

On the Site of Morphology and Crosslinguistic Variation

James E. Lavine
Wellesley College/MIT

1 Introduction

The purpose of this paper is to provide empirical evidence for a “separationist” view of morphology, where separationism refers to those theories of morphology that allow for the morphosyntactic representation of a given object to be potentially separated from its phonological expression (see, e.g., Anderson 1992, Halle and Marantz 1993, and Beard 1995; for a more general discussion of separationism see Harley and Noyer 1999).¹ Separationist theories of morphology are motivated in part by those cases in which the phonological structure (what we hear) fails to line up with the syntactic bracketing (what we interpret). The leading idea is that terminal nodes in the syntax need not bear phonological information. Such a view of morphology necessarily sanctions Late Insertion, whereby the terminal nodes in the syntax are given phonological expression by means of post-syntactic operations. As we will see, such operations can have the effect of rearranging the linear order of terminal elements in the syntactic tree. Note, however, that Late Insertion need not apply obligatorily. The fact that Late Insertion is available only as an option makes it possible for such a mechanism to serve as a source of syntactic variation.

The view of morphology outlined above will be discussed on the basis of the non-agreeing passive-participial predicates in Polish and Ukrainian, given in (1-2):²

- (1) Polish
- a. Znaleziono niemowlę w koszu.
found:-NO baby:ACC in basket
‘They found a baby in a basket.’
 - b. Stefana wzięto do wójska.
Stefan:ACC taken:-TO to army
‘They drafted Stefan into the army.’
- (2) Ukrainian
- a. Nemovlja bulo znajdeno u koшыku.
baby:ACC AUX:PAST found:-NO in basket
‘A baby was found in a basket.’
 - b. Narešti cju mohylu vzjato pid oxoronu deržavy.
finally this grave:ACCtaken:-TO under protection of-state
‘Finally this grave has come under the protection of the state.’

[Wieczorek 1994:16]

Given the surface homophony of the word-final morphology and the fact that the participle’s complement appears (exceptionally) in the ACC Case, these

superficially similar constructions are generally held to instantiate the same phenomenon.³ As we will observe shortly, however, affixation of the /-no/-to/ morpheme in the two languages results in radically different syntactic properties.⁴ I will show that these syntactic differences follow from where the /-no/-to/ morpheme is attached to the verb-stem.

I will propose that Ukrainian *-no/-to* is lexical in the sense that the participle enters the syntax with its word-final morphology intact. In contrast, I will show that the /-no/-to/ morpheme in Polish enters the derivation **independently**, where it occupies its own syntactic position. Polish /-no/-to/ is subsequently joined (and pronounced with) the verb stem by means of a PF-operation. The central theoretical claim of this paper is thus as follows in (3):

- (3) Certain syntactic variation reduces to variability in the site at which Morphology applies.

To review, I will propose that Ukrainian /-no/-to/ is pronounced where it is generated in the structure. In Polish, I will argue that /-no/-to/ has a syntactic life of its own, despite the fact that at some level of Spell-Out it is pronounced as a bound morpheme. So for the case of Polish, I will show that the syntactic representation of *-no/-to* is at odds with its morphophonological representation, resulting in a mismatch between syntactic and morphological structure.

The remainder of the paper is organized as follows: in section 2, I review the ways in which Polish and Ukrainian *-no/-to* differ and propose that these differences are reducible to the site of /-no/-to/'s generation in each language. In section 3, the case of Polish *-no/-to* is taken up, where the /-no/-to/ morpheme is argued to join the verb-stem via the post-syntactic operation of Morphological Merger (Marantz 1988, 1989). Finally, section 4 deals with the remaining problem of accounting for the presence of a Structurally-marked ACC object in the case of "lexical" Ukrainian *-no/-to*. That is, in the case of Ukrainian, where /-no/-to/ is attached to the verb-stem by a lexical operation, we would expect the complex predicate (or unaccusative *v*) to lose its ability to check Structural Case (Case Absorption). A novel analysis is presented in terms of recent feature-checking theory, in which a correlation is proposed between non-agreement and the ability of unaccusative predicates to cooccur with ACC complements.

2 The AUX HYPOTHESIS

Notice that, at first glance, Polish and Ukrainian *-no/-to* are structurally distinct in a variety of seemingly arbitrary ways. We begin by noting that only the Ukrainian structure allows overt tense-marking auxiliaries; such tense-marking auxiliaries in Polish are ungrammatical. These facts are given in (4).

