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Universals and variation: an introduction

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1. Universals and variation

This volume focuses on two notions that appear incompatible at first sight – if not contradictory: universals and variation. Linguistic universals ideally are generalizations that capture properties of language or languages that are essential to and stable across all possible languages and language types. In principle, they even extend to languages that are not attested, and hence also apply to languages that are extinct or have not yet come into existence. Linguistic universals also define the scope within which languages can vary and make predictions concerning the co-occurrence of structural properties. Language variation, in contrast, is about the variable parts of language and languages and students of variation are interested in charting the range of variation and in correlating variation, i.e. a choice out of several competing options, with external or internal factors that can be used as predictors for the observable variation. Linguistic universals have predominantly been discussed within Language Typology and Universal Grammar, albeit based on different conceptions of what constitutes a linguistic universal. Language variation is a domain traditionally associated with dialectology and socio-linguistics, and more specifically variationist linguistics.

The present volume continues a highly successful line of investigation into the relationship between universals and variation in different domains of language and from diverse theoretical perspectives and methodological approaches. Among its most important predecessors are Cornips and Corrigan (2005), Dufter et al. (2009), Filppula et al. (2009), Good (2008), Hinskens et al. (1997), Kortmann (2004), Nevalainen et al. (2006), Scalise et al. (2009), Siemund and Kintana (2008). Of course, this list is not complete and could easily be extended.

Linguistic universals are highly theory dependent and can hardly be discussed outside a specific model or framework. The two major strands of linguistic research in which universals of language are currently discussed can broadly be characterized as either functionalist-inductive or formalist-deductive, instantiated by Language Typology and Universal Grammar respectively (cf. Newmeyer 1998; Siemund 2009). Each of these frameworks has developed its own conception of universals and modes of

A localistic approach to universals and variation

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Abstract

A basic premise adopted here is that language is important to both linguists and naïve speakers but in different ways and for different reasons. While linguists can take a broad view of human language, speakers in general take a very local stance towards language, one that is shaped by and extends largely to just their native language(s). With regard to universals, a generally functional and cognitive approach to language universals is advocated here, though with some role for innateness. Universals, it is claimed, have to derive from what speakers do. Speakers are able to generalize, and do so quite well, but they do so only locally, with their generalizations ranging over relatively small sets of data. Incomplete generalization can lead to variation, so a natural question is how local generalizations might lead to universals. The resolution of the conflict between localistically inclined speakers and the existence of universals that derive from their localistic practices comes from the recognition that oftentimes speakers, even of different languages, are reacting to the same sorts of stimuli and are coming at those stimuli with similar cognitive preferences (e.g. for patterning). Examples of local and incomplete generalizations from numerous languages are provided in support of this view.

Keywords: analogy, Bulgarian, functionalism, generalization, Greek, innateness, Latin, local generalization, Macedonian, naïve speaker, paradigm, Sanskrit

1. Introduction

Linguists and language speakers have some overlapping interests and goals; on an obvious level, both groups, whether wittingly or not, see language as something important. Speakers use their language for important purposes, including communicating ideas, being expressive, showing solidarity, marking identity, and so on. Linguists see all of these functions as highly revealing of something important about the human condition and the role that language plays in human life. And, the fact that language is a

structured system is clearly important to speakers, since structure allows for predictability and thus contributes to processing and decoding, and is of paramount importance to linguists, for whom structure offers a basis for scientific examination.

But linguists and speakers also have different interests and different perspectives, and nowhere do these differences become clearer than in the realm of language universals.

Linguists, by virtue of an interest in the general phenomenon of language, are inevitably drawn to consider what all languages have in common and the ways in which they differ; the quest for linguistic universals is part and parcel of the quest to understand what language is all about. To that end, linguists have a wide variety of tools at their disposal, in the form of dictionaries, grammatical descriptions, historical accounts, comparative evidence from related languages, typological evidence from other languages, experimental results, access to large-scale corpora, and the like, that they use all the time as part of the active examination of language in the abstract.

By contrast, the typical "naïve" speaker does not have access to, or certainly does not avail him- or herself of such tools. And there is no reason why speakers should concern themselves with such resources. For speakers, the particular, rather than the universal, is what is crucial. Speakers' focus is on their language, and whether it fits into a larger schema in some way or another is largely irrelevant for the uses to which they want to put their language. Moreover, speakers are generally interested in preserving a feeling that their language is unique and the use of strategies for the active differentiation of one group's language from that of another group are well documented. Thus speakers can happily exist and be effective language users without any sense of the universal that might be found in language more generally and which linguists so earnestly seek to elucidate.

