Missing Persons:
A Case Study in Morphological Universals[*]

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1. Introduction

Morphological universals have, in one form or another, figured prominently in discussions of linguistic universals since the rise in attention to the topic normally associated with the work of Joseph Greenberg. For example, roughly half of the more than 2000 proposed universals in the Universals Archive[1] involve morphology, and morphology (or morphosyntax) pervades textbooks on language universals (see, e.g., Croft 2003). There are, to be sure, many different types of purported morphological universal, ranging from generalizations over affix ordering (1), through morpheme inventories and contrasts (2), to proposed universals of form at the interface with phonology (3).

(1)   Affix-order universals (see especially Bybee 1985, Cinque 1999, Julien 2000, Rice 2000)

If morphemes expressing features/categories A and B occur in the same word, then B is closer to the root than A.

Admitted:	A-B-root	Excluded:	*B-A-root
	root-B-A		*root-A-B

Examples:	A=case; B=number	(Greenberg 1963, Universal 39)
	A=tense; B=(progressive) aspect	(Blansitt 1975, Julien 2000)
	A=external case; B=internal case	(Moravcsik 1995, Suffixaufnahme)

(2)   Inventory universals (implicational)

If a language has gender distinctions in the first person [i.e., pronouns], it always has gender distinctions in the second or third person, or in both. (Greenberg 1963, Universal 44; Corbett 1991:131).

If a language has a dual number, it also has a plural (Greenberg 1963, Universal 34; see also Corbett 2000).

[1] http://typo.uni-konstanz.de/archive/intro/index.php. As of June 27, 2007, 946 of the 2028 universals involve morphology (including inflection) and almost exactly half of these are categorized as "absolute", i.e., rather than statistical.

A language never has more gender categories in non-singular numbers than in the singular (Greenberg 1963, Universal 37)

(3)   Universals of form (i.e., without reference to meaning / features)

Templatic morphology is always defined in terms of prosodic, rather than segmental, templates. For example, partial reduplication may attach a "light syllable", but cannot be specified directly as CV. (McCarthy and Prince 1986[1996])

In partial reduplication, copying is always Edge-In. Thus, prefixing reduplication copies from the left edge of the base (AB-ABCD, *CD-ABCD) while suffixing reduplication copies from the right (ABCD-CD, *ABCD-CD); (after Marantz 1982, who identified this as a trend, see Nelson 2003 for the claim that it is universal, with accounts of apparent counter-examples)

The literature on morphological universals revolves largely around two questions (parallel to those asked for syntax, see Newmeyer, this volume). The first concerns the empirical validity of claims for absolute, exceptionless universals, as opposed to statistically significant trends. The second (assuming that some universals are indeed absolute) lies at the heart of the formalist-functionalist debate: do the true universals reflect properties of our genetic endowment (the formalist position) or do they emerge from cross-cultural tendencies in speech act settings (the functionalist position)? Another dimension of this question is whether the universals represent properties peculiar to language (and hence clues to the form of Universal Grammar), or merely the reflexes of more general aspects of human cognition.

In this brief paper, I offer a case study of three closely related morphological universals of a type that has received somewhat less attention than those in (1)-(2). Specifically, the generalizations constitute absolute, rather than implicational, universals ranging over morpheme inventories. They have the form that certain well-defined, and a priori plausible, morphological contrasts never occur. I submit that universals of this sort provide a good argument (given the current state of knowledge) for the formalist view, i.e., that there are universal constraints on possible morphemes: a Universal Feature Inventory.

The universals in question range over contrasts in the domain of person marking (pronouns, clitics and agreement), and more narrowly in the attested atomic inventories of person marking.[2] The universals can be understood with reference to what Sokolovskaja (1980) terms the seven "meta-persons". A descriptive vocabulary that incorporates the three traditional features (1, 2, 3) allows for the expression of a seven-way contrast along the dimension of person, independent of any other feature (such as number), as shown in (4).

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[2] That is, these universals range over inventories that are not subject to further morphological segmentation; additional contrasts can be created by combination of morphemes—see section 2.

(4)   The seven meta-persons.

1+2	speaker(s) and hearer(s); no "others"
1+2+3	speaker(s), hearer(s), and other(s)
1	speaker(s) only
1+3	speaker(s) and other(s), hearer(s) excluded.
2	hearer(s) only
2+3	hearer(s) and other(s)
3	other(s) only

Despite the logical possibility of a seven-way contrast, certain distinctions are never morphologized; the maximal attested contrast (holding all else constant) is the four-way contrast in (5b). Many languages show even less: in languages lacking an inclusive/exclusive opposition (such as English), the first four meta-persons are as subsumed under the "first person plural" pronoun, *we*, a point noted already by Boas (1911:35).

(5)

a. possible	b. attested	c. binary
1+2	}"inclusive"	[+spk, +hr]
1+2+3		
1	}"exclusive"	[+spk, -hr]
1+3		
2	}"second person"	[-spk, +hr]
2+3		
3	}"third person"	[-spk, -hr]

The universals are given in (6), under two formulations, which are equivalent for present purposes. Further clarification of these universals is given below.[3]

(6)   Person universals

   a. As restrictions on contrasts

   U1   No language distinguishes [1+1] from [1+3].

   U2   No language distinguishes [2+2] from [2+3].

   U3   No language distinguishes among [1+1+2], [1+2+2] and [1+2+3].

   b. As restrictions on forms

   U1   No language has a special morpheme for (true) [1 PL].

   U2   No language has a special morpheme for (true) [2 PL].

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[3] It is important to keep in mind that the discussion here regards contrasts in person, independently of other features such as number. Thus many, possibly most, languages have a distinct form referring to {2} (a set containing just the hearer) as opposed to {2,3} (a hearer and one other), for example German *du* 'you.SG.' vs. *ihr* 'you.PL', but this is a distinction of number, not person. Crucially, the plural form is not restricted to [2+3] (hearer + other) and is also used to address multiple hearers [2+2]. See below for further discussion and examples.

U3   No language has a special morpheme for 'comprehensive' person [1+2+3].

In sum: the traditional three-value person system over-generates, allowing for the expression of universally unattested distinctions.[4] By contrast, a two-valued, binary feature system [±speaker] and [±hearer] (or any equivalent notation) is not only restricted to a four-way contrast, it in fact yields exactly the maximally attested contrasts and excludes precisely those distinctions that are unattested. In other words, the two-valued person feature system, lacking a feature "third person", admits of all and only the attested person distinctions in the world's languages. To the extent that there is no other (say, language-external) explanation of why the unattested contrasts should be impossible, this state of affairs constitutes a powerful argument in favour of the two-value feature system over the traditional three-value alternative, as a property of Universal Grammar.

The argument is by no means novel, nor is it wholly uncontroversial. With varying choices of the feature labels, this argument has been presented and defended in one form or another by Ingram (1978), Harley and Ritter (2002), and in particular detail by Noyer (1997:chapter 2), and is implicit in other work using a binary feature system (see Silverstein 1976, Anderson 1992).[5] Criticisms and challenges for the two-value system are raised in Zwicky (1977), Comrie (1980), Plank (1985), and Cysouw (2003). Reviewing this well-worn example has in the first place the advantage that the empirical basis is extremely well-documented. Major studies span more than half a century (Forchheimer 1953, Sokolovskaja 1980, Cysouw 2003), with sample sizes on the order of 500 languages (e.g., Forchheimer 1953:2; see in particular Cysouw 2003 for a review of the literature and cirtical discussion of the various means by which authors have assembled samples). The relevant facts are clearly definable with a minimum of theoretical apparatus. And while the universals are extremely robust, there is of course some measure of lingering debate

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[4] If the combining operator "+" is not included, only a three-way contrast is generated. This three-person system undergenerates as it fails to admit languages showing an *inclusive* (speaker and hearer) vs. *exclusive* (speaker and others, but not hearer) opposition in the first person. Although rare in Indo-European languages, and thus not recognized by the ancients, such a distinction is common outside of the Indo-European family (see Cysouw 2003, Filimonova 2005). An arbitrary number of further distinctions made by repeating elements to indicate cardinality of referets (2+2 vs. 2+2+2, vs. 2+2+2+2…) is not attested as a matter of person, as opposed to number and is excluded from further consideration (see Sokolovskaja 1980:84, Cysouw 2003:77, and the exchange between Greenberg 1988, 1989 and McGregor 1989).

