

Zusammenfassung

Dieser Aufsatz befasst sich mit diversen Aspekten der Interpretation von Nominalphrasen im Deutschen. Es wird vorgeschlagen, dass im Deutschen das Konzept der Quantorenanhebung (QR) aufgegeben werden kann zugunsten von Semantischer Rekonstruktion (Cresti 1995, Rullmann 1995). Es wird gezeigt werden, dass Semantische Rekonstruktion eine unabhängig motivierte Strategie der Grammatik darstellt und mithin nicht parasitär zu syntaktischer Rekonstruktion im Sinne der Copy Theory (Chomsky 1992) gesehen werden kann. Ein entscheidender Unterschied der beiden Arten von Rekonstruktion besteht darin, daß gesramblete Kategorien durch semantische, nicht jedoch durch syntaktische Rekonstruktion rückgängig gemacht werden kann. Es wird eine kompositionale Ableitung der Diesingschen (1990, 1992) Mapping Hypothese vorgestellt, die aufgrund empirischer Evidenz einer Analyse mit existentielltem Abschluss vorzuziehen ist. Schließlich wird gezeigt werden, daß die Interaktion der beiden Strategien der syntaktischen und semantischen Rekonstruktion eine adäquate Darstellung des komplexen Phänomenbereichs von Scrambling von Objekten in intensionalen Kontexten erlaubt.

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IS INFLECTIONAL SYNTAX A MORPHOLOGY LICENSING SYSTEM OR A FEATURE LICENSING SYSTEM?*

0. Introduction

Recent developments in syntactic theory in the Government-Binding tradition such as Chomsky's Minimalist Program (Chomsky, 1995) and Kayne's proposal and its corollaries regarding the nature of the c-command relation (Kayne, 1994) have lent the notion "licensing" a prominent position in descriptions of syntactic structures. In the approach to syntax exemplified by Chomsky and Kayne, distinct sentential word orders across languages are related by universal syntactic principles to non-distinct "lexical argument structures." A predicate is associated with a "theta grid" in the lexicon (it does not acquire it in the syntax) and distinct theta roles are associated with distinct structural positions local to the predicate. These structural positions are related to the predicate through syntactic processes (spec-head relation, incorporation) in a manner which is universal across derivations and across languages (Baker, 1988, Hale and Keyser, 1993). However, elements do not enter the lexical argument structure with the grammar's stamp of approval. In order to acquire the grammar's stamp of approval, an element must move out of the lexical argument structure into a "licensing" position made available in the "inflectional syntax" (the IP-CP complex).

A certain ambiguity characterizes descriptions of the "element" the previous sentence refers to. Lexical features (phi-features, specificity, QP-type, etc.) are subject to licensing. Morphemes are not licensed as such; their distribution arises from their tendency to pied-pipe with the feature or features they represent to the feature's licensing position (or not, see Chomsky, 1995). However, the necessity for a certain feature to be licensed by spell-out is crucially related to the overtness or covertness of morphology that the feature is associated with. Generally, overt morphology must be licensed before spell-out, non-overt morphology need not (see Vikner, 1994, and references cited there regarding how much overt morphology is necessary to motivate movement). The sensitivity to overtness in the licensing process indicates that

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the syntax is concerned with the distribution of morphemes, not merely the checking off of features, and presumably for this reason the terms "feature licensing" and "morphology licensing" appear largely synonymous in descriptions of syntactic structures. I will show in what follows that the distinction is non-trivial and that the formulation of licensing in terms of features or morphemes has important ramifications. Though I do not provide data which crucially show that one or the other formulation is correct, I show that a difference exists and that it bears in important ways on current developments in syntactic theory.

I use the term "morpheme" only to refer to phonological entities, which may be non-overt, but which may not be abstract. The difference between non-overtness and abstractness is the difference is between saying that a property like e.g. specificity is marked by a non-overt affix or that it is an abstract feature of a noun not associated with any morphology. A morpheme is a phonological element that cannot be subdivided into meaningful smaller elements. "Morphology" here refers to phonological elements and their distributional properties. I use the term "feature" to refer to any attribute of an element. In section 1, I outline the feature licensing approach to the licensing phenomenon, and provide evidence for and against it. Certain evidence against the feature licensing approach seems to indicate that a pure morphology licensing approach is the proper formulation of the licensing phenomenon. In section 2, I outline the pure morphology licensing approach, and provide evidence for and against it. Section 3 concludes.

1. Feature licensing approach

In the feature licensing formulation of the displacement of morphemes from their lexical argument structure positions, a certain feature, e.g. [+nominative], raises from the argument structure position with which it is associated into the position which is lexically specified as a checking position for the feature [+nominative]. The feature may move before or after spell-out, but once it is in its licensing position, economy conditions prevent it from moving further.

1.1 Evidence for feature licensing

The evidence I will provide in favor of feature licensing is data which shows that distinct features of one morpheme may be associated with distinct syntactic positions. A well known example is specificity. The specific reading of an NP may be forced in a certain syntactic position, as in for example Modern Standard Arabic:

- (1) a. *daras-a* *filistiyniy-un* *al-'adabiyaat-a*
 studied-3ms Palestinian-NOM def-literature-ACC
 'A Palestinian (±spec.) studied literature'
- b. *filistiyniy-un* *daras-a* *al-'adabiyaat-a*
 Palestinian-NOM studied-3ms def-literature-ACC
 'A Palestinian (+spec.) studied literature'

When the NP *filistiyniy* appears after the verb as in (1) a., it may be interpreted as specific or non-specific. When it appears before the verb, as in (1) b., it may only be interpreted as specific. The fact that a property of the subject co-varies with its position with respect to the verb indicates that the word order distinction does not result from verb movement. Indeed, it would be a problematic dependency for the position of the verb to affect properties of the subject, whereas it is natural for the position of the subject to reflect properties of the subject. These facts support the claim that the position of the verb is constant, and both the pre-verbal and post-verbal positions are valid argument positions. An NP in the pre-verbal position differs from an NP in the post-verbal position in a single feature. The NP *filistiyniy* has a number of other syntactically relevant features, such as [+singular, +animate, -definite, +nominative, etc.], however, none are relevant to the syntactic distinction between the position of *filistiyniy* in (1) a. and b. Further, the ambiguous case is (1) a., where the NP is low. The fact the only the feature [specific] covaries with the syntactic position of *filistiyniy* in (1) a. and b. and that the non-ambiguous case is the post-movement case shows that a single feature of an NP can be associated with (overt or non-overt) movement to a certain position independently of other features of the same morpheme. If the manner in which specificity is checked characterizes the checking mechanism in general, then there is nothing unusual about distinct features of a single morpheme being licensed in distinct syntactic positions.