If speakers are not interested in universals and in a certain sense do not need them, one has to wonder where cross-linguistic parallels of the sort that lead linguists to posit linguistic universals come from. One standard answer is that they are innate and thus any particular language conforms in some way to the dictates of universal grammar by virtue of its speakers' biological endowment. Especially important in this regard is the notion that the biological endowment helps to shape the language learning – or rather, language acquisition – process; universals thus are instantiated in particular languages through this "guided" acquisition process. Another, essentially countervailing, perspective takes universals as deriving from the functions to which language is put by speakers in their interactions with other speakers; the idea is that similar functions and goals

lead speakers of different languages to similar "solutions" to the linguistic problems attendant with getting their message across to their interlocutors.

In either case, what seems to matter for universals is what speakers bring to the enterprise of language learning and language use. If universals are due to innateness, then their realization in actual languages is a matter of how speakers apply them in their acquisition of their own language, and if they are due to functional factors, then their realization is a matter of how speakers use their language as they talk to, communicate with, express themselves to, and in essence perform before, other speakers. These basic facts mean that one way or the other, our understanding of universals rests squarely on our understanding of what speakers do and what they are capable of. Exploring these capabilities thus becomes of paramount importance.

Given the premise stated at the outset, namely that speakers and linguists have overlapping but ultimately different goals and overlapping but ultimately different takes on language, an interesting exercise presents itself, namely that of seeing how to balance the universal, representing linguists' interests, with the particular, representing speakers' interests. This balancing act further has to take variation into consideration: even if there are universals of language, there has to be room for variation across languages, as they are clearly not all identical, and linguists look to interlanguage differences as a source of insight into the nature of universals (e.g., are they valid for only certain types of languages, are they statistical tendencies rather than absolutes, etc.). But there also has to be room for variation within languages, and it is here that the speaker's interest in the particular comes into play as well, since intra-language differences often hinge on particularities of detail, whether of a phonetic or a grammatical or a lexical nature, that are salient and noticeable to native speakers.

A key question, therefore, is whether it is possible to derive universals and still have variation. I argue here that the answer is yes, and that the answer lies in recognizing the relationship between the particular and the general.

2. What is a generalization?

In a certain sense, a generalization is an expression of something universal, in that it extends beyond a very localized and highly particular starting point. For instance, to take an example from phonology, covering both sound changes and the synchronic phonological rules that arise from

them, it is often the case that sound change starts small, so to speak, being found at first just in a highly restricted and localized environment where the change is phonetically natural. A case in point is word-final devoicing, as found in Russian, Turkish, and German, among many other languages.

Like many if not most practicing historical linguists, we can assume a view of sound change that may be called "Neogrammarian",[1] whereby sound change is taken to be regular, in the sense that all tokens of a sound that occur in the conditioning environment for a sound change will undergo that change, and also conditioned only by phonetic factors. Any such change in the realization of a word can thus be labeled with a technical term referring to sound change in a very strict sense – what may be called "sound change proper" – and must have a phonetic motivation; in this way it would be opposed to other changes in the pronunciation of a word induced, for instance, by morphological factors, as a result of analogically based generalizations, and thus with a more psychological or cognitive motivation. In the case of word-final devoicing, one can argue (see Hock 1976; Joseph 1999) that it is not particularly phonetically motivated, inasmuch as word-finality has no consistent phonetic cue associated with it; rather word-finality is defined at a higher level of analysis, at the level of words rather than of sounds themselves, and thus at the morphological/syntactic level. From the perspective of Neogrammarian sound change, therefore, devoicing in word-final position could not be a primary event of change; rather, one has to posit that word-final devoicing in a given language had its start in a phonetically natural position and that it spread, i.e. was generalized, from that position to phonetically less natural positions. In particular, following Hock (1976), who draws on Sanskrit evidence, we can say that devoicing in general began in *utterance*-final position, as that is a context where, due to the silence that follows the end of an utterance, with the vocal folds in a resting position, devoicing is phonetically motivated; *word*-final devoicing would thus represent a generalization from devoicing in utterance-final contexts to devoicing in word-final contexts. Such a generalization is analogical in nature, with word-finality being influenced by – analogizing to – utterance-finality, based on the fact that for the most part, utterance-ends coincide with word-ends. In this way, therefore, a highly restricted starting point of utterance-final position

1 So called after the (mostly) Leipzig-centered school of historical linguistics in the mid-to-late 19th century, associated with such luminaries as Karl Brugmann.

leads to a more general application and widespread realization of a phonological (i.e., no longer a purely phonetic) process.[2]

