of Baker’s analysis of the syntax of polysynthetic languages is Noun Incorporation. This is a feature of languages like Mohawk that has attracted attention for quite some time. Grossly, Noun Incorporation is a construction in which, on the surface, a verb stem and a Noun stem constitute a single word, with the Noun stem supplying an argument of the Verb.

There are two basic accounts of how Noun Incorporation works, and both have long traditions in the grammatical literature. One of them, the “syntactic” account, treats Noun Incorporation as a syntactic process, in which an argument of the Verb (or at least part of that argument) is actually moved from its syntactic A-position to adjoin to the Verb. This view seems to be supported a priori by the natural account it offers of how the incorporated stem fills the semantic (T) role of a corresponding unincorporated Noun.

The alternative is the “lexical” theory, a view that goes back at least to Sapir (1911), the first to propose that Noun Incorporation constructions are simply a case of lexical compounding. On this theory, the Noun plus Verb combinations are built in the lexicon rather than in the syntax. Now of course any theory must be able to build at least some such combinations in the lexicon, as in the case of “synthetic” compounds: duck hunting is built from [N duck] and [V hunt]. The possibility of building all lexical compounds in the syntax was explored in the early days of generative grammar (Lees 1960), but that was really before there was any theory of the lexicon. Currently, virtually all syntacticians concedes that the formation of compounds takes place in the lexicon, not the syntax.

Of course, compounds like duck hunting (and ) involve a relation between the Noun and the argument structure of the Verb which is like the one we find in Noun Incorporation constructions. Indeed, in both cases the Noun corresponds to an argument of the Verb that would fill the syntactic direct object position\(^8\) and the 0-role of THEME. Once we admit the possibility that this verb-argument relation can be established by a lexical rule, as it must be to deal with true compounds, the initial motivation for a syntactic account of Noun Incorporation is substantially weakened.

\(^8\)In compounds like earthquake, sunrise, landslide, etc., the Noun apparently represents the subject of an intransitive Verb. In these examples, we might invoke the Unaccusative hypothesis and say that the argument in question represents an underlying Direct Object; thought such an account is less plausible for examples such as crybaby, flashlight, workman, playboy, etc. What does seem constant about all of these cases is the fact that the associated Noun consistently corresponds to the 0-role of THEME, as noted in the text.
Baker’s own work (e.g. Baker 1987), on the one hand, has focused for some time on an account of syntactic incorporation and its generalization from the core cases of Noun Incorporation to other head-movements. It is thus quite important for him that syntactic Noun Incorporation be at least possible (even if other sorts of Noun Incorporation exist as well). On the other hand, if we accept the proposal that “the syntax neither manipulates nor has access to the internal form of words,” as the above version of the Lexicalist Hypothesis requires, it ought not to be possible for syntactic rules to compose words in this way. The choice of analyses for Noun Incorporation constructions thus has a good deal of importance for any theory of how morphology and syntax are related.

Baker’s particular account of Noun Incorporation in Mohawk follows familiar lines. He suggests that a lexical Noun can be generated (as the exhaustive content of a NP) in argument position; this then moves to adjoin to the governing Verb. At least in the context of the analysis of Mohawk under discussion, the motivation for this movement is clear. We have already seen that overt NP’s are not licensed in A-positions in Mohawk, so if such a \([\text{NP}, \text{Noun}]\) were generated, it would be ill-formed. In order to be \(\theta\)-marked, such a NP has to be co-indexed with an element in the Verb (by the Morphological Visibility Condition, (2) above). If that element were agreement, the agreement would (on Baker’s hypothesis) absorb the Case-assigning property of the Verb, so the overt NP would be ill formed. But if the Noun moves so to adjoin to the Verb, (2) is satisfied, and the otherwise case-less NP no longer has phonetic content, and all relevant conditions are met.

Not all languages have Noun Incorporation, and even among those that do, the construction might be a lexical one in some instances (as Baker admits). So we naturally want to know where such a syntactically formed construction would be expected. Baker’s answer is that the syntactic formation occurs where it is required. That is, in Mohawk, incorporation is forced, as above. In English, on the other hand, as in most languages, the Morphological Visibility Condition does not hold, and so movement is not forced. But on the assumptions of many contemporary syntactic theories, if you do not have to do something, you have to not do it: that is, movement and other syntactic operations occur only where they are forced. The lack of any condition that would Noun Incorporation thus renders the construction impossible within the syntax of English.

