

The Implications of Rich Agreement: Why Morphology doesn't Drive Syntax

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1. Introduction - the Rich Agreement Hypothesis

This paper offers a critical evaluation of—and an alternative to—a well-known family of related hypotheses which we may call collectively the Rich Agreement Hypothesis (RAH), given along with its diachronic corollary in (1).

- (1) “Rich” agreement is the cause of (overt) verb movement to Infl.
Corollary: Loss of “rich” inflection causes the loss of verb movement.

This hypothesis has its origins in work on the Germanic languages in the mid-1980s (see Kratzer 1984, Roberts 1985, Kosmeijer 1986), and is most recently explored and most extensively worked out in Rohrbacher 1999.

Central to (1), as evident in Rohrbacher's title “*Morphology-Driven Syntax*”, is the idea that properties of individual morphemes (as identified by their phonological matrix) and/or overtly signaled distinctions in paradigms are causally related to syntax. The leading idea is that morphological variation correlates with syntactic variation because the syntax is projected from the morphology.

In this paper, I challenge the validity of (1). Even restricting the discussion to Germanic languages, I show that there are examples of verb movement (to Infl) in the absence of “rich” morphology and that such examples may be drawn from (i) dialect variation, (ii) intra-speaker variation (optionality), (iii) diachronic variation and (iv) language-internal, cross-construction variation. Importantly, all counter-examples to (1)

* Questions from the audience at WCCFL XX, especially from B. Rohrbacher and H. Davis, have helped to (I hope) sharpen the focus on the issues addressed here. The material has also benefited from presentation and discussion elsewhere; my thanks in particular to J. Frampton, D. Lightfoot, A. Marantz, H. Thráinsson, and S. Wurmbrand. This research has been partially funded by SSHRC #410-99-0902. All errors are mine. [This paper will also appear in the CLS 37 proceedings].

presented here reflect instances of verb movement in the absence of “rich” morphology, where rich is defined structurally, i.e., as the cooccurrence of multiple inflectional affixes on a single verb (see below). There are no examples of the lack of verb movement (i.e., V-in-situ) in the presence of structurally rich morphology. It is therefore not the case that anything goes; there is a generalization to be stated about inflectional morphology and movement to inflection, and it is the one-way implication in (2):

(2) rich inflection \rightarrow verb movement to Infl¹

As Rohrbacher notes morphology-driven (i.e., lexicalist) approaches can provide an account of a bi-conditional (as in (1)) but run a risk of vacuity if the generalization holds only one-way, as in (2). An alternative to a morphology-driven approach is the family of “Late Insertion” or “realizational” models which includes Distributed Morphology. On such models, all concatenation takes place in one module (“the syntax”) and the morphology subsequently “fills in the pieces”—i.e., rewrites the syntactic terminal nodes as (possibly null) phonological strings. What is important for our purposes is that (2)—problematic for morphology-driven approaches—turns out to be the strongest prediction admitted by the Late Insertion model; thus, the validity of (2) is an argument for Late Insertion.

This paper is organized as follows. In section 2 I review briefly the evidence that has been taken to establish the initial plausibility of (1). In section 3 I present the key counter examples which yield (2). Section 4 discusses the problem that a one-way implication poses for morphology-driven approaches. Section 5 sketches the barest outlines of an alternative, with references to further elaboration and independent support. Finally, section 6 presents the conclusions. The main conclusion is that the validity of (2) provides an argument for Late Insertion and against a morphology-driven approach. A secondary conclusion is that the argument inherent in (1) for knowledge of paradigms as a part of linguistic competence (Rohrbacher 1999:7) is defeated; to the extent that there is an informative notion of “rich inflection” (e.g., which could potentially be a cue to acquisition of syntactic structure without being the synchronic cause of the such structure), that notion is defined in terms of structural complexity of word-forms (number of morphemes) and not along a paradigmatic dimension.

1. Note importantly that (2) is a descriptive generalization. It says: when you find rich inflection in some language, then you will also find verb movement to Infl in that language. It does not say anything about causation. I return to this below. As a one-way implication, it makes no predictions whatsoever about what happens when inflectional morphology is not rich.