A similar view emerges from the domain of the development of grammar, in that grammatical material with a general application often can be shown to arise from very particular combinations. Jasanoff (1978), for instance, has explained the Latin imperfect in *-bā-*, a formation found for all verbs in all of the regular conjugational classes of Latin and absent only in a few irregular verbs (such as *sum* 'be'), as originating in a periphrastic formation, one that has a direct parallel in Vedic Sanskrit. The periphrasis in question consisted of a noun in the instrumental case with a past tense form of the verb *bhuH- 'be; become',[3] so that an imperfect such as 'I was laughing' was originally something like 'I was with-a-laugh'. Jasanoff posits that the periphrasis was reanalyzed as a monolectal verbal form (thus, "univerbated"), with *-bā-*, deriving from *bhuH-ā-, treated as an inflectional suffix added to a verb stem. Since the instrumental case ending in Proto-Indo-European was *-eH$_1$, an ending which yielded *-ē in Latin, this account means that the imperfect originated in the *-ē-* stem verbs, that is, in the second conjugational class, and spread from there to the other classes. This very general imperfect tense formation therefore started in a restricted part of the verbal system.

Examples of this sort can be multiplied easily. The fully general and completely exceptionless use of *-m* as a first person singular marker in the present tense in present-day Macedonian, Slovene, and Slovak, for instance, as discussed most recently by Janda (1996), represents the generalization of a verbal ending that in Proto-Slavic was restricted to just five

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2 Kiparsky (2008: 45–48) takes a somewhat different view of word-final devoicing, seeing it as a purely phonological phenomenon right from the start, a view that is not entirely compatible with that taken here. That is, Kiparsky seems to have no qualms about starting with a sound change that makes reference to a non-phonetically defined environment like word-finality, attributing the suppression of certain features in codas to "those features [being] perceptually less salient in those positions" (p. 46); by contrast, I would want to ask what it is that makes for diminished perceptual salience – presumably this is primarily an articulatory and/or acoustic phonetic fact, with the phonological correlate being secondary to that.

3 I use the symbol "H" for a so-called laryngeal consonant of Proto-Indo-European that is of indeterminate quality, as in this root; where the quality of the laryngeal can be determined, due to its vowel-colouring properties, for instance, I use a subscript number. Thus *H$_1$ (below) is the "first" or *e*-coloring laryngeal.

verbs, as it is in Old Church Slavonic.[4] Similarly, the full perfect system of Modern Greek, with a present perfect, a past perfect, and a future perfect, in indicative, subjunctive, and imperatival moods, along with a participial as well, seems to have originated in just the past perfect; as argued by Joseph (1983: Ch. 3) and Joseph (2000), following Thumb (1912), the first place one sees a perfect formation of the Modern Greek type (consisting of forms of the verb 'have' (stem *ex-*) and a remnant of the older infinitive, now in *-(s)i*) is in the past perfect, so that the fully elaborated contemporary system was built up from that limited starting point. Such is the case too with the suffix *-ús-*, used with end-stressed verbs in Modern Greek to mark the imperfect tense (past imperfective) for all person-and-number forms, as it is best taken as having begun in a reanalysis of the third person plural form and to have been generalized from there.[5]

The overall lesson to be drawn from such examples is that generally applicable material – what can be recognized as the "stuff" of generalizations, the substance that generalizations are built on – starts out as highly particularized as to its originating context. Speakers therefore presumably build up from particular instances and extend them into ever-larger domains, generalizing the context of occurrence and distribution for particular elements, whether sounds or grammatical markers.[6]

What this means, however, is that if any domain is missed in the generalization process, what will result is some sort of variation in the realization of the sound or grammatical category being generalized. Incomplete

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4 The five verbs in question are *byti* 'be' (1SG *esmь*), *dati* 'give' (1SG *damь*), *ěsti* 'eat' (1SG *ěmь*), *iměti* 'have' (1SG *imamь*), and *věděti* 'know' (1SG *věmь*). Some of the modern Slavic languages, e.g. Russian, show a similarly restricted distribution for 1SG *-m*; see below for more on this phenomenon in other Slavic languages.

5 That is, the third person plural of a verb-stem in *-e-* would have ended, in Ancient Greek, in *-oun* (from stem-final *-e-* + 3PL ending *-on*); that ending was extended with the ending *-sa-n* proper to another past tense formation (the "sigmatic aorist"), giving *-oûsan* (as if from /-e-o-sa-n/) and this was then reanalyzed as involving an imperfect marker *-oûs-* (becoming *-ús-* in Modern Greek by regular sound change) with an ending *-an*. From that humble beginning, it spread into all other persons and numbers, giving now in Modern Greek, for instance, *fil-ús-a* 'I was kissing', *fil-ús-ate* 'you (all) were kissing', etc.