The next question to raise is that of which positions Nouns can be incorporated from. The basic regularity is: incorporation only takes place from underlying Direct Object (semantically, \textit{theme}) positions.\(^9\) The lexicalist view accommodates this restriction rather straightforwardly: lexical rules often refer to the relation of \textit{theme}, and compounding in particular does so. If Noun Incorporation is simply a form of Noun-Verb compounding, this is exactly what we would expect. The syntactic view derives this result in a way that is, at a minimum, rather less direct: some might find Baker’s account of why only the Direct Object position is accessible somewhat tortuous, but for the sake of discussion we will assume that such an account is at least possible.

Now in fact many languages have constructions that look like Noun Incorporation (i.e., cases where Noun plus Verb together seem to form a single word, and the Noun is interpreted as an argument of the Verb). They differ quite a bit from one another, though.\(^{10}\) For one thing, in most Noun Incorporating languages, the incorporated Noun is always interpreted as indefinite and/or generic. This is comparable to the interpretation of Nouns in lexical compounds in e.g. English: \textit{She’s a truck-driver} means that she drives trucks, not (just) some specific truck. Thus, \(*\text{She’s a truck-driver, which is why it’s parked over there}\) is quite impossible in English. In contrast, in Mohawk, an incorporated Noun can refer to something that’s referentially specific or definite: \textit{Mary poti-brought. I’ll use it to cook the beans} is quite possible in this language. This is just what would

---

\(^9\)See footnote 8 above. Noun Incorporation often accesses the subject position associated with syntactically intransitive Verbs; whether these are consistently characterizable as the underlying Direct Objects of Unaccusative Verbs, or only as \textit{themes}, warrants further discussion. Given the difficulties in providing a universally acceptable definition of \textit{theme}, however, we will leave this point undecided here, and assume that either description is potentially possible.

\(^{10}\)See, for example, Sadock 1980, Mithun 1984, Sadock 1986, as well as much discussion in Baker 1995 for remarks on the typology of Noun Incorporation and superficially similar constructions in a variety of languages.
be expected if the incorporated Noun in this case came from an NP in an A-position, since such an NP can perfectly well be specific or definite.

The lexical analysis has to make some provision to accommodate this possibility. The best analysis seems to be to treat the incorporation structure \( [V \ [N \ X] [V \ Y]] \) as a Verb which is potentially transitive, in which case it can naturally take (syntactic) arguments. The most common view to be found in the literature probably is based on the assumption that when a Noun is compounded with a Verb, the Noun satisfies the corresponding argument in the Verb’s argument structure; this argument then could not be expressed syntactically, and the Noun itself will be interpreted generically or indefinitely. Generic (or indefinite) interpretation would itself follow from the absence of a syntactic phrase expressing the argument, which we could assume to be a necessary precondition for specific, referential interpretation. Assuming that Nouns themselves have an external \( \theta \)-role to discharge (the “R-role,” connected with the Noun’s possibility of referring), the generic interpretation corresponds to a certain sort of binding of the Noun’s own external \( \theta \)-role (by a generic operator), a binding which follows when the Noun is internal to a larger word by virtue of the impossibility of autonomous reference.

To accommodate the facts of languages where an incorporated Noun is potentially referential, this account needs to be revised in part. Let us say that in some languages, at least, Noun-Verb compounding is an operation that “unifies” the semantics of the Noun with the argument position of the Verb, but without saturating the argument itself. That is, \( [V \ [N \ \text{bed}] [V \ \text{buy}]] \) in such a language is a transitive Verb meaning “X buys Y, Y a bed.” This Verb can still take a Direct Object argument. So on this picture, Mohawk differs typologically from English or other languages not in having syntactic (vs. lexical) Noun Incorporation, but rather in the fact that the lexical Noun Incorporation rule does not “saturate” the argument position.

Another typological difference among languages with respect to Noun Incorporation is relevant here. In some languages, an incorporated NP can be doubled by an external NP whose content also specifies the corresponding A-position. There are potentially two cases to consider: (a) where the external NP consists only of modifier material, as in I bed-bought a new (one), and (b) where there is a head N, too, as in I fish-caught six bullheads. The first case is straightforward for Baker’s original head-movement account: he need only say that the head Noun alone moves, leaving any modifiers stranded as the residue of the original NP. The second case was much more problematic for the account of Incorporation in Baker 1987, because it is hard to see how the head could have moved if the NP occupying the corresponding A-position still has a head. His response was to say that in these sentences, the doubling NP is actually an adjunct, related to a separate (phonetically null) NP in argument position. And of course, on the analysis presented in Baker 1995, that is the case for all overt NP’s in a language like Mohawk.