2. The Rich Agreement Hypothesis—initial plausibility

The kind of variation over which (1) is taken to range is given in (3)-(4). Example (3), gives representative present and preterite (i.e., past) weak verbal paradigms from Icelandic and Danish, respectively, and (4) illustrates the word order in (non-bridge) subordinate finite clauses.

(3)		Icelandic <i>heyra</i> ‘hear’			Danish <i>høre</i> ‘hear’		
		Present	Preterite		Present	Preterite	
	1sg	heyr -i	heyr -ði		hør -er	hør -te	
	2sg	heyr -ir	heyr -ði-r		hør -er	hør -te	
	3sg	heyr -ir	heyr -ði		hør -er	hør -te	
	1pl	heyr -um	heyr -ðu-m		hør -er	hør -te	
	2pl	heyr -ið	heyr -ðu-ð		hør -er	hør -te	
	3pl	heyr -a	heyr -ðu		hør -er	hør -te	
(4) a.	... að hann keypti <i>ekki</i>	bókina.		(Icelandic)			
	that he bought not	the.book					
	‘... that he did not buy the book.’						
b.	... at han <i>ikke</i> købte	bogen.		(Danish)			
	that he not bought	the.book					
	‘... that he did not buy the book.’						Platzack 1986:209

It is clear that Icelandic inflection is in some sense “richer” than Danish inflection. Let us make this more precise and say that “richness” is defined structurally, i.e., distinct markers of tense and agreement co-occurring in a single form as in the Icelandic 1pl.preterite: *heyr-ðu-m* (Bobaljik and Jonas 1993).²

Icelandic and Danish differ not only in the richness of their inflectional paradigms, but also in aspects of their syntax, for example, the order of the finite **verb** relative to *negation*, floating quantifiers and sentence adverbials in embedded clauses.³ This variation, reminiscent of the English-French

2. This follows a suggestion by D. Pesetsky and departs from the majority of work on this topic, which appeals to paradigmatic notions. Rohrbacher 1999:138 is emblematic: “Agreement is [rich] (...[thereby] triggering overt verb movement) in exactly those languages where regular subject-verb agreement minimally distinctively marks the referential agreement features such that in at least one number of one tense, the person features [1st] and [2nd] are distinctively marked.”

3. For present purposes, Danish is identical to the standard varieties of Norwegian and Swedish (collectively referred to as Mainland Scandinavian). Icelandic and

main clause contrast studied by Emonds 1978, was first described in terms of verb movement to Infl in (4)a, and the absence thereof in (4)b in Travis 1984:144f.

The RAH then, is the hypothesis that the syntactic variation is caused by the morphological variation. Rich agreement forces verb movement to Infl, while poor agreement requires the verb to remain in the VP.

Early work sought to show that the RAH was confirmed by examining various Scandinavian dialects. For example, the Hallingdalen dialect of Norwegian (Trosterud 1989) marks number when there is no tense affix (i.e., in the present and in the strong past) but makes no person distinctions (5); its morphology thus counts as “poor” and verb movement is blocked in the relevant environments (6).

(5) Pres SG: 1,2,3 *kjøyr-e* PL:1,2,3 *kjøyr-æ* *kjøyr-æ* ‘drive’
 Past SG AND PL: 1,2,3 *kjøyr-de*

(6) a. ...at me *ikkje kjøpæ* bokje
 b. *...at me *kjøpæ ikkje* bokje
 ...that we not buy not the.book
 (presum: ‘that we don’t buy the book.’) Trosterud 1989:89-91

In the Älvdalsmålet dialect of Swedish however, person agreement has been retained in the plural of both tenses (see (7), from Levander 1909:84-88). Along with the rich agreement, this dialect retains the Icelandic-like subordinate word order characteristic of verb movement to Infl (8).