- (4) a. Polish
 Znaleziono *było / *zostało / *jest / *będzie niemowlę
 found:-NO AUX:PAST AUX:PAST AUX:PRES AUX:FUT baby:ACC

w koszu.
in basket
'They found a baby in a basket.'

- b. Ukrainian
Nemovlja bulo / bude znajdeno u košyku.
baby:ACC AUX:PAST AUX:FUT found:-NO in basket
'A baby was found in a basket.'

Next, note in (5a) that the passive *by*-phrase in Polish, marked by *przez* 'through' + ACC, is ungrammatical; only Ukrainian allows a passive *by*-phrase, marked by the INST Case, as shown in (5b).

- (5) a. Polish
Znaleziono niemowlę w koszu (* przez lekarzy).
found:-NO baby:ACC in basket by doctors:ACC
b. Ukrainian
Nemovlja bulo znajdeno u košyku likarjami.
baby:ACC AUX:PAST found:-NO in basket doctors:INST
'A baby was found in a basket by doctors.'

The canonical agreeing passive in Polish allows both tense-marking auxiliaries and a *by*-phrase, as shown in (6), thus suggesting that the restriction on the appearance of auxiliaries and *by*-phrases is a fact about /-no/-to/ rather than a more general fact about Polish.

- (6) Polish
Niemowlę zostało znalezione w koszu przez
baby:NOM.NEUT.SGAUX:PAST.NEUT.SG found:NEUT.SG in basket by
lekarzy.
doctors:ACC
'A baby was found in a basket by doctors.'

A third, apparently unrelated fact is the distribution of *-no/-to* constructions in the two languages with respect to predicate type. Only Polish allows /-no/-to/ to attach to unaccusative predicates, in apparent violation of some notion of vacuous dethematization (Marantz 1984) or Relational Grammar's 1AEX (Perlmutter and Postal 1984) under a passive analysis for Polish *-no/-to*. Ukrainian /-no/-to/, in contrast, does not attach to unaccusative verbs. These facts are given in (7-8).

- (7) Polish
a. Basic Unaccusative
Tonięto / topiono się w morzu, a nie w wannie.
drowned:-TO drowned:-NOREFL in sea and not in bathtub
'People drowned in the sea, not in a bathtub.' [Rozwadowska 1992:62]

b. Object-Experiencer Verbs

[Experiencer-Theme di-unaccusatives (Belletti and Rizzi 1988)]

Zmartwiono Jana wiadomościami z Polski.

upset:-NO Jan:ACC news:INST from Poland

‘Jan was upset with news from Poland.’

(8) Ukrainian⁵

a. Basic Unaccusative

*umerano / *toneno / *buvano

died:-NO drowned:-NO been:-NO

b. Object-Experiencer Verbs

*Ivana bulo zdyvovano žurnalistamy.

Ivan:ACC AUX:PAST surprised:-NO journalists:INST

‘Ivan was surprised by the journalists.’

Finally note the “implicit subject properties” discussed in Baker, Johnson, and Roberts 1989, which are argued to hold of the external argument that is targeted by passivization. In (9-10) we see that subject binding and control proceed unaffected by /-no/-to/ affixation in Polish, while in Ukrainian the external argument does not take part in these syntactic processes. That is, it is only in the case of Ukrainian *-no/-to* that the external argument is truly dethematized.

(9) Polish

a. Binding of Anaphors

Bito_i strażników_j swoimi_{i/*j} (ich_{*i/j}) łańcuchami.

beaten:-TO guards:ACC REFL their chains:INST

‘They_i beat the guards_j with their_{i/*j} chains.’ [Kibort 2000]

b. Control of Adverbial Gerund (GER)

Tę książkę czytano siedząc przy kominku.

this book:ACC read:-NO sitting:GER by fireplace

‘People read this book sitting by the fireplace.’ [Dziwirek 1994:191]

(10) Ukrainian

a. Binding of Anaphors

Storożiv_j bulo pobyto_i svojimi_{*i/*j} (jixnimi_{*i/j})

guards:ACC AUX:PAST beaten:-TO REFL their

lancjuhamy.

chains:INST

‘Guards_j were beaten_i with their_{*i/j} chains.’

b. Control of Adverbial Gerund (GER)

*Cilu porciju bulo vidrazu z’jideni ne

whole portion:ACC AUX:PAST immediately eaten:-NO NEG

opam’jatavšys’.

coming-to:GER

‘A whole portion was immediately eaten before coming to one’s senses.’