A similar example concerns distributivity, e.g.:

- (2) a. A boy read every book
 b. A boy didn't read every book

In (2) a., *every book* may optionally distribute over a boy, yielding a grammatical sentence on the O>S reading as well as the S>O reading. In (2) b., *every book* may not distribute over a boy, rendering only the S>O reading valid. Beghelli and Stowell (1995) argue that in the distributive reading, *every book* carries the lexical feature [+distributive]. Movement of the feature [+distributive] to its licensing position is blocked by the intervening negative particle in (2) b. The ungrammaticality of the distributive reading in (2) b. results from the illicitness of the movement relation between the feature and its licensing position. It

represents a feature licensing failure. This too represents an instance of covariation between the presence of a single feature (distributivity) and licitness of a syntactic configuration (chain crossing NegP). The fact that (2) b. is grammatical on the non-distributive reading shows that the intervening negative particle affects only distributivity independently of other features. (2) therefore represents evidence that syntactic operations operate on single features, not on bundles of features associated with single morphemes.

Another example concerns apparent syntactic dissociations among phi-features related to a single argument. In Arabic, for example, subject-verb agreement for person and number is sensitive to the position of the subject. When the subject precedes the verb, as well as when the subject is absent altogether, in the case of *pro*-drop, the subject-verb agreement suffix matches the subject in gender, number, and person. When the subject follows the verb, the agreement suffix matches the subject in gender only, bearing default third person singular person and number morphology. The agreement suffix itself is an atomic morpheme.

- (3) a. 'allaf-at al-'ustaadh-aat-u maqaalat-an
wrote-3fs the-professor-fp-NOM article-ACC
- b. al-'ustaadh-aat-u 'allaf-na maqaalat-an
the-professor-fp-NOM wrote-3fp article-ACC
'The professors (fem.) wrote an article'

(3) a. and b. are synonymous, but there is covariation between the position of the subject and the subject-verb agreement morpheme. Again, this situation suggests a syntactic distinction between licensing sites for distinct features of a unique morpheme. Person and number features of the subject are licensed in positions c-commanding the spell-out position of the verb, and gender is licensed in a position c-commanded by the spell-out position of the verb (Ouhalla, 1994, Coopmans, 1994). Thus Arabic subject-verb agreement seems to offer another example of the licensing of distinct features of a unique morpheme in distinct syntactic positions.

Examples abound of this type of dissociation. One advantage of this approach is that it makes a universal syntactic structure viable. Languages differ in the manner in which they encode features morphemically. However, the basic inventory of features (case, phi-features, tense, etc.) is consistent across languages, insofar as languages without overt case, such as English, or without overt agreement morphology, such as Danish, etc., are considered to possess case and phi-features nonetheless. Thus, no matter how individual features are manifested morphologically, if at all, the same features must be licensed in the same manner in every language, reducing language variation

to differences in the mapping from lexical argument structure to inflectional syntax.

1.2 Evidence against feature licensing

Consider the following data:

- (4) a. Ein Zug/zwei Züge kommt/kommen heute in der Nacht am Bahnhof an
A train/two trains arrives/arrive today in the night at the station prt.
- b. Es kommt/kommen ein Zug/zwei Züge heute in der Nacht am Bahnhof an
it arrives/arrive a train/two trains today in the night at the station prt.
- c. Es kommt/kommen heute ein Zug/zwei Züge in der Nacht am Bahnhof an
- d. Es kommt/kommen heute in der Nacht ein Zug/zwei Züge am Bahnhof an
- e. Es kommt/kommen heute in der Nacht am Bahnhof ein Zug/zwei Züge an
'A train/two trains is/are arriving at the station tonight'

In each of the sentences above, the subject is the same, but its position varies. It may appear before or after the verb, as a. and b. show, or, as c. through e. show, the subject may be separated from the verb by a variable amount of material. In spite of the variability of the position of the subject with respect to the verb, the agreement marker suffixed to the verb (-t and -en in the sentences above) co-varies consistently with the number specification of the subject.

I consider it evident that any grammar which addresses this dependency must characterize what is consistent about the relation across environments, and that this characterization minimally includes a definition of the nature of the elements between which the dependency holds, and a definition of the relation itself, at whatever level of abstraction. Hence, such a characterization includes a definition of "subject," of "agreement marker," and of the relevant syntactic relation. The approach under discussion characterizes the subject-verb agreement dependency in terms of licensing conditions. An element is the subject of a clause by virtue of occupying [spec,IP], which is the subjective case licensing position. Hence, grammatical roles, like theta roles, are structurally defined. The agreement marker is licensed in the head position local to the subject, namely I°.

However, both the structural definition of "subject" and the syntactic status of the agreement marker are problematic in the feature licensing approach to syntactic dependencies, exemplified by the Minimalist Program. Data presented in section 1.1 indicate that individual lexical features may be licensed in positions distinct from the licensing positions of other features of the same element. Thus, "subjects" are not licensed in a unique "subject position." Rather, a subject cycles through a number of distinct positions each of which licenses

a distinct feature or features of the element. No theory internal considerations prevent case from having its own licensing position, as for example Sportiche, 1992, (for clitics) and others have proposed. In this situation the notion of a structural definition of a subject is less compelling. Feature licensing projections are sensitive to the presence of a certain feature, not to what type of element bears the feature (subject, object, indirect object, etc.). The feature licensing approach therefore does not offer a clear cut way of defining the notion "subject," a requirement of the characterization of the subject-verb dependency exemplified in (4).