(7) Pres SG: 1,2,3 **-V(r)** PL:1 **-um** 2 **-ir** 3 **-V**
 Past SG: 1,2,3 **-d(e)** PL:1 **-d-um** 2 **-d-ir** 3 **-d-(e)**

(8) ba fo ðyæ at ig **wild** *int* fy om
 but because that I wanted not follow him
 (= ‘Just because I wouldn’t follow him.’) Levander 1909:123

Mainland Scandinavian are of course syntactically alike in many other respects. Importantly, they are both verb second (V2) languages in matrix clauses (and in some embedded clauses). V2 is analysed as movement of the finite verb to C°; the difference in (4) emerges only in non-V2 environments. Note that the prevalence of V2 in embedded clauses in Icelandic makes (4)a plausibly irrelevant as it may be a V2 environment (but see Travis 1984). As noted by Magnússon 1990, Vikner 1995a, this can be controlled for straightforwardly, e.g., by using examples of embedded constituent questions, and the differences remain (see Bobaljik and Thráinsson 1998:48).

Diachronic evidence has also been prominently adduced in support of (1) (see especially Platzack 1988). The Old Scandinavian languages had distinctly Icelandic-like (i.e., rich) inflectional paradigms ((9) represents 11th century Danish, Vikner 1997:206) which were lost and developed into poor paradigms as early as the 14th century ((10), *ibid.*, compare (5)).

(9) Pres SG: 1 **-i** 2 **-ir** 3 **-ir** PL:1 **-um** 2 **-ið** 3 **-V**
 Past SG: 1 **-ð-a** 2 **-ði-r** 3 **-ði** PL:1 **-ðu-m** 2 **-ðu-ð** 3 **-ðu**

(10) Pres SG: 1,2,3 *dæm-ær* PL:1,2,3 *dæm-æ* *dæmæ* 'judge'
 Past SG AND PL: 1,2,3 *dæm-dæ*

As (1) predicts, in addition to losing rich agreement, the development of the Mainland Scandinavian languages also involved a loss of verb movement in embedded clauses. Example (11) gives a minimal pair illustrating this change from Old (a) to Modern (b) Swedish.

(11) a. ...at Gudz ord **kan** *ey* vara j honom O.Sw.
 b. ...att Guds ord *inte* **kan** vara i honom M.Sw.
 that God's word {can / not} be in him
 '...that God's word can not be in him.' Platzack 1988:222

These considerations provided initial support for (1) and subsequent work was devoted to determining what exactly should be taken to constitute "rich" (for a review of the literature, see Bobaljik 2000).

3. The counter-examples

3.1 Kronoby and Tromsø

Counter-examples to (1) were raised early. Platzack and Holmberg 1989:74 report that the dialect of Swedish spoken in Kronoby (Finland) displays the verb-negation order indicative of verb raising, even though the "inflectional paradigm resembles the standard Swedish one ... in the relevant aspects" (Rohrbacher 1999:118), i.e., in that it "has no subject-verb agreement at all." (Vikner 1995a:135).

(12) He va bra et an **tsöfft** *int* bootsen
 it was good that he bought not the.book
 'It was good that he didn't buy the book.' (Kronoby)

Vikner 1995b:25 provides examples (from Iversen 1918:83-4) illustrating that the same is true of the Tromsø dialect of Norwegian: it has

(optional) verb raising to Infl in non-V2 contexts, but is morphologically poor (confirmed P. Svenonius, p.c., 4/2001). Contrasting Kronoby and Tromsø with the “standard” varieties of Swedish and Norwegian, we find syntactic variation in the absence of morphological variation, in direct contradiction to (1).

3.2 Faroese

In Faroese—as noted as early as Lockwood 1964—one finds both the Icelandic (verb movement) and Mainland Scandinavian (verb in situ) word orders (as in (13) from Barnes 1987:4).

- (13) a. Tey nýttu fleiri orð, sum hon **hevði** *ikki* hoyrt fyrr
 b. Tey nýttu fleiri orð, sum hon *ikki* **hevði** hoyrt fyrr
 they used several words C° he {had / not} heard before
 ‘They used several words which he had not heard before’

While there are intricacies to the variation (e.g., young speakers find (13)a literary, see Petersen 2000) it appears fair to say that all modern speakers accept (13)b, and some also find (13)a natural (see also Jonas 1996 and Thráinsson et al. in prep for discussion). Importantly, despite the variation in the acceptability of the Icelandic-like word order in (13)a, there are no relevant morphological differences. The basic Faroese paradigm is given in (14).⁴

(14) Pres	SG: 1 -i	2 -r	3 -r	PL:1 -V	2 -V	3 -V
Past	SG: 1 -ði	2 -ði	3 -ði	PL:1 -ðu	2 -ðu	3 -ðu

However one treats the syntactic variation, the important fact for our purposes is that there is no relevant morphological correlate. Once again, we find syntactic variation in the absence of morphological variation, in direct contradiction to (1). Note moreover that since the morphology is identical in the two varieties of Faroese, this constitutes a counter-example to (1) regardless of the definition of “rich” adopted.