In the Polish examples in (9a-b), it is plainly the case that the anaphor and PRO subject of the adverbial gerund are controlled by the external argument of *bity* ‘beaten’ and *czytano* ‘read’, respectively. In Ukrainian (10a), a cognate example with Polish (9a), the reading where the external argument of the participle (the one who did the beating) is coreferential with the possessor of the instrument used is unavailable. That is, the anaphor in (10a), in contrast to (9a), receives no interpretation. Ukrainian (10b) is ruled out by virtue of the fact that the only available reading is the one in which it is the portion of food that implausibly controls the PRO subject of the adverbial gerund, rather than the external argument of *z’jideno* ‘eaten’.

A summary of the diagnostics that have been used to distinguish Polish and Ukrainian *-no/-to* is given in (11):

- (11) a. AUX (*Polish), (Ukrainian)
 b. *by*-phrase (*Polish), (Ukrainian)
 c. *-no/-to/* + unaccusatives (Polish), (*Ukrainian)
 d. subject binding and control (Polish), (*Ukrainian)

The question is whether these properties can be unified under a theory of *-no/-to/* affixation that predicts their clustering. My proposal is given in (12):

- (12) AUX HYPOTHESIS
 Polish (but not Ukrainian) *-no/-to/* has been reanalyzed as a syntactically-independent auxiliary element heading a Tense projection.

The AUX HYPOTHESIS for Polish *-no/-to* immediately accounts for *-no/-to/*’s complementary distribution with overt tense-marking auxiliaries. The position ordinarily occupied by tense-marking auxiliaries is already filled by *-no/-to/*. Furthermore, auxiliaries are functors with respect to the predicate’s theta-properties. They have no argument structure (or meaning) of their own, and, as a result, they simply inherit the argument structure of the predicate with which they compose (see Di Sciullo and Williams 1987). If the predicate’s argument structure is not affected by *-no/-to/* affixation, then the robust subject properties of the external argument and the lack of a passive *by*-phrase fall out automatically. The fact that *-no/-to/* can be attached to unaccusatives is also explained: there is no vacuous dethematization effect since auxiliaries, unlike passive-participial morphemes, do not carry an argument-structure restriction.⁶

Ukrainian *-no/-to* fails the AUX HYPOTHESIS. That is, in the case of Ukrainian, *-no/-to* predicates are drawn from the lexicon fully-formed. The usual adjustments to the predicate’s argument structure under passivization take place in the lexicon. This predicts the Ukrainian facts in (11) and presents an interesting case of divergent cognate morphology in the two languages.

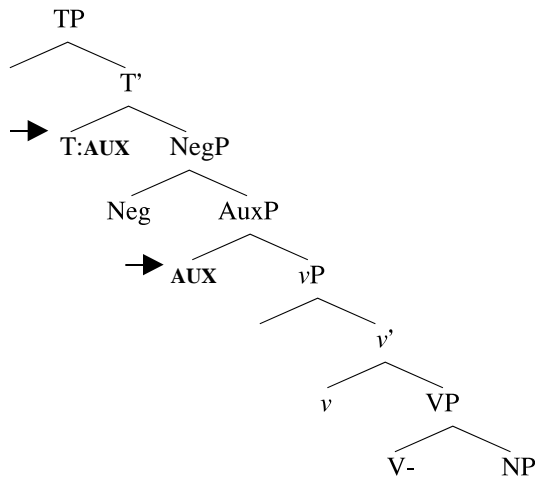
What remains to be explained is the following: (i) for Polish, if /-no/-to/ enters the syntax independently, how does it join with the verb-stem? and (ii) for Ukrainian, how is it that passive-participial morphology fails to “absorb” Structural ACC Case? These questions will be taken up in sections 3 and 4, respectively.

3 The Polish Problem: Late Insertion and Adjacency

Assuming that something like the AUX HYPOTHESIS for Polish is correct, that is, that /-no/-to/ in Polish is interpreted in a higher position than where it is pronounced, the question is whether the operation necessary to bring this affix and the verb-stem together is the result of a purely syntactic mechanism. I will show that the data turn in the direction of joining the verb-stem and affix in the Phonological Component of the derivation.