[5] The labels [±speaker] and [±hearer] are from Ingram (1978), other authors have used [author] in place of [speaker] (Halle 1997) and/or [±addressee] in place of [hearer] (Zwicky 1977) as well as pairs such as [±ego] vs. [±tu] (Silverstein 1976) and [±I/me] vs. [±you] (Anderson 1992, Noyer 1997). The non-committal features [±1], [±2] are also used; however, I have avoided using these here since I use [1,2,3] as more or less descriptive terms of the meta-language. For the purposes of describing the inventories, the above combinations are essentially equivalent, as are variants using privative, rather than binary features, though questions of interpretation arise in tying these to explanations outside the morphology; see section 3.2 below. Note that a binary system using only [±speaker] and [±participant], also encountered in the literature, is not equivalent as it fails to draw the inclusive/exclusive opposition (i.e., [+speaker, -participant] is either incoherent or equivalent to [+speaker, +participant], depending on the interpretation of "-" values) and would need to be supplemented by an additional feature (see Sauerland, in press, and Nevins 2007 for relevant discussion). See Nevins (2007) also for arguments that the simple two-feature binary systems are insufficient to capture co-occurrence restrictions (specifically, the Person Case Constraint) and syncretisms, and thus that a more elaborate system than the one presented here is required; Nevins argues for a [participant] feature in addition to speaker and hearer features. See also Harley and Ritter (2002) and McGinnis (2005) for related discussion including the question of whether the relevant features participate in a feature-geometry, and see Noyer (1997), Cysouw (2003) and Nevins (2007) for contrasting views regarding the nature of the evidence from syncretism. The murkiness of the data on syncretism contrasts starkly with the sharpness of the generalizations considered here.

about their validity. U2 is disputed by Comrie (1980) and Plank (1985) (see also Plank's remarks on the Universals Archive). In addition, some descriptions of sign languages (not discussed in the typological literature) appear to run counter to U2. As it happens, the putative counter-examples to U2 do not survive closer scrutiny (see especially Simon 2005). U3 is much less often discussed, the most important discussion being that in Cysouw (2003). Differences in terminology might suggest a challenge to U3 from data presented in that work, and I turn below to some further clarification of just what is at stake and what the evidence does (and does not show). There is thus room to address the empirical basis of both universals, and I turn to this in the next section.

In addition to the empirical domain, the attention that has been paid to these universals has led to specific proposals regarding the account from both formalist and functionalist perspectives, so these proposals may be directly compared, a task I take up in section 3. There, I show how and why the functional accounts of these universals that are on offer fall short. To the extent, for example, that there is a literature investigating the understanding of person (speech act participants) from a general perspective, it seems clear that the severely restricted inventory of distinctions signalled in morphology is but a pale reflection of the far richer set of distinctions that play a role in cognition. Likewise, current suggestions to deduce these universals from considerations of frequency do not have any empirical support that I am aware of. As they currently stand, such accounts appear to rest on conflicting hunches about "plausibility", awaiting demonstration. At our current level of knowledge, then, these universals thus point to aspects of language that are both universal and specific to language. In other words, these universals provide one of the strongest cases for universal grammar, at least as regards a universal feature inventory for (this domain of) morphology.

2. Missing Persons

I turn now to a closer examination of each of the universals in turn. After a brief elaboration of the content of each one, I turn to apparent challenges in the literature. In the case of U2, two recent works (Simon 2005, Cysouw 2003) have already surveyed—and dismissed—prior challenges, and I will not dwell on repeating their discussions, focussing instead on apparent challenges that have not yet been addressed in this literature. It bears reiteration that the universals in question are exceptionally robust and have borne up over decades. Despite the emphasis here on the apparent counter-examples, the vast majority of languages surveyed fall unquestionably within the parameters delineated by the universals. Greenberg's characterization of U2 as holding "with a few rare and doubtful exceptions" (1988:14) is here entirely apt. Yet establishing that these are absolute universals rather than strong trends requires demonstrating that even these rare and doubtful exceptions do not constitute true counter-examples, and it is to this task that I turn below.

Before proceeding, it is important to call attention to the scope of the universals as holding of contrasts in monomorphemic, i.e., unsegmentable, person markers. Various languages have person markers that are transparent composites of atomic elements, a widely cited case being the Tok Pisin inclusive *yumi* < 2SG *yu* and 1SG *mi* (Foley 1986:67). Compound pronouns are particularly numerous in the Grassfields languages of Cameroon, and are to varying degrees grammaticalized. They are reported to permit the explicit drawing of distinctions such as "you-plural" versus "you and them" (see Cysouw 2003: chapter 5 for examples and analysis). The universals in (6) are posited as restrictions on feature inventories, and thus, ultimately on possible morphemes. The claim is that for example, [2+3PL], as opposed to [2PL], is not and cannot be expressed as a single morpheme, however nothing in the formulation of the universals blocks the construction of a complex element from separate morphemes meaning [2PL] and [3]. Thus the existence of compound pronouns is consistent with the universals and with the formal account. Importantly, the existence of compound pronouns demonstrates that the distinctions in

question are not only conceivable, they are also expressible in natural languages, and can be to some degree grammaticalized in a broad sense (i.e., internally complex, but showing morphophonological irregularities, for example). They are simply never morphemecized.

A related exclusion lies in the area of person distinctions that are 'constructed' of discrete person and number marking. The most well-discussed case is that of Sierra Popoluca (see Zwicky 1977, Noyer 1997:162-167, and Cysouw 2003:147-152). On the surface, this language appears to draw a distinction between [1+2] and [1+2+3], in apparent violation of U3. However, the distinction involves separate person prefixes and number suffixes. The person prefixes draw a four-way contrast, exactly that described above. What is of interest is that the inclusive prefix [1+2] may occur with or without the plural suffix. The question then is what the meaning of [1+2] non-plural is. Most treatments now converge on the opinion that such a contrast represents a minimal/augmented number system, whereby the "non-plural" forms represent the minimal number of participants to meet the person requirements. For a [1], [2], or [3] category (more accurately [+speaker], [+hearer], or [-speaker,-hearer]), the minimal number is one, and thus minimal/augmented converges with singular/plural. But exactly for the inclusive, the minimal number must be two (speaker and hearer), with the "plural" being therefore more than two. While it is true that different word forms will be used in a context including a speaker, a hearer and one other person, on the one hand, and just the speaker and hearer, on the other hand, at its core, this is no different from the observation that different pronouns will be used for reference to a hearer and another person (German: *ihr*, French: *vous*, etc.) as opposed to just a single hearer (*du, tu* etc, respectively).[6] The important message at this point is that this contrast is one of number, not person. I return to the discussion of such cases in section 2.3.

2.1 [1 PL]—a pronoun for the masses

(7)   **Universal 1**

   a.   No language distinguishes [1+1] from [1+3].

   b.   No language has a special morpheme for (true) [1 PL].

This universal was first posited (not quite in these terms) by Franz Boas nearly a century ago (Boas 1911:35), and is undisputed as far as I can tell. No language has a special "chorus *we*", that is, a person marker used solely for a plurality of speakers, speaking together, and distinct from any of the other first person plurals (Zwicky 1977:731, Cysouw 2003:74). Although Boas deemed such an entity impossible (see section 3.2 below), others have suggested contexts in which the distinction could be drawn. Examples commonly cited include the speech of the chorus in Greek drama, crowds at sporting events ("we are the champions"), and religious rituals (such as group prayer), see Mühlhäusler and Harré (1990), and discussion in Cysouw (2003:73-74).

There is a related issue, which is somewhat of an aside at this point, but is of potential relevance below. Namely, the question has been raised as to whether it is proper to speak of first person "plurals" at all (to cover the attested senses of *we*). As Lyons (1968:277) noted (cf. Benveniste 1966:232-3):

   "[i]t is clear … that *we* ('first person plural') does not normally stand in the same relationship to *I* ('first person singular') as *boys, cows*, etc., do to *boy, cow*, etc. The

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[6] There is a wrinkle in Sierra Popoluca, which is that plural marking is apparently facultative (Noyer 1997:166, citing personal communication from Ben Elson).

pronoun *we* is to be interpreted as 'I, in addition to one or more other persons'… In other words, *we* is not 'the plural of *I*': rather, it includes a reference to 'I' and is plural.'