3.3 The diachronic problem

The examples in the two previous subsections involve synchronic varieties of Scandinavian languages which violate the RAH (1). Recall that

4. Faroese morphology involves more complexities than space permits discussion of here. Note importantly that I treat the past tense markers **-ði** (SG) and **-ðu** (PL) as just that—past tense markers and not concatenations of tense and number. See Bobaljik 2001 for a defense of this position and further discussion.

part of the initial plausibility of (1) was established by appeal to diachronic variation, in particular, with the observation that the Old Scandinavian languages had Icelandic-like word order and morphology, and lost both. The problem for the morphology-driven approach, however, arises in that there is a significant time lag (on the order of a half dozen or more generations) between the loss of rich morphology (e.g., as illustrated in the 14th century Danish in (10)) and the subsequent loss of verb movement to Infl. This holds true of the Scandinavian languages (Vikner 1997:207) and of the development of English (Roberts 1993, Lightfoot 1993:207). Once again in comparing various stages of the historical record, we find syntactic variation in the absence of morphological variation. What this means, of course, is that there were periods in which speakers of, say, Middle Danish—like modern Tromsø Norwegian speakers—retained verb movement to Infl but had poor inflectional morphology, contradicting (1).

4. Implications of a one-way implication

The counter-examples presented above have the common property that they illustrate varieties of Germanic languages in which the morphology is poor, but in which verb movement to Infl is retained, violating (1) in one direction. No examples have been presented in which (1) is violated in the other direction, i.e., there are no examples of finite verbs remaining in VP in languages with rich inflectional morphology (understood structurally).⁵ As various authors have noted, the strongest generalization that can be maintained is not the bi-conditional in (1), but the one-way implication in (2) (above). Note importantly that (2) should be read as a descriptive generalization (when one finds a language with rich agreement, one will also find verb movement to Infl in that language) and is not a statement of causality. At this point, one must ask whether a morphology-driven approach can provide an account for (2).

In considering this question, it is instructive to note the approach taken by various authors seeking to maintain a morphology-driven approach to counter-examples like the ones cited. For example Platzack and Holmberg 1989:74, discussing the Kronoby data, weaken the RAH to (2) and suggest (cf. Koenenman 2000: 83) that: “[t]he evidence required, in the absence of

5. Again, Faroese comes closest to being a counter-example, but is not (see reference in previous footnote). Other putative examples presented in the literature to date from, e.g., Slavic and other languages have either failed to illustrate the intended point or are open to reanalysis as involving verb-raising out of the VP. Note e.g., that simply showing that the order Neg-Verb occurs in some language is insufficient to demonstrate that the verb is in VP; it must be independently argued that the negation marks the left edge of the VP.

overt (person) agreement, to set the [verb movement] parameter right is precisely sentences like [(12)]: given reasonable assumptions it can only be analyzed as having the finite verb moved to [Infl].”

Rohrbacher 1999:149 (n.17) notes clearly why this approach is problematic: “If examples of V to I raising in the input are sufficient to trigger the acquisition of V to I raising, it is unclear why the morphological richness of person or any other agreement should play any role at all in this process.” In other words, since the correct generalization is a one-way implication, it must be that there are causes of verb movement other than rich agreement; if these causal factors are also present in languages with rich agreement, then appeal to agreement in the cases where it does work plays no role in the explanation. In addition, if verb movement itself is a syntactic parameter that is not uniquely a consequence of morphology, then the syntax is not morphology-driven.