How does the lexicalist describe this situation? On the proposal above, when an incorporated N is doubled, we say essentially the same thing as Baker: the A-position is filled by an empty category, and the overt (adjunct) NP forms a chain with that position in the same way as other overt argument expressions. In the case of apparently head-less NP’s (as in the case of I bed-bought a new (one)), where it looks as if the head movement has taken place, we can note that the expressions themselves that occupy A-positions are themselves well-formed as NP’s. In Mohawk, as in most languages, there is no overt correspondent of English one, so the object phrase in I want a [new (one)] consists of just the Adjective new. Thus the headed and headless cases of doubling NP’s fall together, at least in most cases.

It is still necessary, of course, to be able to distinguish within the class of Noun Incorporating languages between those that allow doubling and those that do not. The case where no doubling occurs and interpretation is necessarily generic is the one described first above. In such a language,

\[11\] Sadock (1980 and elsewhere) has argued that at least in Greenlandic, this is not always the case, and that some expressions in Eskimo languages can only be derived by something analogous to head movement. I have nothing to say here about such languages, if Sadock is correct.
we say that Noun Incorporation saturates the argument and binds the Noun’s external $\theta$-role with a generic operator. A language allowing free (i.e., not necessarily indefinite or generic) reference, together with the possibility of doubling, results when Noun Incorporation does not saturate the argument or bind its associated $\theta$-role, but the Noun’s semantics unifies with the argument position internal to the conceptual representation of the resulting Verb.

Free reference without the possibility of doubling would be the result where the Noun unifies semantically with an argument position, but absorbs some property that would be necessary to license an overt NP. What could that be? Of course, if overt NP’s had to actually occupy A-positions, this could be exactly the same as whatever we said about languages like Mohawk to exclude overt expressions in association with agreement (whether in terms of Case or of binding); but this would not account for the absence of such expressions in adjunct position. Baker’s own account of a language like Southern Tiwa, where doubling is excluded but non-generic reference in association with an incorporated Noun is allowed, is that the condition licensing adjuncts in association with A-positions only allows them to be licensed by $\text{pro}$, and not by a trace (of head-movement).

What account of the difference between doubling and non-doubling languages is available on lexicalist assumptions, such as those adopted here? Apparently, argument positions corresponding to an incorporated N have some property that other A-positions do not have, and adjunct-licensing/chain-formation is sensitive to that property. I suggest the following: suppose that Noun Incorporation in Mohawk not only unifies the semantics of the Noun with that of the corresponding argument within the semantics of the Verb, but also unifies the Noun’s external $R$-$\theta$-role with the $\theta$-role assigned to that argument. In other words, there is a referential identification associated with Noun Incorporation which is lacking in the absence of Noun Incorporation. Then we can say that in Southern Tiwa, adjunct licensing is incompatible with the nature of that referential identification. This seems essentially equivalent to the constraint on licensing proposed by Baker.

In the kinds of case considered up to this point, the syntactic and lexical stories are essentially “tied” in that each can account for roughly the same range of phenomena the other can. Though Baker is an advocate of the syntactic view, he is quite fair about this: he considers the lexical account (though not with the details I’ve supplied here), and and develops its consequences in quite similar ways to those proposed here. But he also discusses some phenomena which he feels argue for the syntactic account over the lexical one.

The first of these concerns agreement. He argues that in general, agreement does not take place with a position corresponding to the source of Noun Incorporation. In this respect, he differs explicitly from Postal (Postal 1979), who claimed that there is agreement with an incorporated Noun. This is excluded for Baker, since for him, agreement is with a $\text{pro}$, while syntactic incorporation ought to leave not a $\text{pro}$, but a trace.