The question is important in the present context, if we are to maintain the idea that it is meaningful to cast discussions of person universals with reference to the cross classification of person and number. It is indeed meaningful to speak of a first person plural, but it is important to note that plural, for the first person, normally means an *associative* or *group* plural, rather than a multiplicity of individuals sharing the property [speaker].[7] Note that this holds true even for those languages in which plural morphology for first person markers is shared with the morphology for nouns, as in Mandarin Chinese (Corbett 2000:76), Sierra Popoluca (Elson 1960:218-220) and elsewhere (see Corbett 2000:76-77 and Cysouw 2003:68-72 for discussion and additional examples).[8]

(8)　　　　　Mandarin　　　　　　　　　Sierra Popoluca

	SG.	PL.	SG.	PL.
[1]	wǒ	wǒ-men	ʌč	ʌ́č-tʸam
[2]	nǐ	nǐ-men	mič	míč-tʸam
[3]	tā	tā-men	he	héʔ-yah
noun:	xuésheng 'student'	xuésheng-men 'student-PL'		wó:ñ-tʸam 'little.girl-PL'

It thus seems that UG does permit of the combination of [1] and [PL], and while this is often expressed by a single, unanalyzable form (as in English *we*), it may be expressed transparently. From this perspective, U1 is partially equivalent to saying that [plural] for the first person can only be associative.

2.2　The elusive second person exclusive

(9)　　**Universal 2**

　　　a.　　No language distinguishes [2+2] from [2+3].

　　　b.　　No language has a special morpheme for (true) [2 PL].

This universal parallels U1, substituting [hearer] for [speaker]. Many researchers explicitly or implicitly distinguish the first person from the second person in terms of the ability to form true

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[7] Greenberg (1993:13) suggests this is true even for mass speaking: "Even the 'chorus we' is not really a plural of the first person. Each person uttering it, whether the utterance is preconcerted or not, is referring to himself or herself plus others."

[8] The plural marker *–men* in Mandarin is limited to pronouns and certain animate nouns; similarly the plural *–tam* in Sierra Popoluca has a limited distribution among nouns, the plural suffix *-yah* being the more general (Elson 1960: 218). As Cysouw notes, it is exceedingly rare for pronominal paradigms to use a general nominal plural to indicate plurality—when pronouns are transparently segmentable, the marker of plurality used in pronouns, if used in the nominal system, is often limited to a subset of nouns, generally those denoting humans. By contrast, in certain types of agreement morphology, such as adjectival and participial agreement (typically described as lacking person agreement), first and second person plural group systematically together with all other plurals. This is true of associative plurals generally, according to Moravcsik 2003.

plurals; compare Lyons's remarks on the ambiguity of *you-PL* to his remarks on *we* cited above (see also Zwicky 1977):

> "As a plural form, [*you*] may be either 'inclusive' (referring only to the hearers present—in which case it is the plural of the singular *you*, in the same sense as *cows* is the plural of *cow*) or 'exclusive' (referring to some other person, or persons, in addition to the hearer, or hearers)." (Lyons 1968:277)

The validity of U2 has been disputed. For example, Comrie (1980:837) and Plank (1985:147) have suggested examples of languages drawing exactly the distinction that English *you-PL* fails to make. In an important recent contribution to this topic, Simon (2005) carefully reviews all of the putative counter-examples in the literature (with the exception of sign languages, on which see below). Simon demonstrates that none of the reported examples is compelling, and each is open to plausible reinterpretation. This may be exemplified with one of the most often cited examples of a second person exclusive, that of Abkhaz from Hewitt and Khiba (1979:157), given in (10).

(10)   Abkhaz – plural pronouns

	inclusive/general	exclusive
1PL	ħa(rà)	ħart
2PL	š˚a(rà)	š˚art
3PL	darà	

Simon's detailed review of the grammatical descriptions of Abkhaz and related languages, along with Hewitt's own reservations about the interpretation of these forms, shows clearly that these forms do not violate U2, on a variety of levels.

In the first place, it is not at all clear that the label 'inclusive/exclusive' corresponds to the distinction in question. Simon notes the following from the grammar of Abkhaz published by the Georgian Academy of Sciences.

> The 1st person pl. pronoun *ħara* 'we' and 2nd person pl. pronoun *š˚ara* 'you' have parallel forms: *ħara/ħart* and *š˚ara/š˚art*. *ħara* has an inclusive meaning, i.e., the speaker includes the listener as well among the number of 'we'. The exclusive meaning, excluding the listener to whom the speech is addressed, is formed from the personal pronoun *ħara* 'we' and the suffix *–t*, *ħar-t*, (cf. Abaz. *ħarabarat* 'we without you'). In an analogous way, the form for the 2nd person pl. is also formed: *š˚ara* 'you', *š˚ar-t* (cf. Abaz. *š˚arabarat* 'you without me'). (Aristava et al. 1968:35, translation – JDB).

Of note here is that the distinction for the second person is not presented as a distinction between addressee with or without third persons, but rather as 'you' versus 'you without me' (although it remains unclear what that distinction amounts to, given that the plain 'you' normally excludes the speaker in any event). Also of note is that the forms in question are morphologically complex and include an element *–t* that occurs also in demonstratives. Cysouw (2003:75, n.10, with attribution to R. Smeets) suggests a comparison to forms such as French: *vous autres* 'you others', compare also the English collocation *you there*. Thus, while it may be in practice that these forms are restricted to a plurality of hearers and associates present, this component of meaning seems to be not a part of the person feature, but rather contributed by the (independently occurring) deictic element *–t'*.[9] Note that the presence of the demonstrative

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[9] Although I say 'in practice', this may be an idealization. Thus Hewitt notes: "the strictly inclusive forms may and usually do appear where one would expect the exclusives" (Hewitt and Khiba 1979:156). Simon notes in addition

morpheme also shifts the pronouns out of immediate relevance for evaluating U2–the putative distinctions are morphologically composed, and not expressed mono-morphemically (see comments at beginning of section 2).

Another intriguing example of pronominal forms restricted to a plurality of those present, and excluding persons not present but associated with the hearer, is to be found in peculiar uses of pronouns that are not inherently second person at all, but may in special cases be used in such a function. Tomioka (2006) describes a range of such examples.[10] In some varieties of Japanese, *zibun* (which normally functions as a subject-oriented anaphor, roughly 'self') may be used to refer to the addressee (Tomioka draws a comparison to uses of *'yourself'* in English in expressions such as a waited addressing a customer with 'And yourself?'). In combination with the associative plural morpheme –*ra*, this pronoun is restricted to a group of addressees present, and cannot include referents that are not present. This peculiar use of the reflexive (and other items, including similarly special uses of the first person plural to refer to addressees only, compare the English 'we' used in addressing children or patients) would appear to be an example of a dedicated second person plural, unusable for [2+3], exactly the entity excluded by U2. Tomioka, however, argues that the relevant dimension here is neither person, nor presence, per se, but rather a shift in empathy whereby the speaker suggests a shift in point of view to that of the hearer. Tomioka suggests further that the restriction to those present in the reference of the pronoun lies in constraints on empathetic shifts, not in the meaning of the pronoun per se.[11] I lay further exploration of this intriguing array of phenomena aside, along with the family of other special uses of pronouns, though I acknowledge that problems may well lurk here.

A potentially related complication concerns the possible existence of a "present" versus "absent" contrast among pronouns. Milne (1921:17-18) presents a description of the pronominal system of Palaung which, in place of the familiar inclusive/exclusive contrast, shows a distinction between forms used "when some of the people to which *we* refers are not present" and distinct forms "when the people are all present." Her description of the duals is quite explicit on this point, for example drawing the contrast between "she and I" depending on whether both are present or not (although Cysouw 2003:225, n.21 notes that a subsequent description of Palaung presents these forms as an inclusive/exclusive contrast of the familiar type). If Milne's description is correct, it establishes that a present vs. absent distinction is a feature that may be part of the morphological inventory and would interact with person. Such a feature in combination with second person would be extremely difficult to tease apart from the putative [2PL] vs [2+3] distinction that is held to be unattested. As luck would have it, the problem does not appear to arise, in that there are no specific proposals for such a system requiring investigation.

Before proceeding further, it is worth adding to the discussion one other group of languages that has been held to counter-exemplify U2, but which has not been discussed in the typological literature on the subject. Specifically, sign languages, including ASL (American Sign Language) are sometimes described as having many more distinctions of person than attested in spoken

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(2005:122-123) that none of the example sentences in Hewitt's grammar have the putative exclusive forms, and the forms are moreover absent in many grammatical descriptions of Abkhaz. See below on the present/absent distinction, which this resembles.