6 This is assuming of course that the extension process even takes place; it need not, and the conditions that lead speakers to generalize in some instances but to leave a feature in its original restricted environment in others, while an interesting object of study in their own right, are beyond the scope of the present discussion.

generalization leads to there being some loose ends, so to speak, in the grammar viewed more widely. For example, there are speakers of American English for whom word-final devoicing seems to be restricted to occurrence just in vocatives,[7] so that a shout to someone named David or Jacob can be realized as [deɪvɪt] and [dʒeɪkəp] respectively, with final voiceless stops, but it is not generally instantiated in other contexts (so that [deɪvɪt ɪz hijr] would be an unusual, and distinctly non-native, pronunciation for *David is here*).

The Latin example is important here, since a related formation to the *-bā-*imperfect, namely the future in *-b-*, was, unlike the imperfect marker, not fully generalized throughout the verbal system. The *-b-*future derives, in Jasanoff's account, from the same sort of periphrasis as the imperfect but with a subjunctive or future form of 'be' as the verb. As with the imperfect, the starting point for the spread of the *-b-*future was therefore the second conjugation, consisting of verbs whose stem ended in *-ē-*, and the spread was from that originally restricted locus. In this case, however, while all second conjugation (*-ē-*stem) and first conjugation (*-ā-*stem) verbs ended up with a *-b-*future, the two other main conjugational classes resisted the generalization of *-b-* in the future; for instance, the fourth conjugation, consisting of *ī-*stem verbs, has *-ā-* as its future marker (e.g. *audiam* 'I will hear'). Thus there is variation in the marking of future across the conjugational classes in Latin. Interestingly, too, the fourth conjugation in early Latin shows some *-b-*future forms that competed, ultimately unsuccessfully, with *-ā-*futures, so that one finds *audībō* alongside *audiam*.

Such is also the case with the spread of the first person singular *-m* in South and West Slavic. While Macedonian has the *-m* with all present-tense verbs, in the closely related Bulgarian, the *-m* is found in just a subset of the conjugational classes, specifically the one traditionally labelled Class III (see Scatton 1983: 436–438, Scatton 1993: 216–7, for instance). Thus *djalam* 'I do' is the 1SG of the Class III verb *djal-*, whereas *reka* 'I say' is from the Class I verb *reka-* and *molja* 'I beg' from the Class II verb *molja-*; moreover, there are some verbs that show variation (e.g. *znajal znam* for 'I know') and some irregular verbs with 1SG forms in *-m* (e.g.

7 Kiparsky (2008: 46n.12), citing Wissing & Zonneveld 1996, observes that word-final devoicing occurs regularly in Australian and South African English; he notes too that some American English speakers have word-final devoicing of fricatives.

sŭm 'I am', *jam* 'I eat', *dam* 'I give').[8] A comparison of Slovak, with its full generalization of 1SG *-m*, and the closely related Czech (see Short 1993: 489–491) reveals a similar set of developments to that in East South Slavic, as Czech has *-m* in the same verbs as in Proto-Slavic as well as innovatively in other verb classes (the *i*- and *a*-stem verbs).

These examples show that the absence of complete generalization will yield variation, whether between competing markers across different environments or between different realizations of the same category on one and the same stem.

It must be noted that another way of interpreting these "loose ends" is that they represent sub-generalizations. That is, rather than treating *-b-* vs. non-*b*-futures in Latin as showing competition, and thus variation, across the system of verbal conjugational classes, one instead can see the spread of the *-b*-future as evidence of a more limited generalization over just the first and second conjugations; so also with the 1SG *-m* in Bulgarian, since it can be seen as a more restricted generalization that holds (mostly) over verbs in conjugation class III in the present tense. While the end result is the same, in that just a subset of the classes shows the marking in question, the perspective is somewhat different.

In a sense, what is at issue in this alternative way of viewing the facts is the scope of generalization. Just as initial environments for sounds or morphs can be quite restricted, so too can the extent to which generalizing occurs, if it occurs at all, be restricted, yielding a generalization on a small scale, across a small domain. As discussed in Joseph (1997), for instance, "a generalization can be made over the combinations of locative-like expressions in English involving a state of being vis-à-vis institutions, as in … *in school*, *in college*, *in jail*, *in court*, such that the noun is always unarticulated, i.e. lacking a definite article". However, even this rather restricted generalization is not realized with all such nouns, since "there are speakers who have a definite article in the institutional locative expression with the noun *hospital*", i.e. *in the hospital*. And this carries over to directional phrases as well: *to school*, *to college*, but *to the hospital*. Thus there is variation within the class of institutional prepositional phrases, but interestingly, there is a sub-regularity as well concerning the behavior of the noun *hospital* in such phrases, inasmuch as it is always articulated. Furthermore,

8 These particular irregular verbs, it should be noted, continue some of the Proto-Slavic *-m* verbs (see footnote 4); the spread to Class III represents an innovation, presumably the start of what was carried through to completion in Macedonian.

dialects differ here, in that British English uses *in hospital* and *to hospital*, showing a (slightly) broader and more generalized state of affairs, whereas American English consistently has *the hospital* in these phrases, always with the definite article.