First, we examine the structure for Polish *-no/-to*. Following Borsley and Rivero 1994, I will assume that there are two positions in which auxiliaries can appear in Polish. The higher of these positions is referred to as a T(ense)P and the lower as an AuxP. The two positions are separated by a Negation projection, which will serve as one of the main diagnostics for identifying where /-no/-to/ is generated. Note the structure in (13):

(13) Polish: AUX Positions



The two different types of auxiliaries are the past-tense clitic Person-Number (P-N) markers and the clitic conditional *by*, on the one hand, and the non-clitic auxiliaries, *było*:PAST, *został*:PAST *jest*:PRES, and *będzie*:FUT, on the other. The basic facts of negation as they apply to the two AUX positions are as follows: non-clitic auxiliaries follow the NEG particle, while detached clitic auxiliaries (P-N markers and conditional *by*) precede it. These facts are illustrated in (14-16):

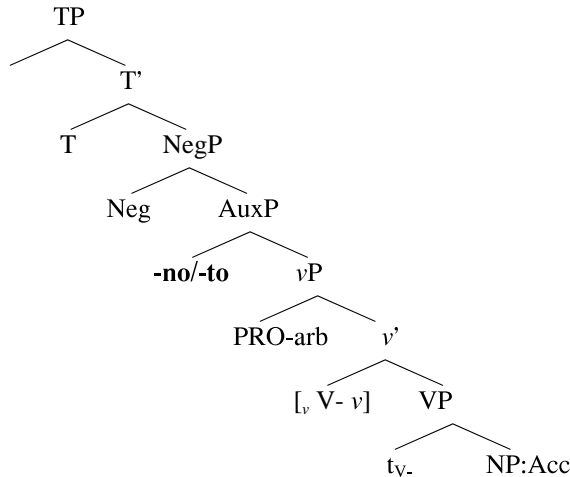
- (14) Non-Clitic AUX and Negation
- a. Janek **nie będzie** czytał tej książki.
 Janek:NOM NEGAUX:FUT read this book:GEN
 ‘Janek will not read this book.’
- b. *Janek **będzie nie** czytał tej książki.
- (15) Clitic AUX and Negation: P-N Markers
- a. My- **śmy nie** czytali tej książki.
 we:NOM AUX:1.PL NEG read this book:GEN
 ‘We didn’t read this book.’ [Borsley and Rivero 1994]
- b. *My **nie-śmy** czytali tej książki.
- (16) Clitic AUX and Negation: Conditional *by*
- a. Janek **by nie** czytał tej książki.
 Janek:NOM CONDNEG read this book:GEN
 ‘Janek would not read this book.’
- b. *Janek **nie by** czytał tej książki.

The question now is which of these two positions /-no/-to/ occupies. Recall that much is being made of the complementary distribution of /-no/-to/ and the non-clitic auxiliaries. This would seem to implicate the lower AUX position. This is further supported by the fact that /-no/-to/ cooccurs with conditional *by*, which I take to be in the same position as the P-N markers, following Borsley and Rivero 1994. Note, for example, the conditional in (17):

- (17) *-no/-to* + Conditional *by*
- Już **by** kupiono samochód, gdyby nie było innych
 already COND bought:-NO car:ACC if NEG was other
 rzeczy do zrobienia.
 things:GEN for doing
 ‘They would have already bought the car if there weren’t other things to do.’

The cooccurrence of /-no/-to/ and conditional *by* rules out the higher AUX position for /-no/-to/’s site of generation.⁷ The final structure for Polish *-no/-to* is given in (18):

(18) Polish *-no/-to*⁸



To recall, I am proposing that Polish *-no/-to* introduces a mismatch between syntactic and morphological structure. The */-no/-to/* morpheme enters the syntactic structure as an autonomous entity in the head of the lower AUX projection, but is pronounced together with the verb stem. That is, the terminal nodes in the syntax receive a separate interpretation at the level of Morphology. This mismatch is schematized in (19):

- (19) a. Syntax
 [AuxP [Aux **-no/-to** [vP PRO-arb [v **V- v**] [VP [v tv NP]]]]]
 b. Morphology
 [AuxP [Aux [vP PRO-arb [v **V-no/-to v**] [VP [v tv NP]]]]]

It is crucial to bear in mind that */-no/-to/* is selected from the lexicon with the feature of being an **affix**. Note that being an affix is a morphophonological notion, like being a clitic. The problem, then, with syntactic approaches to bringing the verb-stem and affix together is one of motivation. For this movement to be truly syntactic, it would have to be motivated by an insufficiency of the target (Attract), that is, */-no/-to/*'s need to combine with its verbal host. However, since the property of being an affix is not a syntactic feature (such as Case or agreement), it should not drive movement in the syntax.