Now in fact, in most cases where a Noun has been incorporated, you can not tell whether agreement has taken place of not, because it is almost exclusively inanimates that are incorporated, and Mohawk has the property that agreement with an inanimate object is phonetically empty — i.e., indistinguishable from no agreement at all. Incorporation of animates (which would induce overt agreement morphology) is generally disfavored, and regarded as pejorative. Indeed, Baker admits to not having an account of why incorporation of animates ought to be avoided: this restriction might be a consequence of the fact that it is precisely in the case of an inanimate argument that the speaker can “fudge” the issue of whether there is or is not agreement. But regardless of the basis of the general avoidance of incorporated animate Nouns, there are clearly some instances where this takes place, and where there is no agreement with the corresponding argument:

(4) Ra-wir-a-nühwe‘-s thîk (owirá’a)
MsS-baby-∅-like-hab that (baby)
He likes that baby
On the other hand, it seems that with animate incorporated objects, agreement is at least optional. Thus, Baker (1995, p.319) notes that “either an agreeing or a non-agreeing form is accepted in the following examples:”

(5) a. Uwári ye(-ruwa)-kstₐ-hser-áhaw-e’ ne rake-’niha
   Mary FsS/(MsO)-old.person-nom-carry-impf prt my-father
   Mary is holding my father

b. Wa’-ke (-hi)-kstₐ-hser-áhset-e’
   fact-1sS /(MsO)-old.person-nom-hide-punc
   I hid the old person (the old man)

And in fact Baker observes in a footnote that “when the doubling material makes explicit the gender of the argument in question, the Noun Incorporation plus agreement construction is preferred where possible.” So this would appear to be a strike against an analysis that precludes agreement in association with syntactic Noun Incorporation, and in favor of an alternative, such as the lexical compounding view (as Baker admits).

This leaves the issue of how we are to derive the result that agreement and Noun Incorporation do not generally co-occur in Mohawk. The facts are obviously rather complicated. There appears to be a preference for avoiding a situation in which both overt agreement material and an incorporated Noun refer to the same participant. One way to resolve this tension is to treat the agreed-with position in a Noun Incorporation construction as if it were inanimate, in which case no overt marker appears: that forms the basis of the preference for inanimates, and the sense that incorporation of animates is somehow pejorative. If this could be maintained consistently, we could say that Noun Incorporation constructions do indeed have morphosyntactic agreement: it is just that this agreement usually has no overt consequences.

Alternatively, we could look for some way to avoid having object agreement morphology when the Verb has an incorporated Noun. Baker suggests that the Lexical account has no way to do this, because a Verb with incorporated object on (his version of) the lexical compounding analysis is just a plain transitive Verb (with a bit richer semantics, but the same syntax as the corresponding basic Verb without Noun Incorporation). The lexical approach I suggested, though, does have at least a potential mechanism for making this distinction.

The object position of a Verb with an incorporated Noun gets a different θ-role from the corresponding position in the same Verb outside of incorporation structures, as a result of unifying the basic θ-role with the external R θ-role of the incorporated Noun. We could in fact say that feature copying in Mohawk agreement is optional, and that a Verb “agrees with” an NP if it expresses either its morphosyntactic features or its R role. I do not claim this device has independent support, or even that it is particularly elegant, but the alternatives are not either, once these are actually worked out. The point is that the facts are not clear and categorical in this area, and the lexical compounding theory of Noun Incorporation does have a way of distinguishing between Verbs with incorporated Nouns and those without them. For Baker, this is the difference between having trace or pro in object position. For the present analysis, it is a matter of whether the Verb assigns referential properties (the R role) to the object or not. In fact, very similar accounts can be offered, I think, for Baker’s other two arguments (which are based on (a) condition-C effects; and (b) the mutually exclusive nature of Noun Incorporation and questions; considerations of space prevent me from going into those here). In essence, though, the lexicalist account of Noun Incorporation is still a possible one, even for the phenomena Baker sees as most syntactic.

In addition, Baker notes that in some languages which are otherwise syntactically like Mohawk (e.g., Tanoan languages like Southern Tiwa and Gunwingujaun languages like Mayali), overt agreement does appear with positions that are also associated with an incorporated NP. In Ainu, which
he puts in the class of polysynthetic languages\textsuperscript{12} some dialects have agreement with the NP position associated with Noun Incorporation and some do not. Wherever we find agreement with an incorporated position in a ‘polysynthetic’ language, though, it poses a problem for Baker’s analysis and thus provides some incremental support for the lexical compounding position.