Two further examples of local generalizations come out of some developments with person and number verbal endings in Modern Greek past tense forms. The endings in the standard language are those given in (1):

(1)				
	1SG	-a	1PL	-ame
	2	-es	2	-ate
	3	-e	3	-an

These represent a blending of two sets of endings in Ancient Greek, shown in (2), as discussed in Joseph (1980) (drawing, for instance, on Thumb 1912):

(2)								
	1SG	-a	~	-on	1PL	-amen	~	-omen
	2	-as	~	-es	2	-ate	~	-ete
	3	-e	~	-e	3	-an	~	-on

Between the Ancient Greek stage with (2) and the Modern Greek stage with (1), for the most part, where there was a difference between the two sets of endings, the *-a*-endings were generalized at the expense of the non-*a*-endings (thus, contemporary *férame* 'we brought' replaced earlier *(e) férome*). This did not happen, however, in the second person singular (2SG), where *-es* won out. What seems to have happened is that the 2SG and the 3SG endings "teamed up", so to speak, forming a local "enclave" for the non-*a*-endings. This joining of the 2SG and 3SG endings via their shared vocalism reflects a local generalization over the set of "non-*ego*" singular forms, which, using the feature scheme of Benveniste (1946) that characterizes person oppositions in terms of ±personal / ±subjective, would be the non-subjective forms. This same pairing of 2/3SG is seen in German in two ways. First, there are verbs that have special vowel changes in just those forms in the present tense, e.g. *sehen* 'to see', with a stem *seh-* in the 1SG form and all plural forms, but a stem *sieh-* in the 2/3SG; this latter stem shows the effects of a sound change that altered the root vowel based on a vowel in the following syllable, but the result is that these two forms are synchronically linked for many verbs. Second, and perhaps more revealing, is that for some verbs, as discussed most recently by Albright (2008: 147), the 2/3SG forms showed a collective resistance to the analogical readjustment of the stem between Middle High German

and the modern language; that is, where the stem at one time had the shape *gib-* in the singular and *gëb-*in the plural, the modern language has *geb-* throughout, except in the 2/3SG, where the stem remained *gib-*. This resistance shows that speakers actively generalized locally over the 2SG and 3SG forms, just as speakers of German today have a special grouping of just these two paradigmatic cells in the formation of present tense stems.

3. Evidence that speakers favor local solutions (= small-scale generalizations)

Generalizations are thus important both to linguists and to speakers. Linguists are trained to look for generalizations in the data they consider, and speakers similarly seek out generalizations as they learn and use their language. We know the latter to be the case not just from what linguists posit that speakers do, but from instances where it is clear that speakers have made generalizations, involving inductive reasoning over small sets of data and then analogical extension of the inductively arrived at result to new data.

This situation can be illustrated concretely by a consideration of two related developments that have to do with the way paradigms are created and maintained. In one way of viewing paradigms, they should be the most general sort of morphological and grammatical structure in a language in that once one has a stem for a word and a set of principles for deriving the inflectional forms of that word, one would expect a full paradigm to emerge, with all the cells in the paradigm filled. And, in fact, that is usually the case. Thus new verbs in a language, say those that enter via borrowing, can almost instantly occur in all person and number forms of the present and the past tense; Modern Greek *klikar-* 'to click (as on an internet link)', for instance, while a relatively recent entry into the Greek lexicon, nonetheless appears to occur in the full range of conjugational forms – a quick internet search yields present forms 1SG *klikaro*, 2SG *klikaris*, 3PL *klikarun*, singular and plural imperatives *klikare*, *klikarete*, past tense forms 1SG *klikara*, 2PL *klikarate*, perfect forms 1SG *exo klikari*, 2SG *exis klikari*, among others, and presumably a broader-based search would yield all possible forms.

Still, despite the generality that paradigms imply, it must be recognized that there are defective paradigms, that is to say, paradigms with gaps in them, and in some instances that is due to the incomplete spread (equivalently, incomplete generalization) of the pieces that make up a paradigm

