Cryptoconstructionalism*

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1 Introduction

This note addresses the question of just how "explanatory" are derivational analyses of syntactic phenomena. I will get to that momentarily. But let me start with a small bit of autobiography. I completed my MIT dissertation (Culicover 1971) in 1970 and started teaching at UC Irvine in that year. A few years later I met Kyle Johnson. He was a student in a syntax course that I was teaching, just after the publication of *Formal Syntax* (Culicover et al. 1977). It was clear even then that Kyle had an uncanny gift for syntax. The subsequent years have confirmed this judgment many times over. I'm delighted and honored to contribute to this collection.

Back to the dissertation. I made two main arguments there in response to Generative Semantics, which held that semantic representations were read directly off of and in fact reducible to syntactic representations. One was that syntax is *autonomous*, in that it cannot be reduced entirely to semantics. The second was that the grammar is *constructional*, in that there are individuated syntactic configurations in a language that enter into a range of interpretations, and there are interpretations that must be associated with a range of syntactic configurations. So the correspondences are not one-to-one in either direction, contrary to what was assumed by Generative Semantics. One-to-one form/meaning correspondence is characteristic as well of most if not all mainstream generative grammar (MGG), including Minimalism (Culicover & Jackendoff 2005). So the issues that I was concerned with in the 1960s are still relevant today.

The first type of constructional mismatch is exemplified by English subject–auxiliary inversion (SAI), which has no fixed interpretation of its own but is seen in yes–no questions (*Do you like pizza?*), *wh*-questions (*What kind of pizza do you like?*, wide scope negation (*Not a single piece of pizza did she eat*), *so*-(*that*) (*So much pizza did she eat that . . .*), and imperatives (*Don't you dare touch that!*). The second type is seen in the imperative, which can be signaled in a number of different ways, e.g., *Sit down! Don't sit down! Do not sit down! You sit down! Will you please sit down? Can't you sit down? Why don't you sit down? Why not sit down?*, etc.

What we see in these and similar cases are correspondences between the form of sentences and their interpretations. The job of a grammar is to provide a description of such correspondences. The job of the theory of grammar is to explain what sorts of correspondences are possible in a natural language.

The standard approach to these tasks in MGG is to assume that there are operations that derive the phonological form and the semantic interpretation from the syntactic structure ('syntactocentrism'). In contrast, the constructional approach is non-derivational: the correspondences between syntactic structure, phonology and semantics are represented directly. This is done without the mediation of MGG devices such as abstract syntactic structure, movement, empty functional heads, empty feature checking, deletion, empty structure, etc. (Culicover & Jackendoff 2005).

I suggest here that in order to successfully apply the derivational mechanisms of MGG, it is necessary to stipulate details of form–meaning correspondences, much the same as constructions do. To the extent that the derivational mechanisms are not independently motivated, analyses that use them with such stipulations are 'cryptoconstructional'. If there is no value added by the derivations, they do not explain anything. Occam's Razor suggests that cryptoconstructional analyses should be dispensed with in favor of more transparent and direct constructional analyses.

2 Imperatives

I focus here on imperatives, since there is a particularly rich derivational literature dealing with their idiosyncrasies. First, however, a couple of general observations about how grammatical theories approach grammatical phenomena. A key feature of the derivational approach in MGG is its universality: it is assumed that every language draws from the same inventory of grammatical devices for expressing a particular semantic function or relation. It means that the syntax of an imperative must be the same across all languages at some level of representation. And the derivations of the positive imperative and the negative imperative in a language should be essentially the same. These and similar consequences fall under the rubric of 'uniformity'. (For a survey and a critique, see Culicover & Jackendoff 2005: Chapters 2 & 3.)

In contrast, a constructional approach is not bound by uniformity considerations. However, identity, similarity of representation and degree of generalization reduce representational complexity and contribute to the ranking of a grammar according to the evaluation metric (Chomsky 1957, Jackendoff 1975, Culicover 2013). A constructional approach readily accommodates constructional idiosyncrasy against the backdrop of broad generalizations (Culicover 1999, Culicover & Jackendoff 2005, Culicover 2013).

Universality of representation predicts, *ceteris paribus*, that the syntactic representation of some phenomenon will be the same across every language, up to parametric variation. For example, if it was actually possible to derive every type of imperative in every language from the same abstract configuration, without ad hoc stipulations, we would have a striking confirmation of the explanatory power of the theory.