4 Some Conclusions

So what should we conclude about the nature of agreement and Noun Incorporation? Baker convincingly demonstrates the existence of a language (and arguably, a class of languages) whose structure is determined by the fact that overt argument expressions actually appear not in the appropriate A-positions, but rather as adjuncts, with the A-positions being occupied by null pronouns. He wishes to argue that this structure follows from a single condition: the MVC (2), which requires that an A-position be indexed (by agreement or by movement, a consequence of N-Incorporation) in the Verb in order to receive a \( \theta \)-role. On the assumption that agreement markers absorb Case, wherever the MVC is satisfied via agreement the corresponding argument phrase has to be licensed in some other way (and adjunct licensing is apparently the only available possibility). If the argument is not licensed via agreement, it can still be saved via incorporation.

For my original purposes, the issue to be considered was Baker’s use of syntactic operations to establish these structures and relations. Is it possible to account for the same phenomena without invoking principles that compose words within the syntax (thus violating the lexicalist hypothesis)? The discussion above would suggest that it is. The basis of the alternative to Baker’s analysis is the proposal that in these languages, the Morphosyntactic Representations of agreeing Verbs are co-indexed with the Verb’s associated A-positions. If that is true, such co-indexing should block the appearance of full NP’s in the relevant positions by principle C of the Binding Theory. I suggested above that that is a parameter of Agreement rules: a given rule requires/allows/omits co-indexing in addition to feature copying between an A-position and the MSR of the governing Verb. This would correspond to the traditional notion that Agreement in some languages “identifies” the corresponding position(s). It would also formalize the notion of “strong” agreement, though treating it as a parameter of grammatical variation rather than deriving it from some aspect of the form of agreement itself, such as the specific features that are represented, or the extent to which various forms are distinct from one another (two tempting but ultimately unproductive approaches to grounding the distinction among others that have been tried in the literature).

How does Incorporation fit in? Treating Incorporation as lexical compounding, along traditional lines, requires us to align this with the nature of agreement. Recall that we said that what happens is that the semantics of the “incorporated” Noun gets unified with the interpretation of the corresponding argument position, and the external R \( \theta \)-role of the Noun gets unified with that assigned by the Verb to its theme. It seems possible to subsume all of the varieties of Noun Incorporation discussed by Baker under this general account.

What, we might then ask, is left of the parameter that distinguishes “polysynthetic” languages from others? What, that is, is the lexicalist equivalent of (2)? In essence, it is quite similar to what Baker proposes: in such a language, \( \theta \)-roles can only be assigned to positions that are referenced in the Morphosyntactic Representation of the assigner. Now if we say that co-indexing is in principle optional (which seems to be the best approach on a cross-linguistic basis), then this version of the MVC will in fact force us to co-index all arguments corresponding to \( \theta \)-roles. This, in turn, will force the corresponding A-position to be \textit{pro} by virtue of principle C of the Binding Theory. As a by-product, this also resolves an indeterminacy left hanging by Baker about Noun Incorporation-doubling expressions: on his theory, headless doubling expressions could in principle appear either as arguments or as adjuncts. But the present lexicalist analysis forces them to be adjuncts, just like other argument expressions.

\textsuperscript{12}Incorrectly, as shown in Kaiser 1997.
Adopting a lexical compounding approach to Noun Incorporation, and a view of “strong” Agreement on which this is distinguished from “weak” agreement (or “Registration”) by the presence vs. the absence of referential identification of the position involved, we arrive at the set of typological parameters in (6):

(6) a. Does agreement allow co-indexing (“Agreement”) as well as feature copying (“Registration”)?

b. (MVC:) Is the assignment of θ-roles limited to identified (co-indexed) argument positions?

c. Does the language have a (Lexical) rule of Noun-Verb compounding with incorporating semantics?

d. Are the semantics of chain formation in the language compatible with the assignment (via incorporation) of a Noun’s R θ-role to a position that is a member of the chain?\(^{13}\)

The consequences of the analytic line suggested above for the nature of the relation between morphology and syntax are significant. Recall that structural and early generative accounts assumed that one is assimilated to the other: either the devices of morphotactics were extended to deal with syntactic structure as well the Structuralist approach), or the syntax is enriched so as to deal directly with morphemes, composing them into words in the process of composing other units into phrases. The position taken here, in contrast, has assumed a substantial separation between the two domains. Words are assumed to be derived within the lexicon, and realized as inflected forms within PF, while the access of the syntax to word-internal structure is only through the MSR, an indication of the features a word bears (but not of the way it represents them).

In the specific context of the present volume, the importance of this analysis for the theory of clitics is to be found in the apparatus it makes available for assimilating (pronominal) special clitics to other agreement phenomena. A variety of evidence suggests that these clitics form a natural class together with more traditional agreement morphology. The mechanism of referential identification through co-indexation, as a relation between a Verb (taken as head of a relevant propositional domain) and its associated A-positions, allows us to unify the morphosyntactic effects of morphology at the levels of the word and the phrase.