into all the cells of the paradigm. For instance, Modern Greek "contract" present tense verbs are a case in point, since singular forms show innovative re-constitution with productive endings added onto a bare stem extracted from an originally zero-marked 3SG form. Thus, early Modern Greek *rotó* 'I ask' (originally contracted from *rota-ō) has been remade to an uncontracted *rotá-o*, with the stem *rota-* and the productive 1SG ending *-o*. For many dialects, including that represented by the standard language, only the 1SG and 3SG forms are re-made (thus, *rotá-o* / *rotá-i*), but the 2SG is not (see Householder and Nagy 1972 on this). The scope of the generalization about how to reconstitute the present conjugation of such verbs is thus, for most dialects, very limited and embodies a gap in its realization.[9] The same scenario obtains with the spread within Modern Greek of *-a-* as past-tense theme vowel discussed in the previous section; while it is the case that *-a-* was generalized at the expense of *-e-* or *-o-* in most forms, interestingly, the 2PL stood out as an exception, resisting the *-a-* for a long time, in fact longer than any of the other cells in the paradigm, and was the last form within the paradigm to change. That is, as discussed in Joseph (1980), there was a stage where the forms of the past paradigm for *fer-* 'bring' were 1SG *éfera*, 2SG *éferes*, 1PL *férame*, 3PL *férane*, but 2PL *férete*; the contemporary form *férate*, to judge from the presentation in Thumb (1912), was generalized only in the 19th century.

Similarly, there can be variation, the sort of "loose ends" referred to above, as a result of counter-generalizations that work against an existing regularity. For instance, the usual marker for 3SG past in (Vedic) Sanskrit is *-t*; however, as the result of a regular sound change, that *-t* disappears in some environments, in particular especially /C__#, e.g. /a-kar-t/ => [a-kar] 'he made'. Thus consonant-final verbs typically show a zero-ending on the surface in the past tense for 3SG forms. Nonetheless, some verbs with consonant-final stems, where the *-t* would regularly have been lost, have had the *-t* "restored" (e.g. *a-dar-t* 'he cleaved' from the root *dar-*, as opposed to *a-kar*, from the root *kar-*). Presumably the motivation behind the restora-

9 There are some dialects in which the 2SG form is also similarly reconstituted, to, e.g., *rotá-is*; in such dialects, there is a broader, more general, reconstitution, whereas in dialects like Standard Modern Greek, such verbs show an irregularity, a gap, as it were, in the 2SG form, in that the forms are 1SG *rotá-o* / 2SG *rotá-s* / 3SG *rotá-i*. Interestingly, in all dialects the plural is excluded from the reconstitution process (often referred to as Watkins' Law – see Janse 2009 for discussion of this process in the history of Greek, with references), again showing the limited scope of the reconstitution process.

tion was to overtly mark 3SG in some way, yet this overt marking runs counter to the phonological regularity – that is to say, a phonological generalization that holds virtually universally in Sanskrit – created by the sound change, such that there are no word-final consonant clusters in this language. The overt re-marking of 3SG was realized only in a piecemeal fashion across the class of consonant-stem verbs, affecting, e.g. *dar-* but not *kar-*, yielding variation between consonant-stem verbs with *-t* in the past tense and those with zero in the past tense. From the point of view of assessing degree of generalization, this example is interesting in two respects: the reintroduction of *-t* in the 3SG past forms did not reach the level of full generalization, since some verbs were not affected, and a valid generalization about Sanskrit phonology was chipped away at, in correspondingly piecemeal fashion, by the re-emergence of this *-t* with these verbs.

All of these examples, and especially the limited scope for generalizations and the restricted starting point for even very general aspects of a language, suggest that speakers can focus on just a small amount of data and a small area of the grammar at any one time; in Joseph (1992: 139) I phrased this observation in the following metaphorical terms: "speakers in the process of using – and thus of changing – their language often act as if they are in a fog, by which is meant not that they are befuddled but that they see clearly only immediately around them, so to speak, and only in a clouded manner farther afield." I went on to state that "they thus generalize only 'locally', in the sense of Joseph and Janda (1988), and not globally over vast expanses of data, and they exercise their linguistic insights only through a small 'window of opportunity' over a necessarily small range of data." Speakers are thus good at making generalizations, but the issue is the scope of the generalization. My claim, based on what speakers actually do in analogical reworkings of linguistic form, is that the scope is necessarily limited, at least at the outset of a given development. Even full-scale generalizations, it seems, start small.

4. So if this is what speakers do, where can linguists get their universals from?

These examples therefore appear to show something fundamental about how speakers approach language. Moreover, speakers deal with aspects of language that are necessarily very language-particular, inasmuch as these features involve instances of morphological marking or of phonological patterns that are found neither in all languages nor even necessarily in a

significant subset of languages.[10] Thus, as suggested above in section 1, the following question naturally arises: if speakers like to generalize but do so only on a localized and highly particularized basis, and if speakers' focus is their own particular language, then how can cross-linguistic generalizations be derived, since such generalizations are clearly beyond the scope of a speaker? More generally, where, then, do language universals come from? It is at this point that the linguist steps in, with the broader vantage point over larger amounts of data from varied sources, but is there a lesson to be learned about linguists' universals from the way speakers proceed?

My answer here is affirmative, and I suggest that there is indeed something important to be learned. In particular the key issue that emerges from the discussion in previous sections is relevant here. That is, the scope of the generalization, and by extension, of linguistic universals, does indeed matter, for linguists as for speakers. And, it matters in two ways.