[10] I thank Andrew Nevins for calling this work to my attention.

[11] For example, Tomioka notes the use of *we* as second person in English as used by caregivers as another example of this phenomenon. While this is (I suspect) most often used in address to those present ('How are we feeling today?') it can certainly be used to refer to a third person if there is a sufficient empathetic connection, e.g., a parent speaking about a child, even if the child is not present ('We had a short nap today.', cf. Siewierska 2004:215).

languages.[12] Thus, describing ASL, Neidle et al. (2000:167) claim that "although … there is a primary distinction between first and nonfirst persons, nonfirst person can be further subclassified into many distinct person values."

What is at issue here is the proper description of (apparent) person markers, both as independent pronouns and as agreement morphemes in the verbs that have agreement. In sign languages, third person referents in a discourse, whether present in the conversation or not, are assigned a location in the signing space, and person markers (pronoun signs and agreement elements) point to these locations. For referents that are physically absent, a (possibly arbitrary) location is used, with different referents having distinct locations. Since there may be arbitrarily many distinctions made in the physical space, there may be arbitrarily many distinctions among third persons in a given discourse. Importantly, unlike spoken language pronouns which are generally imprecise about their referent (English *she* means only some salient third person), sign language pronouns are generally unambiguous, picking out the particular referent assigned to a particular location (Sandler & Lillo-Martin 2006:26, 481). Note further that pronouns picking out multiple referents involve pointing to the various referents in question (either in an encompassing arc movement or via discrete pointings, with an associated meaning difference along the distributive/collective dimension).

Second person pronouns involve the same pronoun signs as third person, but with the deictic component oriented towards the addressee(s). Just as the various third person pronouns are generally unambiguous and distinguish particular referents, so too do the second person pronouns distinguish particular individuals from a group of potential addressees, by pointing to them. In this way, "you_1 + you_2" (i.e., two addressees, both present) can be distinguished from, say, "you_1 + her_3" (an addressee, plus a particular referent present or not). This of course appears to be exactly the distinction that is unattested in spoken languages (U2).

At this point, one might contend that the person markers in question are in fact morphologically complex, composed of simpler elements. The supposed "you and her" is quite literally a combination of the morphemes for [you] and [her]. This would place the pronouns on a par with compound pronouns in other languages as discussed above. Yet even if we were to suspend this concern for the moment, it is not clear that the sign language pronouns mark additional person distinctions as such. In contrast to the view that sign languages mark an arbitrarily large range of [person] distinctions—unattested in any spoken language—various researchers argue instead that sign languages have only a single (non-first person) PRONOUN sign, with the pointing component in effect a form of deixis or an overt manifestation of the referential index (see Meier 1990, Lillo-Martin and Klima 1990, Sandler & Lillo-Martin 2006, Aronoff et al., 2004).[13] That is, sign languages systematically combine linguistic elements with extra-linguistic, spatial/gestural components. The deictic component of the person agreement system has been argued (see works just mentioned) to be a part of a broader pattern which includes the direct expression of spatial information, including source, goal and path. One class of verbs (the "spatial verbs") display agreement for this spatial information instead of for individual referents ("persons"). Both the pronominal system as briefly described above, and the broader incorporation of spatial reference, are apparently universal among sign languages (Aronoff et al., 2004:28, Sandler and Lillo-

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[12] I thank Sandra Wood for first bringing the ASL facts to my attention, and Diane Lillo-Martin for discussion of person in sign languages. The description in the following remarks draws on Sandler and Lillo-Martin (2006), especially chapters 21 and 25.

[13] There is also a question of whether there is a first/non-first distinction (Meier 1990, Sandler and Lillo-Martin 2006) or no person distinction at all (Lillo-Martin and Klima 1990). For a review of differences between the first person and the other forms, supporting first versus non-first as a genuine person distinction, see Sandler & Lillo-Martin (2006, chapter 21), and references therein.

Martin 2006:371). On this view, the expression of a distinction such as [you + you] versus [you + her] is not, in fact, a distinction of person, but rather one of spatial location. That such a distinction is apparently universally expressible in sign languages and unattested in spoken languages is plausibly, as the researchers cited have argued, attributable to the inherently visual-spatial modality of sign languages, which allows for the overt manifestation of referential (ultimately spatial or deictic) indices. But for present purposes, the important aspect of this conclusion is that the facts from sign languages can plausibly and profitably be described without positing new or different person features. Sign languages provide no evidence that U2 is in any way inaccurate.

2.3 Just you and me: the first person dual inclusive

(11)   **Universal 3**

a.   No language distinguishes among [1+1+2], [1+2+2] and [1+2+3].

b.   No language has a special morpheme for the comprehensive person [1+2+3].

In comparison to the previous universals, U3 has received substantially less attention. It might appear that U3 is simply a corollary of U2—in effect, the content of U3 is the observation that the distinction excluded by U2 is not made among the inclusive pronouns. That is, U3 maintains that no language draws a number-independent morphological distinction between an inclusive meaning "speaker and multiple hearers" as opposed to "speaker, hearer(s), and at least one non-participant."

Consider in this light the following passage from Cysouw (2003):

> [After U1 and U2 are recognized] "five categories remain from the seven logical possibilities as outlined in [(4)]… These categories all exist as grammaticalized categories in the world's languages… Some pronominal paradigms in the world's languages distinguish between the two categories 1+2+3 and 1+2." (Cysouw 2003:77)

As it turns out, there is no substantive debate about the facts, and crucially no debate about the validity of U3. Cysouw's aim is rather to establish the existence of a "minimal inclusive" [1+2] category independent of dual number in many languages. Cysouw's focus is thus on cardinality, and crucially, his intent is not to establish the existence of a dedicated [1+2+3] person marker in any language (which would violate U3). Since Cysouw (2003) is the most comprehensive current analysis of person, and since the clarifications below have not been reported in the literature, it seems to me to be worth devoting some space to this issue.

The relevant questions turn around the analysis of the "first person inclusive dual", brought to general attention in Thomas's (1955) analysis of Ilocano (Cordilleran, Western Austronesian, Philippines) enclitic pronouns, and the subject of an exchange between Greenberg (1988, 1989) and McGregor (1989).[14]

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[14] According to Cysouw (2003:85-90), this paradigm type is common. It is widespread in the Philippines and also attested in Australia, Papua New Guinea, Africa, and to lesser degree, in the Americas. The Ilocano [1+2+3] plural *tayo* appears to be morphologically complex, as are its cognates in Kapampangan and Maranao, for example, but we may set this detail aside for the sake of argument.

(12)   Ilocano enclitic pronouns (traditional analysis, see also Rubino 2000)

a.	singular	dual	plural
1 incl	*	ta	tayo
1 excl	co	mi	
2	mo	yo	
3	na	da	

The item of interest in (12) is the pronoun *ta*. As Thomas describes it, "the use of that morpheme is restricted to cooperative action by one speaker and one hearer; no one else may be included under this pronoun" (Thomas 1955:205). One reason for the interest in this item is that there is no evidence for a dual number anywhere else in the language, and in fact, this is typical of languages having a paradigmatic structure like (12) (Cysouw 2003:87). This fact led Thomas (1955) to propose an alternative analysis with only a two-way number contrast, but in which the number contrast is not singular:plural but rather (what later came to be known as) minimal:augmented (Conklin 1962). The table in (13) presents one version of such an analysis.

(13)   Minimal-augmented analysis (Thomas 1955, Conklin 1962, Corbett 2000, Rubino 2005)

b.	minimal	augmented
+sp,+hr	ta	tayo
+sp	co	mi
+hr	mo	yo
-sp,-hr	na	da

A pronoun with "minimal" number denotes the minimum number of individuals necessary to satisfy the basic meaning of the pronoun. Augmented number is anything more than the minimum. Thus, for simple first, second or third persons, minimal:augmented is equivalent to singular:plural. However, in the inclusive, which requires both the speaker and the hearer, the minimal number is exactly two, and hence the augmented number is more than two.[15]

The minimal-augmented analysis of Ilocano-type paradigms is fully consistent with U3. Under this analysis, the dimension of person is characterized by a four-way distinction, and the further distinction that cross-classifies is number. In practice, reference to the dyad of speaker and hearer [1+2] and reference to the speaker, hearer and one "other" person [1+2+3] are picked out by different pronouns (in Ilocano: *ta* and *tayo*, respectively) but this is a distinction of number, and not a distinction of person. In this way, it is parallel to the distinction between reference to just the one hearer, [2] and reference to the hearer plus one other [2+3], as in German *du* vs. *ihr*, etc. These are irrelevant to U2 as the difference lies only in the nature of the number contrast, as is clear from the fact that when reference to more than one hearer is intended, the pronoun used is the plural one, whether or not non-hearers are included.