Now consider the licensing of the agreement marker. Its feature bundle raises with the host with which it is associated, in this case the verb, and its features are checked off in the feature checking head positions it passes through. To be checked, a feature's specification must match that of the element occupying the specifier position of the feature checking head. As a result, the agreement marker is sensitive to the feature content of whatever element or elements occupy the specifier positions of projections it is local to in the course of the derivation. The agreement marker does not know a subject from an object. The difficulty with this situation is that verbs often bear agreement inflection for more than one argument. Arabic verbs, for example, bear a subject agreement inflectional suffix and an object enclitic which is in complementary distribution with an overt object. Both are bound morphemes. When this element raises through the inflectional syntax, verb-associated phi-features which co-vary with the feature content of the object are dutifully checked in those projections which are local to the object, and verb-associated phi-features which co-vary with the feature content of the subject are checked in those projections local to the subject. However, in the feature licensing approach to syntax, this does not follow without stipulation. When the entire verbal feature complex bearing agreement for both a [+feminine] subject and a [+feminine] object reaches a gender licensing head, it does not follow from premises of the theory whether [+feminine] associated with the subject agreement morpheme or [+feminine] associated with the object clitic will be licensed. One option might be to tag licensing projections with conditions like "I go with a subject," or, "I go with an object," but again, subjects and objects are not primitives of the theory, and that is the heart of the problem: the feature licensing approach fails to characterize relations between morphemes, bound and unbound.

Arabic subject and object agreement morphemes belong to different morphophonological classes. Subject agreement is expressed by a level 1 suffix (it affects word stress) and object agreement is expressed by a level 3 enclitic (it appears outside subject inflection, does not affect word stress, cannot bear stress itself, and cannot be separated from the verb) (see Kiparsky, 1982). Thus,

another potential option might be to tag licensing projections for conditions like "I go with a level 1 verbal suffix," and "I go with a level 3 verbal enclitic." Such a step could be viable as long as all subject-verb agreement morphemes belong to the same morphophonological class, distinct from object-verb agreement morphemes. This appears true of Arabic, but not of multitudes of polysynthetic languages. Also, consider tense morphology in English. Though all tense features are checked in the tense licensing category TP, different specifications of the tense feature are associated with different morpheme classes. [+future] is manifested by the phonological word *will*. [+past] is expressed sometimes by the level 3 suffix /d/ (*seeped*) and sometimes by the level 1 suffix /t/+umlaut (*slept*). Thus it is not true within or across languages that different specifications of a certain feature are always manifested within the same morphophonological class.

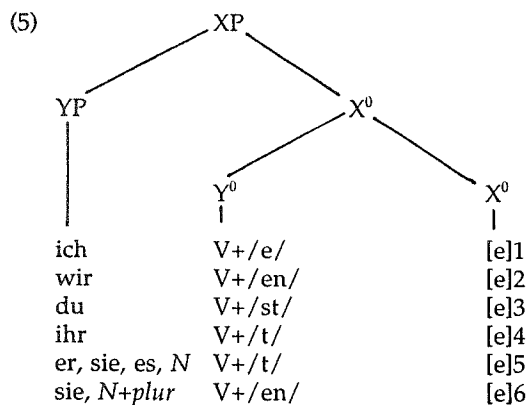
I hope to have made the case that the feature licensing approach to syntax poorly characterizes the relation between lexical items and functional morphology. Even if certain feature checking heads were to check only verbal agreement features relating to subjects and others were to check only features relating to objects, it is not obvious in an elaborately differentiated feature checking syntax how locality principles neatly map subjects and objects into only those projections which check subject and object agreement morphology respectively. But as it is, even the former condition does not hold; no theory internal requirements force a feature checking head to check a feature associated with a subject agreement morpheme or an object agreement morpheme--some additional stipulation to this effect is necessary, if it is possible at all.

2. Morpheme licensing approach

The criticism of the feature licensing approach above suggests that non-local dependencies such as the one exemplified in (4) are best characterized in an approach in which morphemes are basic, not features. The licensing mechanism operates on morphemes themselves, not their feature content. It suggests an approach to licensing in which morphemes (arguments, predicates, and inflectional morphemes, overt and non-overt) are mapped by movement from the lexical argument structure into agreement relations in the inflectional syntax which are marked as licit at spell-out. Agreement relations obtain between a head and a morpheme, not a head and a certain feature. Licit agreement relations have the grammar's stamp of approval. A grammatical sentence consists of a phrase structure in which all morphemes appear in licit agreement configurations.

2.1 Evidence for the morpheme licensing approach

The morpheme licensing approach does not suffer from the inability to determine the distribution of morphemes. The distribution of morphemes follows directly from the agreement criterion: a certain head (henceforth the "agreement head") agrees with a certain morpheme or class of morphemes in a head adjoined position and with a certain morpheme or class of morphemes in its specifier position. This approach forces typically abstract properties like specificity into the morphology. Abstract features must be associated with non-overt morphology, such as a null specificity marker, or for that matter overt morphology, such as case in many languages, in order for the syntax to be sensitive to them. The syntax, then, is not sensitive to the features associated with morphemes; it is the morpheme itself which is licit or illicit in an agreement configuration with another morpheme. Co-variation between e.g. subjects and agreement morphemes results from the fact that different agreement heads agree with different morphemes, but all such agreement heads belong to the same syntactic category. An example may help clarify. Consider the German agreement paradigm characterized in the morpheme licensing approach.