Following recent work in Distributed Morphology (Halle and Marantz 1993, Embick 1995), I will assume that only the morphosyntactic features of */-no/-to/* are generated in the lower AUX head with no phonetic content, while the mapping to PF merges */-no/-to/* and V- (Late Insertion). That is, the lower AUX does not actually dominate any phonological material. According to separationist theories of Morphology, the morpheme enters the narrow-syntactic derivation without needlessly carrying along its phonological representation (see also

Jackendoff 1997, ch. 4). The analysis to follow builds on the fact while PF sees an affix, the syntax just sees a head--a legitimate syntactic object. This is what lies behind the syntax/morphology mismatch in (19).

The leading idea of this approach is that the (Morpho-)Phonological Component is the ultimate arbiter for the establishment of linear order. Building on the observation of Marantz 1988 and Bobaljik 1994 that operations that apply to the mapping from syntax to phonology involve an adjacency condition, the operation that brings affixal /-no/-to/ together with the verb stem is a particular instance of Morphological Merger of structurally adjacent nodes (Marantz 1988, Halle and Marantz 1993). Morphological Merger takes a syntactic relation between two heads and replaces this configuration in PF by an affixation relation. According to Harley and Noyer (1999), “[w]hat Merger does is essentially ‘trade’ or ‘exchange’ a structural relation between two elements at one level of representation for a different structural relation at a subsequent level.” The role that adjacency plays is to ensure that the elements undergoing Merger are “close enough” to allow affixation. Morphological Merger is defined in (20) and schematized in (21):

- (20) Morphological Merger (Marantz 1988)
 At any level of syntactic analysis..., a relation between the heads X and Y may be replaced by the affixation of X to Y [as long as X is listed in the lexicon as an affix].
- (21) Morphological Merger
 [X... [Y...]] [Y + X]

This is what gives us (19b) from (19a) without recourse to poorly motivated syntactic movement. Note that operations at PF have also been proposed to account for English *do*-support (Lasnik 1981, 1999, Bobaljik 1994), the English possessive ‘s clitic (Marantz 1988), Germanic V-Movement in Object Shift constructions (Bobaljik 1994), and West and South Slavic cases of apparent Long Head Movement (Embick and Izvorski 1997, Konopasky 2000). Indeed, what all these phenomena have in common with Polish *-no/-to* is an **adjacency requirement**. That is, lexical items can undergo Morphological Merger only if they are adjacent with respect to what PF can see. If /-no/-to/ were generated in the higher AUX position (T), rather than the lower one, then NEG would intervene (along the lines of *do*-support) and disrupt the necessary adjacency relation between the affix and its verbal host.

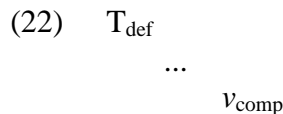
To summarize, the evidence for combining Polish /-no/-to/ with the verb-stem post-syntactically is based on the following points: (i) that the requirement that affixes be affixed is a well-formedness constraint of the PF-component, not a formal feature (along the lines of Case and agreement) responsible for narrow-syntactic displacement; and (ii), that /-no/-to/’s complementary distribution with elements in the lower AUX position indicates the presence of an adjacency condition on /-no/-to/ affixation. Strictly speaking, linear adjacency is not a condition

that holds of purely syntactic processes. As we have seen, the post-syntactic Merger of /-no/-to/ in Polish has a wide variety of seemingly unrelated syntactic consequences. The main theoretical claim of this paper is that the properties that result from Polish /-no/-to/'s "late" Merger are precisely those that distinguish this construction from its Ukrainian counterpart. That is, the predicate-final morphology in the two languages bears the same set of syntactic features (namely, non-agreement); the divergent set of syntactic properties is the result of where in the derivation this morphology is attached.

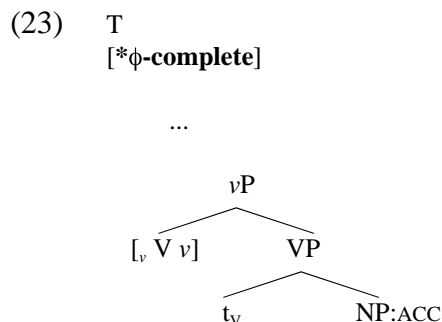
4 The Ukrainian Problem: On Unaccusative v

Note that the post-syntactic merger of Polish /-no/-to/ affix has the added advantage of accounting for the ACC Case-marking on the predicate's complement. This is because Polish *-no/-to* does not entail passivization. Recall that the same is not true for Ukrainian. Before concluding, I would like to propose how a genuine passive like Ukrainian *-no/-to* can surface with an ACC object.