Cysouw discusses the minimal-augmented analysis, and suggests instead an alternative. He accepts that the number contrast in pronouns is different from the simple singular:plural

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[15] A more elaborate version occurs in some languages of Australia (and elsewhere) and is referred to as having a three-way number contrast between minimal:unit-augmented:augmented (Corbett 2000, Cysouw 2003). A "unit-augmented" number is a dual wherever minimal is equivalent to singular, but for the inclusive pronouns, minimal = 2, unit-augmented =3 and augmented > 3,

opposition found elsewhere (see also section 2.1 above), yet chooses to represent the first person dual inclusive as part of a five-way person contrast in the non-singular number (Group), as given in (14) with Cysouw's labels.

(14)   Singular-Group analysis (Cysouw 2003:90)

	Singular	Group	
		tayo	1+2+3
		ta	1+2
1	co	mi	1+3
2	mo	yo	2+3
3	na	da	3+3

While Cysouw's arrangement of the paradigm is chosen to highlight patterns of neutralization and syncretism across languages, the analysis, and in particular the label [1+2+3] is, somewhat misleading in the context of the present discussion. Given that Cysouw defines [3] as "other", i.e., neither speaker nor hearer (Cysouw 2003:6), the analysis is not strictly speaking correct for the pronoun *tayo*, as far as I can tell from published descriptions and brief consultation with native speakers and experts. The augmented inclusive pronoun *tayo* is used in contexts including the speaker, hearer and "others" (as in (15b')), but crucially is also used in contexts involving the speaker and multiple hearers, but excluding non-participants (15a'). In other words, the pronoun *tayo* denotes 1+2+X, where X may be hearers or others and, contrary to the letter of Cysouw's description, does not specifically include "other" in its denotation. By contrast, the minimal inclusive pronoun *ta* does exclude 3rd persons in its denotation, but does so only by virtue of minimal number; in fact, it also excludes reference to multiple hearers as this would no longer constitute minimal number.

(15)   Eva and her husband Phil have three kids. One evening, Eva and the kids are in the kitchen; Phil is on his way home from work. The kids are asking Eva if they can eat, and Eva says:

    a.   (Not yet kids.)
          We will wait for (your) father to come home. [we = 1+2+2+2, not 3]
    b.   Then **we** will (all) eat together.   [we = 1+2(+2+2)+3]

    a'.   Saantay(o) pay nga mangan.
          Urayen**tayo** ni daddyyo nga agawid.   [tayo = 1+2+2+2, not 3]
    b'.   Sa**tayon**to mangan   [tayo(n) = 1+2(+2+2)+3]

Cysouw also discusses the related language Kapampangan in this regard. Replying to a somewhat different argument in Greenberg (1989), Cysouw states that "[t]he [Ka]pampangan pronoun *tamu* is built from the parts *ta* (1+2) and *mu* (2), but its meaning is clearly 1+2+3, not 1+2+2 as Greenberg would have it" (Cysouw 2003:77). To the extent I have investigated the matter for Kapampangan, the facts are parallel to Ilocano: there is an inclusive dual *kami*, which is restricted to the speech act dyad, while the plural inclusive *tamu* covers both [1+2+3] and [1+2+2] (i.e., multiple hearers, but no third persons), in contrast to a literal interpretation of Cysouw's remark. The ambiguous nature of *tamu* is already suggested by the glosses of the plural form in Gonzalez (1981:172) who provides three senses for it: "you (plural) and I; you and we; you (plural) and we". This is confirmed by (rather superficial) consultation with speakers data for contexts similar to (15). Thus both sentences in (16) translate the English 'We will eat together'; the pronoun *kaming* in (16b) is unambiguously dual (you and I), while the pronoun

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tamung, (Cysouw's 1+2+3) can be used either for [1+2+3] or [1+2+2], i.e., multiple hearers, but not including others not present.[16]

(16)   a.   Kaibat pwede **tamung** mangan.
            'Then we will eat together'

       b.   Kaibat pwede na **kaming** mangan.
              'Then we will eat together'

Similar remarks apply to the description of Limbum, a Grassfields language of Cameroon (discussed in Cysouw 2003:87). Just as in Ilocano and Kapampangan, there is a distinction between [1+2] and [1+2+3], but the distinction is one of number—the "special" form [1+2] is restricted to a dual number. Cysouw cites the brief description of the pronouns from Fransen (1995:179). The description stresses the cardinality of the special form *sò*, which is restricted to a group of "only two people". Importantly, the description provides no basis for thinking that the plural inclusive *sìì* requires reference to a third person, as a [1+2+3] category would seem to imply.

In personal communication (2006), Michael Cysouw suggests that a better interpretation of "3" in the non-singulars in (14) might be "and associates", making explicit the connection with associative plurals noted in section 2.1 above, rather than "other". Thus, the pronoun inventory contains eight members, which may be listed as in (17).

(17)   a.   [+sp,-hr], [-sp,+hr], [-sp,-hr]
       b.   [+sp,+hr]
       c.   [+sp,+hr,+A], [+sp,-hr,+A], [-sp,+hr,+A], [-sp,-hr,+A]

Since "+A" is no longer defined as "other", the Ilocano facts are now properly described: [+sp,+hr,+A] is ambiguous between [1+2+2] and [1+2+3], and the only distinction that can be drawn is that between [+sp,+hr] and [+sp,+hr,+A], a distinction of number (±A). The eight categories in (17) are exhaustively characterized by three binary features: the two person features [±sp,±hr] and the number feature [±A]. There are exactly four [-A] categories (17a-b), and four corresponding [+A] categories, precisely as on the minimal/augmented analysis. Cysouw's emphasis is on the inherent cardinality of the groups—the three in (17a) are singular, while the five others are necessarily of cardinality greater than one. But there is no incompatibility here, so far as I can see. UG provides for exactly and only the distinctions in (17), but the fact that processes (such as agreement) that are sensitive to singular vs. non-singular divide may yield a 3:5 split—grouping (17b) together with (17c)—simply tracks the actual cardinality necessitated by the semantics of the features (cf. McGregor 1989). Although [+sp,+hr] is not [+A], it cannot be singular. Its cardinality follows from its semantics, and its minimality follows from the system, in which it stands in contrast with [+sp,+hr,+A]. For this reason, the non-plural [+sp,+hr] is (normally) dual. Although [±A] thus does not match up precisely with number in the sense of a singular-plural contrast, the contrast seen in languages with a first-person inclusive dual is still, featurally, best understood as one of number. Holding number constant, what remains uncontroverted is that no language draws a distinction between "pure inclusives" (only speakers and hearers) and "complete inclusives" (pronouns that necessarily include an "other" alongside the speech act dyad).

In sum, despite general scepticism in the functional-typological literature about whether there exist any absolute universals (see discussion and references in Newmeyer, this volume), U1-U3

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[16] For sharing their expertise on Ilocano and Kapampangan, I am grateful to Sheila Iiams, Lourdes Corpuz, Carl Rubino, Aaron David and Jason Paul Laxamana.

remain solid candidates. We may thus move on to the question of how these might best be explained.

3. Explaining absences

Positing that UG makes use of the two-value feature system [±speaker,±hearer], crucially with no feature "other" or "3", provides a degree of explanation of the observed universals. Specifically, the binary system allows for the expression of all and only the attested distinctions of person. The unattested distinctions are never grammaticalized because the grammatical apparatus for expressing them does not exist within UG. This discovery in and of itself—absent a compelling independent account—provides an argument for UG, that is, constraints on possible languages. As with any principle of UG, the account only goes so far. In particular, the postulation of a substantive universal accounts for why any one language has certain properties, but does not answer the question of why UG has this feature system and not others.