XP in this case is AgrSP. A null head of the category AgrS with certain c-selection properties determining its distribution is lexically specified to obligatorily co-occur at some level of derivation with a head adjoined verb bearing only a certain inflectional suffix, and to obligatorily co-occur at some level of derivation with a certain morpheme or a certain class of morphemes in its specifier position. Hence the dependency between subject and verb agreement morphology. The notations *N* and *plur* refer to the morpheme classes "noun" and "plural marker" respectively. The class of nouns is obviously enormous. The class of plural markers in German is quite large also, and noun-

plural marker pairs are an idiosyncratic property of the noun. The noun determines the particular plural morpheme that appears; the agreement head is sensitive to any member of the class. An agreement head may also agree with a class of head adjoined elements as well. For example, German [e]1 also agrees with the morpheme *bin*, the irregular first person singular form of the verb *sein* ('to be'). The possibility of unwieldy lists of idiosyncratic agreement configurations is daunting but fundamentally unproblematic: it is precisely such idiosyncratic information that must be listed somewhere in the grammar.

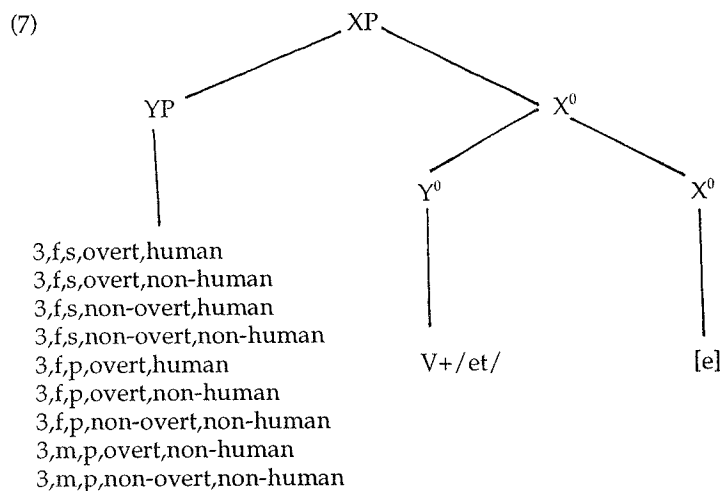
The point that form is more important than content in agreement paradigms is also made by facts about honorary titles in English such as "your excellence," or "your honor," or the royal usage of "we." In the example below, the verb bears third person morphology, though the question is addressed to a second person.

(6) Has your honor reached a conclusion?

The relation of the addressee to the speaker is not relevant to verb morphology, contrary to the notion of person distinctions in agreement paradigms. The agreement paradigm is sensitive to the form of the subject, the element *honor*, rather than its denotation, the person being spoken to. First and second person agreement morphology co-occurs only with a subset of the pronominal elements of a language. It does not seem to be referential properties of an expression that determine its agreement properties, but rather the expression's form alone.

Arabic provides another example of the straightforwardness of the morpheme licensing approach. This approach supports the claim that not only is the position of the verb fixed, but also that there is only one (post-verbal) subject A-position. The (traditionally) third person singular agreement morphemes agree with overt elements in the specifier position of the agreement head. The agreement morphemes which express full agreement agree with non-overt elements in the specifier position of the agreement head (*pro* and NP-trace of a subject raised to the left of the verb). This formulation of the agreement paradigm reduces full agreement in the case of both null pronouns and preverbal subjects to a single dependency: overtness. Arabic agreement morphology's sensitivity to humanness is also easily formulated in this system. Singular non-human subjects match subject agreement morphology in gender only regardless of their position. Plural non-human subjects always co-occur with the feminine singular agreement morpheme regardless of their own gender and their position with respect to the verb. Thus, the Arabic lexicon contains a head [e] with the agreement properties diagrammed below. The

"features" of YP in (7) are a notational convenience I use to represent morpheme classes.



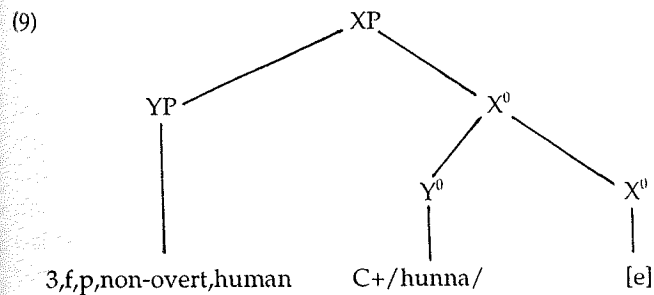
The above examples show that the morpheme licensing approach is explicit with respect to the distribution of morphemes. Decisive evidence in favor of the morpheme licensing approach would be an instance in which this explicitness were a necessary aspect of any analysis of a certain structure. Arabic provides such an instance. The complementizer 'anna co-occurs with a following accusative DP. A clause may not otherwise begin with an accusative element, i.e., accusativity is associated with 'anna. 'Anna may also bear an enclitic in complementary distribution with a DP otherwise associated with 'anna, e.g.:

- (8) a. balagh-a-nii 'anna al-banaat-a wasal-na
 reached-it-me that the-girls-ACC arrived-3fp
 'I heard that the girls arrived'
- b. balagh-a-nii 'anna-hunna wasal-na
 reached-it-me that-them arrived-3fp
 'I heard that they arrived'
- c. *balagh-a-nii 'anna-hunna al-banaat-a wasal-na
 reached-it-me that-them the-girls-ACC arrived-3fp

According to Sportiche's 1992 analysis of clitic phenomena, clitics are associated with heads of clitic licensing projections the specifier position of which is occupied by a DP raised from the argument position with which the clitic is associated to check the features of the clitic and relate it to a thematic role. Hence the clitic *-hunna* and the noun *albanaata* are not base generated in the same position, but are checked against each other locally. According to this

analysis, the clitic is related to a DP by movement in every case; what (8) shows is that the clitic co-occurs with a *pro* DP and never with an overt DP.