In sum, if the empirical generalization is only a one-way implication, then the morphology-driven approach is at best incomplete; in its current instantiations, it is empty of predictive force, amounting in essence to a restatement of the description.⁶

5. In search of a better theory

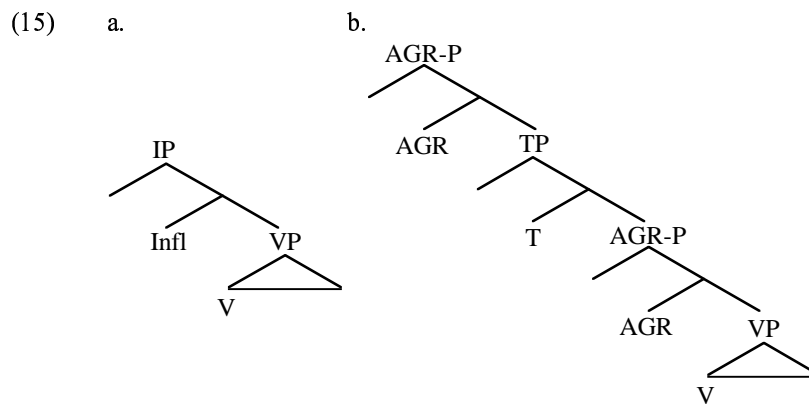
It bears repeating at this point that just as the counter-examples to (1) presented above are problematic for a morphology-driven approach to syntax, the correctness of the weaker generalization in (2) provides an argument that the morphology and syntax are nevertheless connected. In this section, I will demonstrate that (2) in fact follows (on assumptions that can be independently motivated) from an approach which takes the syntax to feed the morphology. That is, I am arguing here for the position recently called “Late Insertion” which is familiar from the framework of Distributed

6. Note that the claim here is that morphology-driven approaches are inadequate if (1) must be weakened to (2). Thus Rohrbacher 1999 and Vikner 1997 (p. 211, n.19) maintain contentful theories by retaining the two-way implication in (1) and leaving the Kronoby (and similar) data as “an unresolved problem for [the] approach” (Rohrbacher 1999:120.) My claim here is that the counter-examples are numerous and systematic, and thus that these approaches are not inadequate, but rather incorrect.

Note also that care must be taken to distinguish the predictions of a one-way implication from a biconditional. Various authors have fallen into the trap of accepting (2) and claiming to derive from it the loss or absence of verb movement to Infl in languages with poor morphology. This is erroneous; (2) licenses no predictions whatsoever about the syntax of languages with poor inflection.

Morphology (DM) and its antecedents (see Harley and Noyer 1999 for an overview and bibliography).

On a Late Insertion model, the syntax does not concatenate concrete morphemes (i.e., phonological pieces like “past tense /-d/”); rather, what the syntax manipulates is abstract morphemes, for example, the terminal node [PAST]. The determination of the particular allomorph of [PAST] for a given verb (/–d/, /–t/, /–Ø/) is made at the point of lexical insertion, which happens post-syntactically (i.e., after “Spell-Out” in the vocabulary of current syntactic models). On this model, overt morphological variation can be seen as not the cause but the consequence of syntactic variation, as proposed in the domain of Germanic inflectional morphology by Johnson 1990 and developed in Bobaljik 1995, Thráinsson 1996 and Bobaljik and Thráinsson 1998. Bobaljik and Thráinsson 1998 propose the Split IP Parameter, i.e., that languages vary in the inventory of functional projections that make up the IP domain. English and the standard Mainland Scandinavian languages have a simple IP as in (15)a while languages like Icelandic have the structure in (15)b.



On a late insertion model, overt morphemes (called *vocabulary items* in DM) are inserted into the terminal nodes provided by the syntax. On the assumption that no more than a single overt morpheme may be inserted into a single syntactic terminal node⁷, it follows that languages with a single inflectional head will never permit more than one overt inflectional morpheme on a single verb (i.e., there simply isn’t room for more than one); languages with a more articulated IP (as in (15)b) will permit more. Now, recognizing that zero morphemes exist (i.e., that there are syntactic terminal nodes/features which find no overt expression in the morphology),