Functionalist discussions purport to offer inherently superior accounts on this score. An answer to the question of why UG is the way it is, and not some other way, would be a major advance in understanding. More specifically, if the universals above could be shown to follow from general cognitive properties, independent of language, then hard-wiring them into the feature system may be superfluous. There are at least two types of functionalist explanation for the person universals currently on offer, and I will consider each one in turn, arguing that they range from uncompelling to unsupported by the evidence. One view holds that the unattested distinctions are possible in principle, but of such vanishingly small functional load that they would never be grammaticalized (Cysouw 2003:76). Another view holds that the unattested distinctions are indeed impossible, but due to general properties of the cognitive representation of discouse: namely, the way in which we conceive of conversations necessarily yields only the attested contrasts. The feature system may allow for additional distinctions, but these would be unusable, in a manner more or less parallel to the cliché example of *[+hi,+low] in phonology: the grammar (feature logic) need not exclude such a representation, but it will always be unusable for system-external reasons. This latter view has been explicitly offered for U1 only as far as I know (Boas 1911:39); Levinson (1988) might be read as endorsing an extension to U2, although Levinson's suggestion amounts to a proposal specific to language, and is thus a variant of the UG/formalist proposal sketched above. I address each of these in turn.

3.1 Functional load

In discussing the empirical validity of U1 and U2, Cysouw (2003:76) writes:

> "[t]he cateogries 1+1 and 2+2 are thus possible linguistic categories, but they are not grammaticalized in human language. This absence can be explained by noting that the conversational settings in which the semantic categories 1+1 and 2+2 are attested are extremely marked."

The context of this passage makes it clear that Cysouw is offering an explanation for U1 and U2. That is, the "absence" of 2+2 quite unambiguously refers to the absence of a form distinguishing multiple hearers from hearer + others (but see the remarks on "3" in section 2.3 above). The explanation proposed is that such a distinction has a vanishingly small functional load and can thus never give rise to a morphologized person distinction. Unfortunately, two key pieces of the explanation are missing.

On the one hand, no data is given to support the claim that the relevant contexts are indeed rare. For example, given some representative sample of second person plural forms, just how rare is

the multiple hearer meaning, as opposed to the meaning hearer plus others?[17] To attempt a crude estimation of this, I had an online corpus of Spanish investigated (http://www.corpusdelespanol.org, consulted June 2007). Occurrences of the 2 PL *vosotros* were counted, and coded where possible for whether they referred to multiple hearers [2+2], hearer plus others [2+3]. In the corpus available, only 64 pronouns occurred with context and for the majority of these, the context was not sufficient to unambiguously determine the pronominal reference. However, for those where the reference was clear, 13 were multiple hearer contexts as opposed to only 4 for hearer plus others. If the results are at all representative, this would appear to undermine the position that the [2+2] context is in any relevant way marked in actual usage.

Further, no independent threshold of grammaticalizability is provided. What counts as 'extremely marked' to a sufficient degree as to be universally impossible to grammaticalize? The claim of extreme markedness thus seems to rest on a hunch about plausibility. On this point, researchers apparently simply differ in their hunches. Thus while Cysouw appears to consider the functional load of the contrast negligible, comparing the quotes from Lyons in sections 2.1 and 2.2 above suggests that Lyons found the functional load of the second person contrast plausible enough to be worthy of identification, and in this, significantly distinct from that in the first person. Likewise Zwicky (1977) criticizes the binary feature system, in part because it fails to allow for the inclusive/exclusive contrast in the second person (U2), stating that he knows of no language that draws the distinction "but expect[s] that there are some" (p.729). As it happens, Zwicky was to be disappointed—the universal is absolute, however, the fact that researchers simply differ starkly in their assessment of the a priori plausibility of the contrast underscores the need for an empirical basis to the argument.[18] Of course, this does not defeat the possibility of an explanation in terms of functional load, but it seems safe at this point to say that nothing beyond a speculation is currently on offer. To the extent that Lyons, Zwicky and others are correct in their assessment of the relevant contrast as being sufficiently salient in discourse, this would appear to speak against this particular functional explanation.[19]

At this point, we leave the explanation in terms of functional load as an unsubstantiated speculation, and turn to the question of whether a language-external explanation of the universals is plausible in light of what is known (or conjectured) about the language-independent cognitive representation of communication.

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[17] Cysouw, following McGregor (1989), offers a particularly narrow sense of the relevant contexts, noting, with regard to multiple hearers, that "eye contact with more than one person is only achieved in specific situations, like class address" (p.77). Since eye contact is not necessary for the use of second person singular forms (i.e., when the issue of multiple hearers is not at issue) its relevance here eluded me.

[18] I would hazard a guess that, at least in conversation, reference exclusively to multiple hearers (2+2+…) is at least as common, if not more so, than a good number of the finer distinctions that one does find morphologized in, say, tense and aspect systems, or in extremely rich case systems. If correct, this should challenge, if not refute, the notion that simply counting the degree to which a relevant context occurs in everyday speech is the relevant determinant of grammaticalizability.

[19] Newmeyer (2005:13) mentions U1 and notes a potential direction of functional explanation attributed to Martin Haspelmath, namely, that "innovations always begin with individual speakers, not with groups of speakers." The presumed underlying assumption is that a pronoun used exclusively for mass speaking would require a simultaneous innovation by a group, which Haspelmath contends is impossible. However, I would dispute the implicit assumption here, since there are various forms of mass speaking, such as liturgical contexts, in which a single figure leading the speech provides the text to be repeated (repeat after me). Such forms of speech can and do have characteristics that are different from everyday speech, and thus provide, in principle, an avenue whereby a sufficiently charismatic individual may innovate a form specific for mass speaking. I thank Fritz Newmeyer and Martin Haspelmath for discussion of this point.

3.2 Extended egocentricity

A language-external explanation would be provided (thus rendering superfluous the argument for a substantive universal feature inventory) if it could be shown that the unattested distinctions cannot be simply conceptualized, and thus cannot be expressed in language in simple terms, regardless of the formal apparatus.

Looking first at U1, the absence of a contrast between a plurality of speakers versus [speaker and others], Franz Boas suggested that such a contrast was impossible on, partly, language-independent grounds. Thus, he took "first person" [1] to denote not the speaker but rather the *self,* and wrote: "[a] true first person plural is impossible, because there can never be more than one self." Boas 1911:35). A similar viewpoint characterizes remarks by Benveniste (1971:202), Sokolovskaja (1980),[20] and others. Greenberg (1993) terms this argument the uniqueness of the *ego*.

Although this appears at first blush to be a typical functionalist explanation, offering an account for a linguistic universal in terms of a generalization that is independent of language, on reflection, it can be seen that this falls squarely within the formal mode of explanation, relying directly on a claim about the universal feature inventory as a restriction peculiar to language. The aspect of the account that is language-independent is the uniqueness of the *ego*.[21] For the sake of argument, we may grant that to be correct as a matter of human psychology. But the account of the linguistic facts rests entirely on the premise that the morphological category "first person" universally denotes [*ego*], and can never be, say, the conventional discourse role of *speaker*. What is doing the explanatory work in excluding a true first person plural is this latter premise, that is, an assumption about an irreducible property of language, an aspect of the universal feature inventory.[22] Boas's conjecture explains (without need for any additional stipulation) why the plural of a first person must be associative, but it does so only if there is a universal inventory of possible grammatical features, and this inventory includes [*ego*] but does not include [*speaker*].

The considerations just mentioned cover only U1. We may ask at this point whether there is a parallel to the uniqueness of the *ego* that would hold for U2 (and U3), say, a uniqueness of the *tu*. Greenberg rejects this possibility explicitly: "The ego has two linguistically relevant peculiarities. It is unique, and *unlike the second* or third person it has no true plural." (Greenberg 1993:13, emphasis added). In contrast to Greenberg, Levinson (1988:183) suggests it "may be that pronouns universally exhibit a 'prototype' semantics (Fillmore 1982) based on a canonical situation of utterance where there are only two participants, so that the … notions 'speaker' and 'addressee' exhaust the relevant participant roles." Levinson may thus be read as suggesting a

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[20] Sokolovskaja (1980) does not include U1 in her list of 50 putative universals regarding personal pronouns, and instead stipulates as a part of her notational apparatus that the speaker is always singular (i.e., unique), see her "limitation 1" (p.85).

[21] It is probably important to distinguish *ego* from the related notion of *deictic center*. The latter may indeed be a more appropriate source for the grounding of the first person, but I will leave these further refinements aside.