But if imperatives vary dramatically not only cross-linguistically, but even within a single language, the explanatory power is lost. Under such circumstances we have to make ad hoc stipulations about the structure and features of particular constructions in order to get not just the linear order but the morphological form right. This is cryptoconstructionalism — the importation of construction-specific stipulations into analyses formulated using the formal vocabulary of derivations.[1]

In fact such cryptoconstructionalism is endemic to the analysis of imperatives. There is a extensive literature that seeks to devise a uniform account that will accommodate the phenomena of English, the Romance languages such as Italian, Spanish and French, and Greek and other Balkan languages. The phenomena are quite diverse, and are not easily accommodated under a uniform analysis:

- *Positive/negative:* In many languages, a negative imperative is not simply a positive imperative with a negative particle in the canonical position of negation with respect to the verb.
- *Arguments:* In many languages that have pronominal clitics, the clitics do not necessarily appear in the same position with respect to the verb in the imperative as they do in the indicative, and there are even differences between positive and negative imperatives.
- *Subjects:* In many languages, even those that lack *pro*-drop, the subject need not be overt in the imperative.
- *Auxiliaries:* In English, which has a well-developed auxiliary system, the distribution and form of the auxiliary is far from regular, and does not resemble what appears to be going on in the other languages.

3   Derivations

An influential attempt to account for this diversity in derivational terms is Zanuttini 1997. For Zanuttini, 'true' imperatives are those that have forms that are unique to the imperative function, while 'surrogate' imperatives are those that are "morphologically identical to a form used for the same person in another paradigm." One interesting property of Italian is that pronominal clitics are proclitic in indicative

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1 It is of course possible to incorporate the ad hoc stipulations in 'micro-parameters'. I argue in Culicover 1999 that doing so renders parameter theory vacuous.

sentences, but enclitic in imperative sentences, regardless of the form of the verb: *Le telefonate* 'You call her'; *Telefonate-le* 'Call her!'.

The third person singular and plural subjunctive may also be used to convey polite imperative force; in this case the pronouns are proclitics. To complicate the situation further, some of the Romance languages also show additional suppletion in negative imperatives, using the infinitival form of the verb. And a negative indicative form may be used in the imperative in Italian with either proclitics or enclitics (Zanuttini 1997: 149): *Non date-mi il libro!; Non mi date il libro!* 'Don't give me the book!'.

Zanuttini (1997: 146) assumes the uniform structure in (1) for imperatives.

(1)   [$_{CP}$ Spec [$_{C'}$ C[IMP] [... ...[$_{NegP}$ Spec [$_{Neg'}$ Neg [$_{MoodP}$ Spec [$_{Mood'}$ Mood VP]]]]]]]

Crucially, when one assumes a uniform underlying structure such as this for a diverse set of surface forms, it becomes necessary to assume various triggers for moving pieces of the structure around so that only the well-formed surface orders are derived, and so that they correspond to the proper interpretations. Here is how Zanuttini's solution works for Italian:[2]

> Assume that the IMP feature in C must be checked. Assume that movement of V to C checks this feature, hence V is initial and precedes the clitics. Assume that when there is Neg, it checks the IMP feature (because it is closer to C than V is). Then V is not initial and follows the clitics. Assume that the features of Mood must be checked. Assume that overt or abstract auxiliary verbs check the features of Mood. Assume that a true imperative verb cannot adjoin to and check the features of Mood, which is why negation is incompatible with a true imperative. Assume that suppletive imperatives can adjoin to and check the features of Mood. Assume that in a negative suppletive imperative there are various options for adjunction to Mood.

One might say that such an analysis, with a healthy number of specific assumptions including the specifics of (1), is standard practice for the field. Be that as it may, there are no actual empirical facts underlying these assumptions that would *independently* lend support to the existence of the phonetically invisible heads or the assumed features or the need to check them. The motivation is the need to derive the

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2 Because space is limited, please see the literature for the full range of data and the derivational details.

observed linear order from the assumed uniform structure with the observed meaning. Whether an invisible head actually exists, whether it has a feature, and whether this feature must be checked by negation, or a verb, are all matters of stipulation designed to get the correspondences to work out.

Such stipulations are not restricted to Italian. Zanuttini's analysis extends to Italian dialects, Spanish and Catalan. The imperatives in these languages are similar to those Italian but differ in various details having to do with which inflections are used in which persons, and the location of clitics in positive and negative imperatives. And other researchers have made similar proposals, but with different stipulations, for Greek and other Baltic languages (Rivero & Terzi 1995, Isac 2015).

4 What about English?

One might reasonably wonder how to extend an analysis such as Zanuttini's to the English imperative. Potsdam (2007) assumes that there are two approaches to explaining word order in this case: (i) in the inverted imperative, *do(n't)* is in C, and in the uninverted imperative, it is in I; (ii) in the inverted imperative, the subject is below *don't* and doesn't raise, while in the uninverted imperative, it does. However, Potsdam does not explain why raising occurs, or why *do* shows up. Moreover, his assumptions incorrectly predict the grammaticality of **Do you sit down!*; **You don't touch that!*; **You do be quiet!*.

If we try to accommodate the English facts within the framework of an analysis like (1), we see that just as in the case of the Romance imperatives, the analysis requires constructional stipulations framed in the vocabulary of feature checking and movement. For instance, the fact that we get *do*-support in English means that we have to assume that there is an imperative inflection — call it SUBJUNCT — that cannot attach to V if it is blocked by negation, just as in the indicative case. However, this SUBJUNCT is different from the true subjunctive, which does not allow *do*-support: *It is absolutely imperative that she not/*don't be there late.*

In order to get inversion with *don't* but not with *do*, we could assume that there is an imperative feature in C that is checked off by V in the positive imperative and by negation in the negative imperative. So we would get *don't you. . .* , but not **do you. . . .* However, V itself does not invert in the positive imperative, so we could assume that there is something invisible between the subject and V, call it X, that checks the feature in C. (2) suggests one possible analysis along these lines.