7. This is the null hypothesis, though departures are countenanced within DM.

we find that the theory allows the following: in a language with the structure in (15)a, there can be at most one overt inflectional morpheme on a given verb, but there can also be zero; in a language with the more articulated structure in (15)b, there can be at most three overt inflectional morphemes, there could also be two, or one, or none. This yields the following: a verb with more than one overt inflectional morpheme must correspond to the syntactic structure in (15)b; but a verb with one (or no) overt inflectional morpheme can correspond to either structure. This is, of course, a one-way implication from overt morphology to syntactic structure: rich inflection (i.e., multiple morphemes) entails (15)b. If it can be shown that the structural variation correlates with verb movement, then we will have demonstrated that (2) can be accounted for on a late insertion model.

Bobaljik and Thráinsson 1998 argue that the distribution of verb movement to Infl is indeed a consequence of the Split IP Parameter. In brief (I refer the reader to that paper for details), we assume (i) that syntactic movement is driven by ‘feature-checking’, i.e., the need to establish local relationships of some sort, and (ii) that sisterhood is one such local configuration, adequate for feature checking. In a language in which VP is the complement of IP head-to-head movement of V to Infl will establish no new checking relationships (since a projection of V is already the sister of I). Given assumption (i), V-to-I movement will therefore be blocked in such languages. In a language with the structure in (15)b on the other hand, the functional projection I have labeled (rather arbitrarily) Agr-P will block the establishment of a local relationship between T and the verb unless the verb raises. In sum, on the assumptions just mentioned, verb raising to Infl (i.e., T) is forced in (15)b and blocked in (15)a.⁸

Recapping, we find that the one-way implication in (2) follows as a consequence of the architecture of the theory. A syntactic parameter (15) determines unambiguously whether a language has (15)b or lacks (15)a verb movement to Infl. Since only the structure in (15)b allows for the (post-syntactic) insertion of multiple inflectional morphemes, we derive the observation that (structurally) rich inflection implicates (the structure in

8. For additional details the reader is referred to Bobaljik and Thráinsson 1998 and chapter 5 of Bobaljik 1995. Among other things, it is a consequence of this theory that the addition of more functional material above IP can force verb raising even in languages with a simple IP—this is the analysis of V2 in the Mainland Scandinavian languages. In addition, on this approach, verb movement is always overt. Note that there is no covert verb raising, hence inflection of the verb in those environments in which the verb does not raise must be achieved by a post-syntactic, morphological process (essentially Affix Hopping) as I have argued elsewhere (see chapter 2 of Bobaljik 1995).

(15)b which in turn correlates with) verb movement to inflection. However, since morphological zeros exist, surface-poor morphology allows for no inferences regarding syntactic structure or verb movement. This is (2).

Now, the theory will be stronger if independent support for the structural variation in (15) can be offered. This is the main point of Bobaljik and Thráinsson 1998 where it is argued that the additional specifier positions made available in (15)b (as contrasted with (15)a) are crucially implicated in a range of syntactic phenomena which also show variation among the languages in question. These are: (i) the correlations between word order and interpretation for subjects of the kind investigated by Diesing 1990 and others; these are taken to require the availability of two VP-external subject positions below CP (i.e., Spec,TP and Spec,Agr(S)-P), and hence cannot arise in the Simple IP languages; (ii) the possibility of Transitive Expletive Constructions; (iii) the availability of “Object Shift” of full NPs, which is taken to require a VP-external specifier position distinct from IP to host the shifted object. As each of these processes requires additional specifier positions to serve as landing sites for the various XP-movement processes entailed, the availability of these operations in languages like Icelandic—and the absence thereof in languages without overt verb raising—constitutes independent syntactic evidence for the syntactic parameter in (15).⁹

6. Conclusion and discussion

In this short paper, I have provided the following arguments. First, I have shown that counter-examples to the bi-conditional RAH (1) are relatively numerous and systematic. In particular, the strongest empirically sustainable generalization is a one-way implication from (structurally) rich inflection to verb movement (2). Throughout this discussion, I have focussed on examples in which we find syntactic variation in the absence of morphological variation. This refutes the strongest version of the hypothesis that (overt) morphology is the sole cause of syntactic operations like head movement. In sections 4 and 5, I showed that the retreat to a weaker generalization is problematic for morphology driven approaches, but is in