First, just as generalizations can be restricted as to their scope, so too can linguistic universals be limited, as paradoxical as that may seem.[11] That is, if a putative[12] universal is circumscribed appropriately as to its attendant conditions – for instance if it holds only for languages of a particular structural type or with a particular set of features – then it might stand a good chance of being a valid generalization about human language. Moreover, from the perspective of individual speakers of a language, to the extent that all they know is their own language,[13] it is reasonable to suppose that

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10 That is, very few languages use *-t* as a marker of 3SG past tense or *-i* as 3SG present tense, and not all languages limit consonant clusters at the ends of words.

11 What I advocate here is similar in spirit, though perhaps not in detail, to the important notion advanced by Siemund (2008: 322) that universals must be recognized that are applicable only in "specific linguistic domains".

12 I say "putative" here since in a real sense all universals are hypotheses about what is to be found in a language under certain conditions, and thus is subject to testing, and ultimately to falsification, if a language is found that meets the conditions but does not give evidence of the particular property or feature that should occur. At that point, a universal may shift in its character from an absolute, wherein the feature must occur given conditions X, Y, and Z, to a statistically based positive tendency, wherein the feature has such-and-such a likelihood of occurring under those conditions. See Dryer 1998 on the relative merits of statistical versus absolute universals.

13 It seems reasonable to suppose that the default situation regarding knowledge of languages on the part of typical speakers in most parts of the world is that they are multi-lingual. Still, the ability to generalize across languages one

for them, the highly circumscribed and particularistic facts about their language *are* universal, and really do define what a human language is like. What is familiar, and thus comfortable, for speakers is the way things are in their language, and my feeling is that most speakers will see the characteristics of their language as "natural", and therefore indicative of human language in general, without the benefit – or burden – of making comparisons across languages. If speakers have any thoughts about the nature of language, they will surely extrapolate from what they know and will thus view language in general through the prism of their own language.

Here the linguist's perspective is different, in that most linguists would not accept as very interesting or significant or insightful a "universal" that held just for one language or, for that matter, just for one very narrowly identified "class" of languages. Still, the notion of "relativized universals" is one way of blending the particularistic viewpoint of speakers with the more catholic viewpoint of the linguist.

A second way in which these two viewpoints can be reconciled is by recognizing that universals that cut across languages, and that are thus beyond the scope of what any individual speaker in the typical case can be expected to discern, could well be the result of different speakers generalizing, in the localized way that they do, but with each reacting to similar sorts of stimuli. This is the essence of the motivation behind claims of a functional basis for universals: speakers use language to achieve certain ends, and those ends are consistent with the human experience, that is with individuals being human and interacting with other humans. To the extent that aspects of human interaction are universal, features of language that are rooted in such interactions will be similar across languages. Therefore, there will be features that necessarily cross language boundaries, and in that sense are universal, since the human condition cuts across language boundaries.

By taking this position, I am essentially rejecting here the basic "innateness" approach to universals. If universals are innate, then they would have to derive in some way from the human biological endowment; however, if the most successful way to state universals is in relativized terms that focus on details and/or derive from speakers' level of attention to detail, then the relevant biological imperatives, in this view, would have to

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knows as to abstract features that they show seems to me to be something that does not come naturally to speakers who are untutored in the ways of linguistic analysis.

themselves be at the level of detail that speakers seem to operate at. But for speakers, the details that are relevant are particulars about their own language, so one would have to suppose that the biological endowment, even if claimed to be universally human, nonetheless includes language-particular features. That seems like a difficult, and perhaps even contradictory, stance to have to take.

Still, humans show certain tendencies in the way they operate in general and in the way they approach the world that could lead to cross-linguistic similarities that are suggestive of universals. And, this can be the case even if these tendencies are realized in a particularistic way in individual languages. For instance, it is undeniable that humans show a preference for patterns, which can extend to a preference for symmetry, when they are dealing with data that is presented to them. Whether this preference is a matter of instinct or of cognitive structure or something else is immaterial to the concerns expressed here; what is important is that seeking out patterns in data one encounters is a thoroughly natural activity, even if an unconscious one, for speakers to engage in. As far as patterns and symmetries in language are concerned, speakers must deal with these on a particularistic basis, since all that speakers are presented with, in the typical case, is data from their own language. Yet, working with that data, speakers can extract regularities and can, for instance, generalize over the order of head nouns and adjectives, on the one hand, and head nouns and relative clauses, on the other hand, and thereby recognize a pattern of noun plus modifier; if the data warrants it, this pattern could take in as well nouns with modifying possessives. The key point here is that if enough speakers in different languages recognize such patterning in data, and even go so far as to act on that recognition by, for instance, innovating a word order in one combination so that it matches the word order in the others, then linguists would be inclined to talk in terms of a universal linguistic tendency for modifiers of any sort to line up in parallel fashion across a language, relative to the modified noun, as claimed by Greenberg (1963), for instance. Where the suggestion made here differs from that of Greenberg is in relating the parallelism to the human tendency for recognizing patterns in data and for working actively to bring outliers in under the "umbrella" of the pattern; that is, a linguistic universal, in this view, could result from a non-linguistic (e.g. cognitive) universal, played out in individual languages by individual speakers.[14]