[22] See Lyons (1977) and Zwicky (1977), who stress the need to distinguish between speech act roles and morphological/grammatical categories of person, and suggesting that there are universals of language governing the relation between these. I have suggested that Zwicky was wrong in certain details, but his point is fundamental in evaluating purported language-external (i.e., functional) explanations, as discussed in the main text.

unique *tu* alongside the unique *ego* in the universal feature inventory, see also Benveniste (1966:232).[23]

If correct, this would indeed be a notable discovery, because it is very clearly a property of language and not a property of general cognition. Indeed, the context of Levinson's remarks is an assessment of the rich array of categories for the analysis of speech act participant roles that arise in the literature on sociolinguistics and the ethnography of speaking (Levinson discusses in particular the work of Erving Goffman, e.g., Goffman 1981). What is striking is how few of these distinctions are grammaticalized in the morphology of person. Where the linguist understands a notion of, say 'addressee', Goffman and those following him posit an array of finer distinctions (for example, between the *addressee*, to whom the utterance is addressed, the *target*, to whom the message is addressed, and the *hearer*, who happens to actually hear the utterance; the three need not coincide in actual utterance events). The suggestion from Levinson noted above was offered as a speculative answer to the question "why should most languages utilize first- and second-person grammatical categories that are indifferent to all the finer distinctions that are possible?" (Levinson 1988:183). It is thus abundantly clear that Levinson, and those on whose work he draws, quite explicitly see the problem as being one of linguistic, and not conceptual or cognitive, universals.

In sum, an account of U1-U2 in terms of the uniqueness of the *ego* and even more so of the uniqueness of the *tu* is does not constitute a functional account at all, but is rather a formal account—a specific proposal regarding the restricted universal inventory of features from which the grammatical categories in the world's languages may be constructed.[24]

4. Conclusion

The conclusion seems inescapable, on the basis of the known facts. It is a universal and fundamental organizing principle of morphology that there are only two grammatical persons, namely first and second, in the sense that the dimension of person in natural language is exhaustively characterized by these two features, which in combination yield a four-way contrast. To be sure, there is room for further refinement in establishing the precise features, for example (i) whether these are binary (as in (18b)), or privative with underspecification for third

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[23] What Levinson might have in mind is something like the following: Just as Greenberg suggested that the speaker understands "we" even in chorus contexts to mean "I (unique) and those associated with me", the addressee will always understand plural 'you' as addressed to "me (unique) and those associated with me". In other words, although the speaker may address multiple individuals simultaneously, the hearer will always "hear" the utterance as directed towards themself—the unique *ego*—and associated others. My thanks to Irene Heim (p.c. 2005) for suggesting this way of thinking about what a "unique *tu*" might mean. Taking this direction further, it may then be instructive to think of the opposition *ego vs. tu* not as reference to [speaker] vs. [hearer], but rather as a distinction of orientation: 'originating from' vs 'directed towards' the *ego* / deictic center, on analogy to other aspects of deixis (cf. German *hin* vs. *her,* away from vs. towards the deictic center (speaker)).

[24] Levinson argues that some of the finer distinctions are in fact expressed in some languages. For example, differences between 'source' and 'speaker' are drawn in the distribution of evidentials. The observation constitutes further support for the main thesis here: the finer-grained distinctions that are universally unattested in the (simplex) morphology of person-marking are in fact distinguishable elsewhere in language. This argues strongly against the proposition that the absence of the distinctions in person morphology can be reduced to a general language-external property. See also Cysouw (2003:6-8).

person (as in (18c)),[25] (ii) whether these are part of a geometry, and (iii) how precisely the features are defined with respect to speech act participants ([speaker/hearer] vs. [ego/tu], etc.).

(18)

	a. notional	b. binary	c. privative
	1+2	[+spk, +hr]	[speaker, hearer]
	1+2+3		
	1	[+spk, -hr]	[speaker]
	1+3		
	2	[-spk, +hr]	[hearer]
	2+3		
	3	[-spk, -hr]	[ ] (unspecified)

This is a noteworthy discovery, and has proven eminently robust, having survived more scrutiny, over a larger range of languages, than most, if not all, other morphological universals. The universals in U1-U3, which motivate the two-valued system, have been discussed and investigated over more than 50 years of work, and some 500 languages. The categories involved are extremely well-defined and accessible, thus it is clear what a relevant counter-example would look like. Indeed, counter-examples have been proposed, but as discussed above, none has survived closer inspection. This discovery is all the more important for the study of linguistic universals as it has resisted explanation from language-external considerations. Proposed functional explanations, such as the uniqueness of the *ego* (and perhaps of the *tu*) are not language-independent properties of cognition, but amount in fact to recognition of the formalist position, that there are indeed substantive linguistic universals that constitute discoveries about limitations on possible morpheme inventories. That is, what the study of person marking teaches us is that there are indeed well-defined, conceivable meanings, that are simply inexpressible as simplex elements. The atomic feature inventory of Universal Grammar is limited, and it is therefore meaningful to speak of possible and impossible morphemes.

References

Anderson, Stephen R. 1992. *A-Morphous Morphology*, Cambridge University Press, Cambridge.
Aristava, Š. K., Kh. S. Bgažba, M. M. Tsikolija, L. P. Čkadua, and K. S. Šakryl. 1968. *Грамматика абхазского языка.* Alašara, Suxumi.
Aronoff, Mark, Irit Meier, Carol Padden & Wendy Sandler. 2004. Morphological universals and the sign language type, in Geert Booij & Jaap van Marle (eds.), *Yearbook of Morpholoy 2004*, Kluwer, Dordrecht, pp. 19-39.
Benveniste, Emile. 1966. *Problèmes de linguistique générale*, Gallimard, Paris.
Blansitt, Edward L. 1975. Progressive aspect, *Working papers on language universals*, **18**, 1-35.
Boas, Franz. 1911. Introduction, in Franz Boas (ed.). *Handbook of American Indian Languages*, Bureau of American Ethnology, Washington, D.C., pp. 1-83. [Reprinted in Preston

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[25] Note that the logic of underspecification provides a partial hierarchy 1+2 > 1,2 > 3, which is expected to be reflected in considerations of markedness, for example, predictions about directions of neutralization and syncretism. For example, in a language like English, as there is no "inclusive" pronoun, the first four categories in (18) constitute a natural class, defined by the feature [speaker]. There is a sizeable literature on this, including significant debate, see Noyer (1997), Harley and Ritter (2002), McGinnis (2005) and Nevins (2007); see Cysouw (2003) for criticism. Note that the logic of underspecification does not inherently order [speaker] versus [hearer]; if it is correct that the semantic grouping [speaker,hearer] always neutralizes to [speaker] in a language without an inclusive/exclusive opposition, this needs to be stated in addition, for example, via a hierarchy 1>2>3 (Zwicky 1977), though the facts here are famously debated (see Noyer 1997). On semantic issues bearing on markedness, see Schlenker (1999), Heim (in press), Sauerland (in press), Kratzer (2006) and references there.

Holder, ed., 1991, *Introduction to Handbook of American Indian Languages,* University of Nebraska Press, Lincoln.]

Bybee, J. L. 1985. *Morphology: A Study of the Relation between Meaning and Form*, John Benjamins, Amsterdam/Philadelphia.

Calabrese, Andrea. 2006 / in press. On absolute and contextual syncretism: remarks on the structure of case paradigms and how to derive them, in Asaf Bachrach & Andrew Ira Nevins (eds.), *Inflectional Identitiy*, Oxford University Press, Oxford, pp.

Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*, Oxford University Press, Oxford, UK.

Conklin, Harold C. 1962. Lexicographical treatment of folk taxonomies, in Fred W. Householder & Sol Saporta (eds.), *Problems in Lexicography*, Indiana University Press, Bloomington, pp. 119-142.

Comrie, Bernard. 1980. Review of *Universals of Human Language, vol III: Word Structure*, ed. J. H. Greenberg, *Language* **56.4**, 834-838.

Corbett, Greville G. 1991. *Gender*, Cambridge University Press, Cambridge.

Corbett, Greville G. 2000. *Number*, Cambridge University Press, Cambridge.

Croft, William. 2003. *Typology and Universals [Second Edition]*, Cambridge University Press, Cambridge.

Cysouw, Michael. 2003. *The paradigmatic structure of person marking*, Oxford University Press, Oxford.

Elson, Ben. 1960. Sierra Popoluca Morphology, *International Journal of American Linguistics* **26.3,** 206-223.