9. The theory also predicts that structural differences among clause types in a given language will systematically yield differences in verb movement patterns, even when there are no accompanying morphological differences. Initial results from Icelandic infinitives are promising in this regard. Wurmbrand to appear has demonstrated that different classes of infinitival verbs have different functional structures (ranging from bare VP complements in restructuring configurations up to more CP complements for, e.g., factive infinitives); we therefore expect—and find—differences in verb raising among the different classes of infinitivals.

fact predicted on the late-insertion approach which posits variation in the functional architecture of the IP domain. In particular, the Split IP Parameter, for which independent syntactic evidence can be and has been given, correctly predicts that only those languages which have verb movement to Infl have the potential for multiple inflectional morphemes on the verb. Since this correlation is hard to derive if morphology is the cause of syntactic variation (and no correlation is expected whatsoever if morphology is truly autonomous), the validity of the correlation provides a strong argument for the view that morphology is dependent on syntax.

Before closing, two additional remarks are in order.

6.1 Paradigms

In this paper, I have focused primarily on the distinction between morphology-driven and late-insertion models of morphology-syntax interaction, arguing for the latter. There is one additional remark to be made concerning the role of paradigms. Rohrbacher 1999 and other proponents of the (strong or weak) RAH (e.g., Vikner 1997, Koenenman 2000) have argued that “rich” for the purposes of the RAH must be defined in terms of paradigmatic dimensions, e.g., the number of contrasts overtly signaled in some particular domain (see fn. 2 above). I have departed from these works in showing that the crucial dimension along which “rich” must be defined is structural and not paradigmatic. A language has rich inflection (and thus a split IP, and thus verb movement) if it permits more than one distinct inflectional affix on its finite verbs. The number of affixes counts, not the number of (e.g., person) distinctions signaled. As Rohrbacher 1999 himself notes, the prevailing view in theoretical morphology takes paradigms to be derivative constructs and not primitive aspects of linguistic knowledge. One consequence of this paper is thus that the paradigm-free view of morphology is not challenged by the inflection-movement correlations.

6.2 Cues

On a final note, in addition to reiterating what has been claimed above, it seems useful at this point to contrast this with what is not being claimed. The evidence presented above constitutes a strong argument for the architecture of grammar which includes the ‘Late Insertion’ assumption. Overt morphology does not cause, drive, or project syntactic structure, rather, overt morphology is a reflection—sometimes imperfect, but nevertheless principled—of prior syntactic structure. Syntax puts abstract morphemes together, morphology spells them out. This is how grammar works, synchronically. This is what has been claimed here. What has not been claimed is that a late insertion model of grammar prevents children from using overt morphology as cues for acquisition of syntax. Consider the nature of (2); as noted, this is a descriptive generalization (not a statement

of synchronic causation), but it follows from properties of Universal Grammar (as discussed in section 5). Armed with U.G., then, the child presented with a finite verb bearing more than one overt inflectional morpheme is clearly licensed to conclude that their target grammar must contain adequate functional heads to host the form. In this way, morphology may provide a cue to the child about the Split IP Parameter, but the morphology does not cause the syntax. Note though, that the morphology is one of many potential cues for the Split IP Parameter, any of the other effects of the Split IP Parameter mentioned above should suffice (including verb movement to Infl, which here is not a parameter in and of itself, but a consequence of a deeper structural parameter).¹⁰ In a similar vein, if morphology is a cue to the underlying syntactic variation, then the loss of morphological distinctions does not entail the loss of verb movement (the empirical evidence is quite clear on this point), but it does mean that there is one fewer cue to the next generation of learners. On the approach developed here, it follows thus that the loss of rich inflection is a necessary, but not a sufficient condition for the loss of verb movement to Infl.

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10. Note that the available evidence is that children acquire (i.e., produce) verb movement quite early, apparently with the acquisition of a simple finite versus non-finite contrast and long prior to the acquisition of inflectional “paradigms”. See Lardiere 2000 and references therein. This is fully consistent with the approach outlined here, and quite problematic for a morphology-driven approach.

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