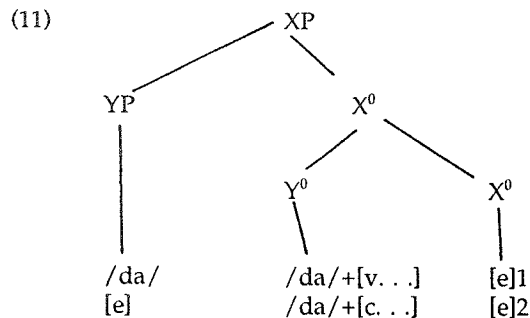
Both the feature licensing and the morpheme licensing approaches require that the clitic is associated through movement with a licensing position. In the feature licensing approach, this position (or positions) checks the features [+third person, +feminine, +plural]. In the morpheme licensing approach, this position checks the morpheme *-hunna* (against an empty head with a restricted range of possible specifiers, i.e., non-overt elements with (non-overt) third person human feminine plural morphology). The fact that overtness co-varies with the appearance of the clitic indicates that both are checked in the same checking domain. However, sensitivity to overtness is not something that the feature checking approach can express as such; an element checks the same phi-features whether the checked element is overt or covert. The distinction may then reduce to a syntactic operation; *pro* moves before spell-out and an overt DP at LF. *-Hunna* moves before spell-out in every case, being licensed if the raised *pro* has specified the features against which it is checked, and crashing if an overt DP has failed to raise to specify the features against which it is checked. Such an analysis presupposes that the features which are licensed by the head of a certain Agr projection may be determined in the course of a derivation, i.e., that a feature checking head must be "triggered" by movement of an element into its checking domain. However, sentences such as those in (4) show that the content of Agr nodes is determined before checking takes place. It is difficult to motivate the claim that *ein Zug* occupies [spec,AgrSP] in (4) e., though the verb bears agreement morphology. Further, this presupposition is inconsistent with the independently motivated Lexicalist Hypothesis (Chomsky, 1970), which entails that syntactic processes do not affect feature content. In the morpheme licensing approach, *-hunna* agrees with a head which agrees with a non-overt specifier with (non-overt) third person human feminine plural morphology, e.g.:



A similar example of morpheme sensitivity in syntax comes from Hessian German prepositions with pronominal objects, exemplified below.

- (10) a. Leg's auf den Tisch
put-it on the table
'Put it on the table'
- b. Leg's da drauf
put-it there there-on
'Put it on it'
- c. Schneid's mit diesem Messer
cut-it with this knife
'Cut it with this knife'
- d. Schneid's damit
cut-it there-with
'Cut it with it'
- e. *Schneid's da damit
Cut-it there there-with

I assume on the analogy of Koopman's 1993 analysis of the position of Dutch *er* that *da* in (10) b. occupies [spec,PlaceP], and further that both the forms *drauf* in b. and *damit* in d. result from incorporation of the preposition into the head of PlaceP, which immediately dominates PP. The crucial distinction between b. and e. is that the preposition in b. begins in a vowel and the preposition in e. begins in a consonant. Vowel initial prepositions license *da* in [spec,PlaceP] and consonant initial prepositions do not. Like overtiness, this is a viable agreement distinction in the morpheme licensing approach, as diagrammed in (11), where XP is PlaceP.



I believe that in the feature licensing approach this type of dependency is unthinkable.

The sensitivity in the syntax to phonological properties of elements as displayed in (11) and in (7) and (9) with respect to overtiness has a desirable side effect. It supports the conclusion that a constituent and its feature matrix

are syntactically quasi-independent elements. Chomsky, 1995, suggests that a feature matrix may raise and leave its phonological constituent *in situ*, explaining instances of "covert overt movement" such as *wh-in situ* in Chinese. Groat and O'Neil (in press) take this distinction and the notion of covert overt movement to its logical conclusion and claim that syntactic transformations map a numeration to a single phrase marker which feeds both the PF and LF interface. All chain formation takes place before spell-out. Weak features may be licensed by raising of the feature alone into a checking configuration. Strong features must be licensed by raising of the phonological constituent itself. Thus, while all elements raise covertly, the position in which an element is pronounced depends on whether the features it licenses are strong or weak. Strong features require the licensing element to be pronounced in the licensing position, weak features allow the element to be pronounced in its base-generated position. In such a model of syntactic structure, licensing heads are sensitive not merely to the presence of a certain feature content in their checking domain, but also to the presence of phonological material. Such a sensitivity seems to allow one to dispense with the notion that PF and LF read different phrase markers, since it allows (weak) feature licensing to take place without raising (of the phonological constituent).

However, sensitivity to overtiness is a strange dependency for the feature licensing approach. If overtiness is a feature itself, it is not of the same type as other features. If a constituent may bear the feature [+overt], then the feature [+overt] must not belong to the feature matrix, since the distinction between the feature matrix and the phonological constituent is precisely what the feature [overt] encodes. It is also strange to think of overtiness as a feature of the phonological constituent, since it is always overt by virtue of being the phonological constituent. Sensitivity to overtiness is a dependency between a licensing position and a morpheme, not a licensing position and a feature. It is a dependency between an agreement head and a morpheme in its checking domain.

The feature licensing approach characterizes certain features as strong. Strong features require the phonological constituent associated with the licensed features to appear in the licensing position. The morpheme licensing approach characterizes this kind of dependency without further apparatus linking strong features with overtiness. Certain agreement heads agree with a phonological constituent in addition to a member of the constituent's chain; they require phonological material in their checking domain. Such a formulation of word order variation in terms of the placement of the phonological constituent with respect to its chain is not explanatorily less adequate than the notion of feature strength, a no less arbitrary characteristic of licensing

positions. Indeed, it does the job of syntax straightforwardly: it encodes the distribution of words in terms of the distribution of words, not the licensing properties of abstract features.