Filimonova, Elena (ed.). 2005. *Clusivity: Typology and case studies of the inclusive-exclusive distinction*, John Benjamins, Amsterdam.

Fillmore, Charles J. 1982. Frame semantics, in *Linguistics in the Morning Calm*, Hanshin, Seoul, pp. 111-137.

Foley, William A. 1986. *The Papuan Languages of New Guinea*, Cambridge University Press, Cambridge.

Forchheimer, Paul. 1953. *The category of person in language*, Walter de Gruyter, Berlin.

Fransen, M. A.E. 1995. *A Grammar of Limbum, a Grassfields Bantu Language Spoken in the North-West Province of Cameroon*, Ph.D. Dissertation, Free University, Amsterdam.

Goffman, Erving. 1981. *Forms of Talk*, University of Pennsylvania Press, Philadelphia.

Gonzalez, Andrew B. 1981. *Pampangan: Towards a Meaning-Based Description*, Australian National University, Canberra.

Greenberg, Joseph H. 1963. Some universals of grammar with particular reference to the order of meaningful elements, in Joseph H. Greenberg (ed.). *Universals of Language*, MIT Press, Cambridge, pp. 73-113.

Greenberg, Joseph H. 1988. The first person inclusive dual as an ambiguous category, *Studies in Language* **12.1,** 1-18.

Greenberg, Joseph H. 1989. On a metalanguage for pronominal systems: a reply to McGregor, *Studies in Language* **13.2,** 452-458.

Greenberg, Joseph H. 1993. The second person is rightly so called, in Mushira Eid & Gregory Iverson (eds.), *Principles and Prediction: The analysis of natural language*, Benjamins, Amsterdam, pp.

Halle, Morris. 1997. Distributed Morphology: Impoverishment and Fission, in Benjamin Bruening, Yoonjung Kang & Martha McGinnis (eds.), PF: Papers at the Interface, MIT Working Papers in Linguistics, Cambridge, 30, pp. 425-449.

Harley, Heidi & Elizabeth Ritter. 2002. Person and number in pronouns: a feature-geometric analysis, *Language* **78,** 482-526.

Heim, Irene. 2007, in press. Uninterpretable features on bound variable pronouns, in David Adger, Susana Béjar & Daniel Harbour (eds.), *Phi theory: Phi features across interfaces and modules*, Oxford University Press, Oxford, pp.

Hewitt, B. G. & Z. K. Khiba. 1979. *Abkhaz*, North Holland, Amsterdam.

Ingram, David. 1978. Typology and universals of personal pronouns, in Joseph H. Greenberg (ed.). *Universals of Human Language, vol. III: Word Structure*, Stanford University Press, Stanford, pp. 213-248.

Kratzer, Angelika. 2006. Minimal Pronouns: Fake indexicals as windows into the properties of bound variable pronouns. Unpublished manuscript, University of Massachusetts, Amherst.

Levinson, Steven C. 1988. Putting linguistics on a proper footing: Explorations in Goffman's concepts of participation, in Paul Drew & Anthony Wootton (eds.), *Erwing Goffman: Exploring the Interaction Order*, Polity Press, Oxford, pp. 161-227.

Lillo-Martin, Diane & Edward S. Klima. 1990. Pointing out differences: ASL pronouns in syntactic theory, in Susan D. Fischer & Patricia Siple (eds.), *Theoretical Issues in Sign Language Research, vol. 1: Linguistics*, Chicago University Press, Chicago, pp. 191-210.

Lyons, John. 1968. *Introduction to Theoretical Linguistics*, Cambridge University Press, Cambridge.

Lyons, John. 1977. *Semantics*, Cambridge University Press, Cambridge, UK.

Marantz, Alec. 1982. Re Reduplication, *Linguistic Inquiry* **13,** 483-545.

McCarthy, John J. & Alan Prince. 1996. Prosodic Morphology 1986, *Rutgers University Center for Cognitive Science Technical Report*, **32**, pp.

McGinnis, Martha. 2005. On markedness asymmetries in person and number, *Language* **81.3,** 699-718.

McGregor, William B. 1989. Greenberg on the first person inclusive dual: Evidence from some Australian languages, *Studies in Language* **13.2,** 437-458.

Meier, Richard P. 1990. Person deixis in American Sign Language, in Susan D. Fischer & Patricia Siple (eds.), *Theoretical Issues in Sign Language Research, vol 1: Linguistics*, University of Chicago Press, Chicago, pp. 175-190.

Milne, Leslie. 1921. *An Elementary Palaung Grammar*, Clarendon Press, Oxford.

Moravcsik, Edith A. 1995. Summing up Suffixaufnahme, in Frans Plank (ed.). *Double Case: Agreement by Suffixaufnahme*, Oxford University Press, New York, pp. 451-484.

Moravcsik, Edith A. 2003. A semantic analysis of associative plurals, *Studies in Language* **27.3**, 469-503.

Mühlhäusler, Peter & Rom Harré. 1990. *Pronouns and People: The linguistic constructions of social and personal identity*, Blackwell, Oxford.

Neidle, Carol, Judy Kegl, Dawn MacLaughlin, Benjamin Bahan & Robert G. Lee. 2000. *The syntax of American Sign Language: Functional Categories and Hierarchical Structure*, MIT Press, Cambridge.

Nelson, Nicole. 2003. *Asymmetric anchoring*, Ph.D. Dissertation, Rutgers University,

Nevins, Andrew. 2007. The representation of third person and its consequences for Person-Case effects, *Natural Language and Linguistic Theory* **25.2,** 273-313.

Newmeyer, Frederick J. 2005. *Possible and Probable Languages*, Oxford University Press, Oxford.

Newmeyer, Frederick J. this volume. Universals in Syntax**,**

Noyer, Rolf. 1997. *Features, positions and affixes in Autonomous Morphological Structure*, Garland Press, New York.

Plank, Frans. 1985. Die Ordnung der Personen, *Folia Linguistica* **19,** 111-176.

Rice, Keren. 2000. *Morpheme order and semantic scope: Word formation in the Athapaskan verb*, Cambridge University Press, Cambridge.

Rubino, Carl. 2000. *Ilocano Dictionary and Grammar: Ilocano-English, English-Ilocano*, University of Hawai'i Press, Honolulu.

Rubino, Carl. 2005. Iloko, in Nikolaus Himmelmann and K.A. Adelaar (eds.), *The Austronesian Languages of Asia and Madagascar*, Curzon Press, London, pp. 326-349.

Sandler, Wendy & Diane Lillo-Martin. 2006. *Sign Language and Linguistic Universals*, Cambridge University Press, Cambridge.

Sauerland, Uli. 2004. A comprehensive semantics for agreement. Handout of a paper presented at *Workshop on Phi Features.* McGill University.

Sauerland, Uli. in press. On the semantic markedness of Φ-features, in David Adger, Susana Béjar & Daniel Harbour (eds.), *Phi theory: Phi features across interfaces and modules*, Oxford University Press, Oxford.

Schlenker, Philippe. 1999. *Propositional Attitudes and Indexicality: A Cross-Categorical Approach*, Ph. D. Dissertation, MIT,

Siewierska, Anna. 2004. *Person*, Cambridge University Press, Cambridge.

Silverstein, Michael. 1976. Feature hierarchies and Ergativity, in Richard M.W. Dixon (ed.). *Grammatical categories in Australian languages*, Australian Institute of Aboriginal Studies, Canberra, pp. 112-171.

Simon, Horst J. 2005. Only *you*? Philological investigations into the alleged inclusive-exclusive distinction in the second person plural, in Elena Filimonova (ed.). *Clusivity: Typology and case studies of the inclusive-exclusive distinction*, John Benjamins, Amsterdam, pp. 113-150.

Sokolovskaja, N. K. 1980. Nekotorye semantičeskie universalii v sisteme ličnyx mestoimenij, in I. F. Vardul' (ed.). *Teorija i tipologija mestoimenij*, Nauka, Moscow, pp. 84-102.

Thomas, David. 1955. Three analyses of the Ilocano pronoun system, *Word* **11.2,** 204-208.

Tomioka, Satoshi. 2006. Plural indexicals in Japanese (and beyond). Paper presented at ZAS Berlin.

Zwicky, Arnold. 1977. Hierarchies of Person, in, Chicago Linguistics Society, Chicago, pp. 714-733.