Accusative Case on the object, for all unaccusatives, is the result of the following configuration, with respect to the ϕ -completeness of T(ense) and v , given in (22), where ϕ -completeness refers to a full set of agreement features, which in recent theory (Chomsky 1999, 2000) is held to be responsible for checking Structural Case:



What normally prevents unaccusative v from checking ACC is the subsequent requirement that the predicate's complement enter into a checking relation with a ϕ -complete T. That is, there is a correlation with Case downstairs and the status of the ϕ -set upstairs. This is schematized in (23):

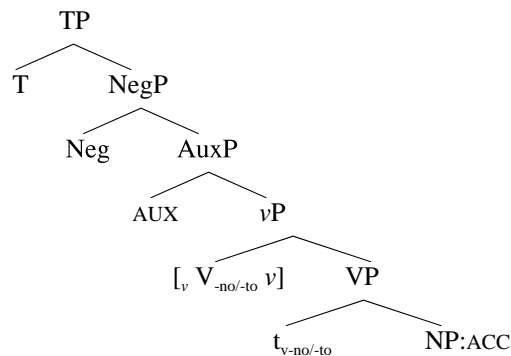


In the case of **defective** (or **-incomplete**) T, the NP valued for ACC is not subsequently forced to check T's ϕ -features, and, thus, the derivation can converge. T is ϕ -incomplete in the case of nonagreeing predicates only (and infinitives). The proposal, then, is that the lexical availability of nonagreeing morphology on the

predicate is what allows for unaccusatives to appear with ACC complements (see Lavine and Freidin, to appear, for discussion).

The structure for Ukrainian *-no/-to* is given in (24). Under the current approach, the difference between the structure for Ukrainian *-no/-to* and its Polish counterpart is the site of */-no/-to/*'s generation and the resulting lack of an external argument in the case of Ukrainian.

(24) Ukrainian *-no/-to*



Note additionally that T is defective (= -incomplete) in both Polish and Ukrainian *-no/-to*. This allows *v* in both cases to value ACC on lexical V's complement (via the Agree relation), thus unifying the ACC-Case-assigning mechanism in the two languages. There is no such thing as “Case Absorption”. Contra recent theory on the properties of *v* (Chomsky 1999), the licit assignment of ACC Case on the object reduces to a fact about agreement on T, rather than to the question of whether or not *v* assigns an external argument.⁹

5. Conclusion

The main empirical claim of this paper is that the Polish */-no/-to/* affix is interpreted as the head of a functional projection. The first piece of evidence for this proposal is the complementary distribution of Polish */-no/-to/* and anything else heading the lower AUX projection. The AUX HYPOTHESIS for Polish */-no/-to/* predicts the other syntactic properties of this construction and distinguishes it from its superficially similar Ukrainian counterpart. Assuming that stranded affixes constitute a PF-, rather than a strictly syntactic, violation, it is shown that Polish */-no/-to/* and the verb-stem are joined under affixation in the Morphophonological Component, where processes such as English *do*-support are believed to take place. The theory presented for Polish */-no/-to/* relies on the idea that morphemes can provide one set of instructions for narrow syntax and another, unrelated, set of instructions for their phonological realization. I have attempted to show that some such separationist theory of Morphology is necessary.

The fact that the AUX HYPOTHESIS does not hold for Ukrainian */-no/-to/* supports the larger theoretical claim of this paper, namely, that crosslinguistic

variation in closely-related languages may be best accounted for in terms of where Morphology in particular instances applies. That is, I have shown that where Morphology takes place matters.

Notes

¹ The term “separationism” is due originally to Beard’s “Separation Theory” (see, e.g., Beard 1988).

² Note the difference in the English glosses for the cognate examples in (1a) and (2a). It will be argued that the Polish construction contains a fully-thematic external PRO-*arb* argument, in contrast to its Ukrainian counterpart. For more on the features of Polish /-no/-to/’s PRO-*arb* subject, see Dziwirek 1994.

³ The examples in (1-2) are often cited as “exotic” passives due to their lack of Case Absorption and their corresponding exceptional behavior with respect to Burzio’s Generalization (see, e.g., Baker, Johnson, and Roberts 1989). I will not pursue these matters here. For discussion of ACC-Case-assigning participial predicates in Polish and Ukrainian, see Babby 1989, Maling 1993, Goodall 1993, Dziwirek 1994, Billings and Maling 1995, Lavine 2000, 2001, and Lavine and Freidin, to appear.

⁴ Note that word-final /-no/ and /-to/ are allomorphs, which at one time marked the NEUT.SG in both languages; in the modern languages they no longer mark agreement of any sort. Given the unchanging word-final morphology in (1-2), these predicates are referred to as Polish and Ukrainian *-no/-to*, respectively.