\(^{13}\) If so, doubling of an incorporated Noun is possible; if not, it is excluded, as in Southern Tiwa and some other polysynthetic languages.
Appendix: Consequences of the status of overt NP’s in Mohawk

Baker shows in considerable detail that in Mohawk (and the other languages in his sample), overt NP’s really are not in A-positions. The proposed clause structure for ‘polysynthetic’ languages turns out to have a rich set of consequences. For instance, since all overt NP’s are in adjoined position rather than in A-positions, there should not be asymmetrical behavior of subject and object NP’s. Also, the content of all overt NP’s ought to behave as if they were islands, since adjuncts are islands. Some of the consequences of these properties, which confirm the essentially correct nature of the analysis Baker proposes for Mohawk clause structure, are summarized below.

I will not illustrate these points with actual Mohawk examples, because these would present too many additional complications that are not germane to the present discussion. I trust that the structural issues will be clear from schematic “Mohawk-in-English” examples.

Condition C effects: He shows that coreference is possible in *I hired her, because Mary* is a good worker but blocked in *I told her that Mary j, k is a good worker* [i.e., “ordinary” NP’s cannot be C-commanded by co-referring expression]. This shows that Condition C applies in the language. However, there is no Subject/Object asymmetry with respect to these condition C effects. That would be the case if e.g. *Bill’s girlfriend kissed him* were possible, but not *He j kissed Bill’s girlfriend* (both with intended coreference between Bill and he/him). If the overt NP *Bill’s girlfriend* is adjoined in both cases, the lack of asymmetry follows, since the position of the full NP with respect to the coreferring expression is the same.

NP anaphors: Mohawk has no independent reflexive and/or reciprocal pronouns. If all NP’s are in adjoined positions, and all A-positions are occupied by pro, there is no way to have an overt anaphoric expression. The probative nature of this fact is not great, since a great many languages that no one would call polysynthetic also lack independent reflexive pronouns. Perhaps in a polysynthetic language, these elements (anaphors) are the only overt NP’s that can appear in A-positions. The position of overt anaphors would thus be constrained in a way other NP’s would not.

Non-referential quantified NP’s: Mohawk also lacks ‘true’ universal quantifiers corresponding to English every. (as opposed to quantifiers like referential all, where the two can be distinguished on the basis of singular vs. plural agreement). This follows from the fact that “a quantifier must bind an actual trace in argument position.” Similarly there are no negative universal quantifiers (parallel to nobody, nothing), etc., distinct from existentials (somebody, something, etc.) within the scope of negation.

Interrogatives: Question words should bring up the same issue, since the relevant operator should be required to bind a trace in A-position (not a pro). Baker argues that Mohawk question-word NP’s are required to appear in comp (as opposed to relatively free order of other NP’s). The basis of this analysis is the claim that *wh*-words (as opposed to other overt NP’s) are able to appear in D-Structure A-positions, because they have someplace to go: comp. They can thus evade whatever it is that blocks overt NP’s from A-positions. *wh*-in-situ constructions are excluded (for multiple as well as simple questions). They ought to be, since the MVC requires an agreement element in order for the *wh*-word to get 0-marked, but this would prevent it from getting case in situ.

“CED effects”: Mohawk NP’s are extraction islands. In other words, it is never possible to move anything (notably a *wh*-word) out of a full NP. Adjuncts are generally islands, a property which extends to all overt NP’s in Mohawk.

Weak Crossover effects: *Who does her boyfriend think is beautiful?* only has the unbound reading (where her≠who), since the *wh*-word comes from the complement clause. Mohawk thus
displays weak crossover effects. But not only *Who did her boyfriend slap? but also *Who slapped his girlfriend? are excluded in Mohawk (with the bound reading), because the trace of wh-movement in subject position does not C-command any of the arguments, and the condition underlying Weak Crossover effects says “Quantified NP’s and wh-traces can have anaphoric relations only with pronouns which they C-command.”

**Idioms:** Remarkably, Mohawk appears to have no Verb+NP idioms. That would follow if the NP part of such an idiom were precluded from appearing in a position directly governed by the Verb, since the option of appearing in an adjunct position forming a chain with a pro in A-position is closed for non-referential elements.
References