2.2 Evidence against morpheme licensing

In the morpheme licensing approach, every morpheme must be local to a licensing head at some level of representation. Thus, the number of licensing positions in a structure depends on the number of morphemes in what Minimalism terms the "numeration": the set of elements that make up a sentence. If this is so, the notion of a universal syntactic template into which syntactic operations map elements from the numeration is hopeless. No *a priori* syntactic template exists, but rather the template depends in every derivation on the licensing requirements of the numeration. The advantage of the notion of a universal template for every numeration is that language acquisition reduces to the acquisition of constraints on the mapping from a universal (per Baker's 1988 UTAH) lexical argument structure to a universal inflectional syntax. Such a minimal account of language acquisition explains the apparent ease with which language acquisition takes place among children. If children need to learn not only licensing procedures but also the structures within which licensing relations hold, then this type of multiple variation in the input fails to address the enduring problem for syntactic theory of the bewildering ease with which children learn language. Empirically speaking, evidence supports the so-called Full Clause Hypothesis: inflectional syntax is innate and children project licensing positions for lexical elements from the first stage in language acquisition (Verrips & Weissenborn, 1992, Hyams, 1992, Poeppel & Wexler, 1994). That is, licensing positions are available in child grammars before the morphology is available to be licensed. Before a child learns what features are manifested by what morphology (e.g. whether case is expressed on determiners or nouns, whether tense is expressed as a phonological word or a verb suffix), he or she already possesses a syntactic superstructure for the licensing of lexical elements. If the Full Clause Hypothesis is correct, then there must not be a dependency between the morphology with which features are manifested and the position in which the features are licensed, i.e., licensing procedures operate on features, not the morphemes with which they are associated.

Syntactic evidence for this conclusion comes in part from languages in which agreement morphology is compositional. I claimed in section 1.2 that the split Agr analysis of agreement morphology licensing, in which separate features of an atomic morpheme are licensed in separate syntactic positions, fails to characterize the relation of a certain grammatical role, i.e. "subject," to

an agreement morpheme associated with that grammatical role. In the morphology licensing approach, compositional agreement morphology, in which separate features of the subject are associated with separate agreement morphemes, requires separate checking positions for each morpheme. Each of these morphemes must be checked against the subject at some level of representation. Consequently, the subject at the end of the derivation will occupy multiple "subject positions." But which of these positions licenses the subject? It seems they all do. If it is not a requirement of the subject that it pass through each agreement projection, but rather only of the agreement morpheme, then the agreement morpheme could simply be left out of the numeration to no one's disadvantage, since the morpheme need not be licensed if it is not present.

Polish represents an example of compositional agreement morphology. In the Polish past tense construction, one morpheme expresses gender and number agreement with the subject and another morpheme expresses person and number agreement with the subject, as in example (12) a. below. The two morphemes are syntactically separable. (12) a. is synonymous with (12) b.

- (12) a. jak ty robil-a-s
 how you did-fs-2s
 'How did you do (it)?'
- b. jak-es ty robil-a
 how-2s you did-fs
 'How did you do (it)?'

The gender/number marker must always appear as a verbal suffix. The person/number marker may appear as a verbal suffix as well (outside the gender/number marker), as in (12) a. However, it may also appear as a suffix on any element to the left of the verb except the negative particle *nie* and prepositions. Viable hosts for the floating person/number marker include pronouns, conjunctions, complementizers, adverbs, nouns, and, as in (12) b., interrogative particles (the *e* of *-es* is epenthetic). See Sussex (1980) for a detailed description of this phenomenon and Booij and Rubach (1987) for evidence that both markers are inflectional affixes, not clitics. The distribution of subjects is free. Thus, the grammar of Polish must characterize a non-local dependency between a theta position (of the subject), the position of the gender/number marker's host, and the position of the person/number marker's host. In section 1.2, I considered the notion that subjects passed through multiple feature checking positions problematic because it fails to characterize the relation of subject licensing requirements such as a nominative case feature to agreement morphology associated with the subject, or to any structural notion of subjecthood. The existence of compositional agreement morphology

poses the same problem for the morpheme licensing approach to such syntactic dependencies. In Polish, a subject must license several morphemes, but none of these morphemes is associated with the subject as such, but rather only with certain features of the subject. Thus features of the subject such as case are not uniquely related to the presence of a unique functional morpheme. Features of the subject do not share a licensing domain with a certain functional morpheme. There are two morphemes, both are licensed by the subject, and both license the subject in some sense, since the subject must co-occur with both morphemes. Such a situation is bizarre for the morpheme licensing approach, but not for the feature licensing approach, in which it is ordinary, since the two morphemes correspond to different features of the subject.

Further evidence that abstract features are relevant to syntactic dependencies independent of morphology comes from phenomena in which agreement morphology appears to be sensitive to inherent properties of the denotation of expressions such as, for example, humanness. In the morphology licensing approach to agreement phenomena, syntax is only morphology sensitive. The fact that the Arabic agreement paradigm is sensitive to humanness, as expressed in the diagrams in (7) and (9), therefore requires that humanness be related to a morphological marker. Humanness shows up morphologically in Arabic in plural marking. Generally, human nouns take a regular plural suffix. Plurality is expressed on non-human nouns by irregular stem vowel changes. But affixation of a human plural suffix to a non-human noun does not make the denotation of the noun human, rather it results in an ungrammatical form. Humanness is a property of the denotation of a noun; the property "human" is not determined by the morphology. Humanness morphology in Arabic is a case of an inherent property of a noun constraining morphology. The morpheme licensing approach therefore does not obviate the need for abstract features, as one might term "inherent properties." They still operate at least in the morphology, and if they are present in any pre-syntax stage, it is unclear why syntax should not be sensitive to them. It would be syntax's insensitivity to abstract features that would require explanation, not feature sensitivity, wherever it is found.

Further, certain evidence suggests that the idea that the morphology licensing approach can present a unified phrase marker to both the PF and LF interface is less promising than it appears. As discussed in section 2.1, the Arabic subject agreement morphology paradigm is sensitive to the position of the subject. The distinction can be related to the presence of the phonological constituent belonging to the subject chain in the postverbal subject position. Degenerate agreement co-occurs with the phonological constituent. Full agreement occurs complementary to the phonological constituent. A problem

with this analysis arises in connection with post-verbal subjects that are not adjacent to the verb, i.e., those that are separated from the verb by other elements, for example an object. Verbs in such sentences may follow the post-verbal subject agreement paradigm, agreeing with the subject in gender only and bearing default third person singular person and number agreement. Or, they may fail to agree with the subject at all, bearing default third person masculine singular agreement morphology regardless of feature content of the subject. Thus, both sentences in (13) are grammatical (though (13) a. is preferred).