⁵ The Ukrainian facts, to be sure, are significantly more complicated. Ukrainian *-no/-to* does appear with inchoatives and other predicates lacking external causation, as in (i-ii), thus weakening the claim that the /-no/-to/ morpheme in Ukrainian does not attach to unaccusative verb-stems.

- (i) Vikno bulo začyneno / rozbyto.
 window:ACC AUX:PAST closed:-NO broken:-TO
 ‘The window closed/broke.’
- (ii) Derevo bulo vypaleno soncem.
 wood:ACC AUX:PAST burned:-NO sun:INST
 ‘The wood was burned (warped) by the sun.’

The example in (8b) merely indicates that *-no/-to* passivization in Ukrainian, like passivization more generally, cannot apply on Themes (assuming that (8b) is an Experiencer-Theme verb). Thus, there is reason to believe that (i-ii) above are not passive; that is, not all instances of Ukrainian *-no/-to* involve passivization. The discussion in the text merely focuses on those instances of Ukrainian *-no/-to* that are passive. The question of why Ukrainian *-no/-to* applies only to **transitive** unaccusatives (cf. (i-ii) above and (8a)), and not to unaccusatives more broadly, as in the case of Polish *-no/-to*, takes us beyond the scope of the present work.

⁶ Note that the AUX HYPOTHESIS for Polish *-no/-to* also explains the following fact (noted in Oesterreicher 1926) concerning this construction’s development: /-no/-to/ came to cooccur productively with ACC objects (rather than NEUT.SG subjects) only after tense-marking auxiliaries ceased to appear in this construction (15th-17th centuries). A more precise description of this diachronic process is given shortly. See Lavine 2000, 2001 for details and examples from Old Polish.

⁷ Note that the P-N markers, also in the higher AUX position (T), are phonologically null in the 3.PL, the form required for the PRO-*arb* reading of Polish *-no/-to*. As a result, we cannot determine conclusively whether /-no/-to/ and the P-N markers cooccur as well, though the present analysis assumes that they do.

⁸ See Maling 1993 on PRO-*arb* in Polish *-no/-to* as occupying the thematic subject position. As Maling notes, this unifies Polish *-no/-to* and infinitival constructions with respect to the infelicity of non-human PRO subjects. Note, for example, the ungrammatical Polish *-no/-to* constructions in (i) and the English infinitivals in (ii):

- (i) a. *Na podwórzu szczekano.
 in yard barked:-NO
 ‘There was barking in the yard.’ [Dyła 1983:123]
 b. *Zwiednięto.
 wilted:-TO
 ‘There was wilting.’ [Maling 1993]
- (ii) a. *To elapse without incident would be a miracle.
 b. *To be milked before dawn is important. [Maling 1993]

For additional discussion of PRO-*arb* in Polish *-no/-to* I thank John Frampton for his comments at CLS.

⁹ Note that the relationship between the Case-assigning properties of *v* downstairs and the completeness of T upstairs does not involve “look-ahead”. Derivations in which *v* fails to value Structural Case when dominated by defective T will simply not converge.

References

- Anderson, Stephen. 1992. *A-Morphous Morphology*. Cambridge: Cambridge University Press.
- Babby, Leonard. 1989. Subjectlessness, external subcategorization, and the Projection Principle. *Zbornik Matice srpske za filologiju i lingvistiku* 9:1-55.
- Baker, Mark, Kyle Johnson, and Ian Roberts. 1989. Passive arguments raised. *Linguistic Inquiry* 20:219-251.
- Beard, Robert. 1988. On the separation of derivation from morphology: Toward a Lexeme/Morpheme-based morphology. *Quaderni di Semantica* 9:3-59.
- Beard, Robert. 1995. *Lexeme-Morpheme Base Morphology*. Albany: SUNY Albany Press.
- Belletti, Adriana and Luigi Rizzi. 1988. Psych verbs and theta-theory. *Natural Language and Linguistic Theory* 6:291-352.
- Billings, Loren and Joan Maling. 1995. Accusative-assigning participial *-no/-to* constructions in Ukrainian, Polish, and neighboring languages: An annotated bibliography. *Journal of Slavic Linguistics* 3/1:177-217; 3/2:396-430.
- Bobaljik, Jonathan. 1994. What does adjacency do? *MIT Working Papers in Linguistics 22: The Morphology-Syntax Connection*, ed. by Heidi Harley and Colin Phillips, 1-32. Cambridge, Mass: MIT, Department of Linguistics and Philosophy.
- Borsley, Robert and Maria Luisa Rivero. 1994. Clitic auxiliaries and incorporation in Polish. *Natural Language and Linguistic Theory* 12:373-422.
- Chomsky, Noam. 1999. Derivation by phase. Ms., MIT.
- Chomsky, Noam. 2000. Minimalist inquiries: The framework. *Step by Step: Essays on Minimalism in Honor of Howard Lasnik*, ed. by Roger Martin, David Michaels, and Juan Uriagereka. Cambridge, Mass: MIT Press.
- Di Sciullo, Anna Maria and Edwin Williams. 1987. *On the Definition of Word*. Cambridge, Mass: MIT Press.
- Dyła, Stefan. 1983. Some further evidence against an impersonal passive analysis of Polish impersonal constructions. *Studia anglica posnaniensia* 15:123-128.
- Dziwirek, Katarzyna. 1994. *Polish Subjects*. New York: Garland.
- Embick, David. 1995. Mobile inflection in Polish. *Proceedings of NELS 25*, ed. by Jill Beckman, 127-142. Amherst: GLSA, University of Massachusetts, Amherst.