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14 If this pattern is extended across categories to take in as well non-nominal domains, then one could talk, as Hawkins 1983 did, in terms of a Cross-Cate-

As an aside, it can be noted that the contradiction alluded to above defines what can be considered (for at least a portion of linguists) the basic problem with Optimality Theory (McCarthy 2001). The constraints that are posited in Optimality Theory as operative in the sanctioning of, for instance, particular phonological realizations are claimed to be universally available to all languages, differing only in their "ranking" (i.e. strength) relative to one another. Yet some of the constraints that one sees in Optimality Theory analyses are so particular as to be clearly language-specific. What is universal about a constraint that blocks all but *-n*/*r*/*s* in word-final position in Classical Greek, to take, for instance, one fact about one language that would seem to be amenable to a treatment in terms of a constraint active in a language? One can of course abstract away from the particular and say that a restriction on the occurrence of consonants in final position is the sort of distributional constraint that languages can be expected to have, so that the Greek restriction is but one instance of a more general type of constraint. Still, for the speakers of Classical Greek, what marked their reality was the restriction to certain, i.e. non-final, positions for all consonants except *-n*/*r*/*s*, which exhibited a greater freedom of occurrence.

My answer is thus that attention to the proper scope of what speakers can do and therefore to what universals can be expected to focus on tells us that universals must emerge out of what speakers do, and not be part of the biological "plan" that is inherited. In that way, I advocate a more derivative approach to understanding universals, essentially a cognitively or functionally based one, since that accords more closely with what speakers are capable of doing on the one hand and what they do in fact do with their language on the other.

At the same time, though, I would suggest that there are certain gross architectural features of language, e.g. the existence of levels of structure, the fact that smaller units combine to give higher-level units, and so forth, that are likely to be explainable by innateness and are likely to be part of

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gory Harmony Principle, which he saw as a linguistic universal. See Dryer 1988 for discussion of whether Hawkins's principle holds up to scrutiny against a wider and more carefully selected sampling of languages. It is worth noting here, though, that even though Dryer (p. 204) expresses doubts about "a cross-categorial tendency towards consistent ordering of head and *dependent*", à la Hawkins, he is comfortable with the idea that "there may be a tendency towards consistent ordering of head and *modifier*", the generalization focused on here. See also Nichols 2008 for similar doubts about cross-categorial harmony.

our biological endowment.[15] Admittedly, this list may seem somewhat brief and vague, but it is not my purpose here to explore this particular type of universal, only to signal its existence. Still, suffice it to say that the need to recognize such "design features" for language, to use the terminology of Hockett (1960), derives from the fact that every language that linguists have ever investigated reveals that it is not a random collection of sounds or words but rather that there is structure and system to the utterances that make it up, and that this structure can be organized into different levels that evince a hierarchy of sorts (sounds combine to form meaningful chunks ("morphemes") which combine to form composites (words or phrases) with meanings derivable from the meaning of the chunks, and so on). In this way, it would seem that the answer to the question of where universals come from must necessarily take into consideration both innateness and function. This, hopefully, can be seen not as an empty compromise position that satisfies no one, but rather as a realistic viewpoint that strikes a balance between one reality, namely that there is some biological and innate basis for language, even if perhaps (or at least partly) derivative from other innate cognitive functions, and another reality, namely that language is something that speakers use constantly, and thus to some extent shape to their own ends.

5. Conclusion

It must be admitted that in a given case, it may not be obvious where or how to draw the line between what counts as a basic architectural feature and what can be considered to be a functionally derivable one. But the basic insight argued for here must guide any decision: speakers, it is claimed, necessarily take a highly localized stance towards their language, and while they are capable of making generalizations they do so only in localistic terms; the limited generalizations that result mean that in the typical case, variation within the usage of individuals and across a speech community is inevitable. Accordingly, cross-linguistic generalizations, by which is meant here universals of different degrees of particularity, must always be understood against a starting point of potential individual language variation.

15 These are surely akin to what Nichols (2008: 292) had in mind with her reference to "hard-wired universals".

Abbreviations

1SG = first person singular; 2SG = second person singular; 3SG = third person singular; 1PL = first person plural; 2PL = second person plural; 3PL = third person plural; C = consonant.

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