(2)   C[IMP] NP X V+I[SUBJUNCT] . . . $\Rightarrow$ X+C[IMP] NP V+I[SUBJUNCT] . . .

Finally, we have to address the fact that the *you* subject may be omitted in English imperatives. Since English is not a pro-drop language, we cannot attribute this possibility to a parametric property of English. We have to state it as a property

of the English imperative. This trick can be accomplished by stipulating, that the imperative C has a feature that licenses null subjects (Zanuttini 2008). This is a constructional stipulation, of course.

As the observations above suggest, I do not believe that couching the phenomena in stipulations of this sort counts as an advance over simply stipulating the correspondences between form and meaning. The number of assumptions and stipulations in a derivational treatment based on a uniform underlying structure is at best the same as the number of direct constructional stipulations, and uses considerably more formal machinery. A construction would stipulate, for example, that the simple imperative in English is of the form *VP*; there is no overt subject, and the addressee is the external argument of the corresponding interpretation. Again, space limitations prohibit elaboration; suffice it to say that in a constructional analysis of English the constructions also directly license the bare negative imperative and the other forms given above.

5   Everywhere you turn

Not surprisingly, the cryptoconstructional approach is everywhere in the literature, presented as explanation when it is stipulation. To take just one example more or less at random, consider the following set of assumptions about the ordering of subject and tensed verb in English and other languages from Biberauer & Roberts 2010, who claim to "show how the proposed analysis facilitates a new understanding of relevant aspects of the modern English verbal system and its diachrony." The assumptions are by no means atypical, although perhaps a bit extreme in their opacity, complexity and use of scare quotes.

> Assume that T c-commands V and that T and C are in an Agree relation. For English, assume that T has an unvalued V-feature. Assume that Agree licenses V's tense morphology. Assume that agreement inflection is "poor", which yields expletive subjects. Assume that there is an EPP feature that triggers movement of the subject to Spec,TP. Assume that a tensed V is a "compound" consisting of T and V—this gets V into the second position in the clause. For languages with V2, assume that movement of V is "triggered by a T-related feature of C and that full V2 languages in some sense involve a 'hybrid' C". Assume that in English, "Tense features are lexicalized as auxiliaries". Finally, "the Match component of Agree simply copies the value from the Probe to the empty slot in the Goal (the unvalued Aspect feature on the V-Goal can be thought of as the feature that makes it 'active' here, parallel to the manner in which

> unvalued Case renders DPs 'active', and T's feature-matrix will also
> [. . .] include an unvalued V-feature, which is the basis for its Probe
> status) . . . the appearance of overt *do* is regulated by the presence of
> an 'extra' feature on T."

It is perhaps belaboring the obvious to point out that all of these assumptions are made with the sole goal of guaranteeing something that can be stated very simply: in English, the overt auxiliary must undergo SAI and precede *not* (and not the tensed main V), and if there is no such auxiliary, expletive *do* satisfies these constructional conditions.

6 Conclusions

To recapitulate, accounts of linear order using movement to abstract elements whose positions are stipulated and whose existence is not independently motivated are cryptoconstructional: they are ways of importing constructional stipulations into a derivational framework. Significantly, the fact that such accounts can be formulated in no way justifies the derivational approach.

While such an approach is characteristic of contemporary work, it is interesting to note that it was explicit in the earliest days of generative grammar, e.g., Katz & Postal 1964. Katz and Postal argued that there is an abstract marker Q in clause-initial position in the syntactic representation of interrogatives, and an abstract marker I in clause-initial position in imperatives. The purpose of these markers was to mediate between the linear ordering of the constituents of a sentence and its interpretation. For example, the form of a yes-no question is derived by moving the finite auxiliary to Q, and the interrogative interpretation is borne by Q.

But it is straightforward, and in fact simpler, to stipulate that in the English question, the subject and the finite auxiliary are spelled out in the order AUX > NP, without assuming that there is movement of the AUX from a structure where it follows the subject.

To sum up, there are certain facts about the form–meaning correspondence that have to be explicitly stated in a grammar. They do not follow from general principles, and in this sense they are constructional. To the extent that derivational accounts of form-meaning correspondences of imperatives as in Section 3, or interrogatives as dealt with by Katz and Postal, are ways of stipulating the correspondences, they are actually constructional. We can state them explicitly as constructions, or we can couch them in the MGG vocabulary of uniform abstract structure, empty functional heads, features, movement and feature checking. In that case they are cryptoconstructional. To the extent that no independent evidence can be found to

motivate these derivational devices, I suggest that we apply Occam's Razor and dispense with the extra machinery.

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