- (13) a. 'allaf-at maqaalat-an al-'ustadh-aa-t-u
wrote-3fs article-ACC the-professor-fp-NOM
- b. 'allaf-a maqaalat-an al-'ustadh-aa-t-u
wrote-3ms article-ACC the-professor-fp-NOM
'The professors (fem.) wrote an article'

Assuming that in (13) a., the chain associated with *al-'ustadh-aa-t-u* raises to check agreement morphology on the verb, leaving its phonological constituent behind, then the wrong agreement marker is predicted. As displayed in (7), the agreement marker *-at* in the morphology licensing analysis may co-occur with a third person feminine plural nominative *overt* element, viz., it requires the phonological constituent in its checking domain. A morpheme licensing head which is sensitive to phonological material in its checking domain is not sensitive to where else in the syntax phonological material may appear. But (13) a. seems to show such a sensitivity. The fact that any amount of material may appear between the verb and subject mitigates against an analysis of (13) a. in which the subject does occupy the subject agreement position, but both the verb and the object have raised higher still. The subject position is high, and it is difficult to motivate enough structure to house everything that may appear between the verb and a post-verbal subject. (13) b. is more problematic still. A subject *in situ* cannot check case morphology without covert movement. An overtly or covertly raised subject does not have the option of failing to license any agreement morphology. These data seem to display a sensitivity not merely to overtiness but also to the temporal order of instances of movement. They represent evidence for post-spell-out movement. Full agreement requires subject raising before spell-out. Degenerate agreement may or may not co-occur with subject raising before spell-out. Failure of agreement must not co-occur with subject raising before spell-out. But checking requirements of the subject always force subject raising by LF. Thus, uniformity of phrase markers presented to the interfaces is not a unique advantage of the morphology licensing approach. The bifurcation of chains and phonological elements which

is natural if not necessary in the morphology licensing approach does not necessarily lead to the unification of LF and PF representations.

Evidence from Polish and from Arabic show that the morphology licensing approach shares some of the same conceptual dilemmas as the feature licensing approach, such as multiple subject licensing positions and the pre-spell-out/post-spell-out movement distinction. While morpheme licensing has the advantage of being able to directly relate arguments with atomic agreement morphemes, it is unable to characterize the different distribution of non-atomic morphemes that express distinct features of a single argument, as in Polish. Data from Arabic show that sensitivity to morphology in syntax does not suffice to reduce the distinction between overt and covert movement to a distinction between morphemes and chains. Thus, the distinction is not motivated on conceptual grounds alone, and fails to necessitate the morpheme licensing approach in the name of reductionism. And though certain empirical evidence argues against the feature licensing approach, empirical evidence alone does not strongly favor the morphology licensing approach.

3. Conclusion

Syntactic operations appear capable of operating on abstract features such as specificity and inherent properties such as humanness independently of the morphological manifestation of such properties and their cooccurrence with other features, indicating that features are the elements that licensing operations affect. However, the feature licensing approach to these dependencies fails to characterize the relation between elements that enter into licensing configurations and the morphemes they are associated with in the surface string. A feasible representation of this relation is one in which the distribution of all elements is formulated in terms of requirements on the cooccurrence of morphemes. The existence of cooccurrence restrictions that make reference to properties such as overtness or the consonant/vowel distinction make such a representation natural if not necessary. Further, sensitivity to morphology in the syntax may be a step toward unifying PF and LF representations in the model of grammar. However, the morpheme licensing approach presents a profound learnability problem. Further, evidence shows that even in the morpheme licensing approach, (1) there is not necessarily a one-to-one relation between morphemes and licensing positions, (2) dependencies may still exist between abstract features and morphemes, and (3), the notion that syntactic representations may be unified is not straightforward. Therefore, it is not obvious that the morpheme licensing approach has these three conceptual advantages over the feature licensing approach.

An important step in resolving a problem is a careful formulation of the problem itself. The precise mechanics of a system are often overlooked in light of the system's potential for broad empirical coverage. But it is ultimately the mechanics of the system that choose the analysis of a phenomenon, and an analysis is an ontological claim about the phenomenon and what motivates it. The mechanics of a system are therefore not secondary to the general idea it expresses. Syntactic operations seem to operate primarily on abstract properties, though a better understanding of what a "feature" is in order, but the feature-morphology relation is not accommodated by the framework under review here. The intention of this paper has been to make the point that syntactic theory requires a subtheory of this relation. The foregoing discussion seems to point toward the conclusion that existing independently motivated principles of grammar do not suffice to accommodate such a subtheory. In the framework I have discussed, principles of grammar generate a lexical argument structure, and then dissociate the elements comprising this structure in order to satisfy theoretically unconstrained "licensing" requirements of these elements. Such a framework faces the dilemma that it broadly overgenerates in lieu of a theory of what can be a feature, and what constrains the relation between features and morphology. The morphology-feature interface, in whatever form it may take, is a non-trivial component of the theory of grammar.