- Embick, David and Roumyana Izvorski. 1997. Participle-auxiliary word order in Slavic. *Formal Approaches to Slavic Linguistics 4: The Cornell Meeting*, ed. by Wayles Browne, Ewa Dornisch, Natasha Kondrashova, and Draga Zec, 210-239. Ann Arbor: Michigan Slavic Publications.
- Goodall, Grant. 1993. On case and the passive morpheme. *Natural Language and Linguistic Theory* 11:31-44.
- Halle, Morris and Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. *The View from Building 20*, ed. by Kenneth Hale and Samuel Jay Keyser, 111-176. Cambridge, Mass: MIT Press.
- Harley, Heidi and Rolf Noyer. 1999. State-of-the-article: Distributed Morphology. *GLOT* 4.4:3-9.
- Jackendoff, Ray. 1997. *The Architecture of the Language Faculty*. Cambridge, Mass: MIT Press.
- Kibort, Anna. 2000. Morpholexical rules in Polish revisited. Paper presented at Generative Linguistics in Poland 2, Warsaw.
- Konopasky, Abigail W. 2000. Long Head Movement in Slavic. Ms., Princeton University.
- Lasnik, Howard. 1981. Restricting the Theory of Transformations: A case study. *Explanations in Linguistics: The Logical Problem of Language Acquisition*, ed. by Norbert Hornstein and David Lightfoot, 152-173. London: Longman.
- Lasnik, Howard. 1999. Verbal morphology: *Syntactic Structures* meets the Minimalist Program. *Minimalist Analysis*. 97-119. Oxford: Blackwell.
- Lavine, James. 2000. *Topics in the syntax of nonagreeing predicates in Slavic*. Ph.D. dissertation, Princeton University.
- Lavine, J. 2001. On a new (affixal) AUX in Polish. *Generative Linguistics in Poland 2*, ed. by Piotr Bański and Adam Przepiórkowski. Warsaw: Polish Academy of Sciences.
- Lavine, James and Robert Freidin, to appear. The subject of defective T(ense) in Slavic. *Journal of Slavic Linguistics*.
- Maling, Joan. 1993. Unpassives of unaccusatives. Ms., Brandeis University.
- Marantz, Alec. 1984. *On the Nature of Grammatical Relations*. Cambridge, MA:MIT Press.
- Marantz, Alec. 1988. Clitics, morphological merger, and the mapping to phonological structure. *Theoretical Morphology*, ed. by Michael Hammond and Michael Noonan, 253-270. San Diego: Academic Press.
- Marantz, Alec. 1989. Clitics and phrase structure. *Alternative Conceptions of Phrase Structure*, ed. by Mark Baltin and Anthony Kroch, 99-116. Chicago: University of Chicago Press.
- Oesterreicher, Henrych. 1926. *Imiastów bierny w języku polskim*. Kraków: Polska akademja umiejętności.
- Perlmutter, David and Paul Postal. 1984. The 1-Advancement Exclusiveness Law. *Studies in Relational Grammar 2*, ed. by David Perlmutter and Carol Rosen, 81-125. Chicago: University of Chicago Press.
- Rozwadowska, Bożena. 1992. *Thematic Constraints on Selected Constructions in English and Polish*. Wrocław: Wydawnictwo uniwersytetu wrocławskiego.
- Wieczorek, Diana. 1994. *Ukrainskij pierfiek na -NO, -TO na fonie polskiego pierfiekta*. Wrocław: Wydawnictwo uniwersytetu wrocławskiego.