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Zusammenfassung

In neueren Forschungsansätzen ist die Hauptmotivation für syntaktische Verschiebung die Zuweisung abstrakter Eigenschaften an Elemente in der Phrasenstruktur. Eine Aufgabe, die dieser Richtung der Entwicklung der Syntaxtheorie noch zu lösen bleibt, ist die Kennzeichnung der Distribution der Morpheme. Die Distribution von Morphemen ergibt sich aus den Lizenzierungseigenschaften jener Merkmale, mit den sie verbunden sind. Doch die Verbindung zwischen Merkmalen und Morphemen, und die Frage, welchen Eigenschaften gemäß Merkmale variieren können, sind Themen, in die die Theorie der syntaktischen Distribution von Merkmalen noch keine klärenden Einblicke hat. Eine mögliche Antwort auf dieses Problem ist eine Umformulierung der Theorie zu einer Theorie von Abhängigkeiten zwischen Morphemen und zugewiesenen syntaktischen Stellen, in der Merkmale sekundär sind. Dieser Ansatz hat verschiedene Vor- und Nachteile und bietet Evidenz dafür, daß syntaktische Transformationen weder auf morphologischen Eigenschaften noch auf abstrakte Eigenschaften reduzierbar sind. Dies weist darauf hin, daß in der Syntaxtheorie eine Morphologie-Merkmal Schnittstelle erforderlich ist. Die Insertion von Elementen eines Satzes in eine lexikalische Argumentstruktur ist semantisch kompositionell. Transformationen, die diese Elemente in der Struktur erfassen, operieren aufgrundtheoretisch unbeschränkter Lizenzierungsvoraussetzungen dieser Elemente. Ohne eine Theorie darüber, was ein Merkmal sein kann, und was die Beziehung zwischen Merkmalen und Morphologie beschränkt übergeneriert ein solcher Algorithmus. Evidenz, die in diesem Aufsatz diskutiert wird, weist auf einige der Probleme hin, die die Morphologie-Merkmal Schnittstelle zu lösen hat.

Martin Haiden

THE ASPECT OF SHORT SCRAMBLING

In this paper, we will devise an account for an unexpected referential-opacity effect for VP-internal objects in German. After sketching some distributional arguments for obligatory short scrambling, it will be noted that objects resisting this movement not only fail to identify the reference of discourse-anaphors in continuation-clauses, but they cannot take scope beyond their S-structure position either: sluicing is restricted to existential short-scrambled NPs, and we face the problem why VP should induce a barrier for the scope of existentials, which, otherwise, does not seem to be island-sensitive.

Elaborating on Borer (1994), we will suggest an account of these phenomena in terms of Aspect- and Case licensing: Accusative Case, it will be claimed, is related to the specifier of a functional category ASP to whose specifier direct objects move. If they don't, their Case is licensed by incorporation to V, forming a complex predicate at LF. Thus incorporated, those objects are not available for the application of QR by their very nature. Substantiating this claim, we will discuss the aspectual interpretation of VP-internal NPs in German.

Discussing residual issues, the final section will address some consequences the account has for the organization of UG.

1. Low objects and the referential opacity of VP

1.1. The low *Mittelfeld* in German

According to traditional grammars, the German clause can be partitioned into three domains (*Felder*). These domains are delimited by the two clearly identifiable positions: the position of the finite verb in root clauses (or the complementizer in embeddings, respectively), and the position of non-finite verbs in root clauses (or the finite verb in embeddings, respectively). The space to the left of the finite verb is called the *Vorfeld*, the space to the right of non-finite verbs the *Nachfeld*, and the space between the two positions of the verb the *Mittelfeld*. In generative terminology, the *Mittelfeld* corresponds to the domain of VP plus IP, excluding the CP-layer and extraposed elements. The *Mittelfeld* is the domain of Scrambling in German.

In the present paper, the scrambling-phenomena discussed in the literature (in what follows, "regular scrambling") will not play any significant role. Neither the permutation of arguments (cf. Fanselow (1996), Haider (1993) etc.), nor the relative position of sentential adverbs (cf. Adger (1994), Diesing (1992), Haiden (1995), etc.) and their respective semantic effects will be addressed.

Rather, we will focus on an instance of scrambling with properties crucially

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ITALIAN NOMINAL INFLECTION

0. Introduction

This contribution can be understood both as a sequel to the authors' article on binarism in Italian morphology, where only one paragraph had dealt with Italian nouns (Dressler & Thornton 1991), and to the general introduction on inflection in the recent WLG contribution by Dressler, Drążyk, Drążyk, Dziubalska-Kończak & Jagła (1996), where our approach has been applied only to the relatively complex system of Polish declension. The present contribution is intended to show the relevance of our approach also for a very reduced inflectional system². Within the framework of Natural Morphology (cf. Dressler et al. 1987; Kilani-Schoch 1988), we will focus our discussion on the subtheory of language-specific system adequacy.

Italian noun inflection has not been the subject of recent monographic studies. There is no fixed traditional classification for Italian noun classes: nothing comparable to the well-established declension classes used in the description of Latin or other inflecting Indo-European languages has ever been proposed for Italian. The main descriptive grammars³ do not agree on the number of classes to be recognized (they vary between three and ten) nor on the criteria to be used for establishing these classes. Some authors consider only the shape of the singular form (e.g. Migliorini 1952, Dardano & Trifone 1985, Schwarze 1988), sometimes in connection with gender (Serianni 1988). Lepschy & Lepschy (1981) establish as many as ten classes on the basis of the shape of both singular and plural. With the same criterion Fornaciari (1906), Fogarasi (1962), and Hall (1971) arrive at between three and seven classes. The historical grammar by Rohlfs (1968) describes Italian noun inflection on the basis of the five Latin declensions, focussing on automatic transfers from a given Latin class to a corresponding Italian one, and on deviations from these correspondences ("metaplasmi"). The grammar by Renzi (ed. 1988) does not make use of the

¹ The main responsibility for section 3 is with the second author (Università dell'Aquila), for the most of the other sections and for the general approach with the first author (Universität Wien).

² It is part of an ongoing research on inflectional classes in morphological theory, specifically applied to Italian inflection in synchrony, diachrony, and language acquisition (cf. also Tonelli, Dressler & Romano 1995).

³ Fornaciari 1906; Migliorini 1952; Fogarasi 1962; Hall 1971; Regula & Jernej 1973; Lepschy & Lepschy 1981; Dardano & Trifone 1985; Renzi (ed.) 1988; Schwarze 1988; Serianni 1988.