

Poor pronoun systems and what they teach us

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Abstract

The world's smallest pronoun systems can eschew any of the following contrasts: (i) author–nonauthor, (ii) participant–nonparticipant, (iii) singular–nonsingular. This supports the view that features are mutually independent parameters (Harbour 2011a, 2014a, 2014b), but is problematic for Koenenman and Zeijlstra's (2014) recent reworking of the Rich Agreement Hypothesis, which is predicated on the claim that (i)–(iii) are universally obligatory.

1. Introduction

Attempting to rehabilitate the connection between verb movement and rich subject agreement, Koenenman and Zeijlstra (2014), henceforth REHAB, promulgate a “new observation”: that “even the most minimal pronominal systems in the world have at least forms distinguishing between (i) speaker and non-speaker (ii) participant and non-participant and (iii) plural and non-plural”. REHAB takes this to entail that “all languages in the world show at least featural distinctions with respect to [speaker], [participant] and [plural] in their pronominal systems (cf. Greenberg 1963, Harley & Ritter 2002, Cysouw 2003)”.

These claims are wrong. By “pronominal systems”, REHAB means free or independent pronouns, rather than bound forms like agreement and clitics.¹ However, some systems of independent pronouns do not distinguish speaker from nonspeaker, contra (i); others do not distinguish participants from nonparticipants, contra (ii); and yet others make no plural–nonplural distinction, contra (iii). In fact, Harley and Ritter 2002a, Cysouw 2003, and another work cited in REHAB, Noyer 1992, all contain counterexamples.

Indeed, in preparing this article, I have made use of sixteen typological studies (Dixon 1980, Suarez 1983, Foley 1986, Mühlhäusler and Harré 1990, Shibatani 1990, Noyer 1992, Maitanskaya et al. 1993, Mithun 1999, Corbett 2000, Harley and Ritter 2002a, Cysouw 2003, Adelaar 2014, Bhat 2004, Siewierska 2004, Daniel 2005, Smith 2011). Only two, studies of the Uralic languages and the languages of Japan, fail to contradict the universality of (i)–(iii).

Moreover, at the featural level, Harley and Ritter (and Noyer) explicitly argue against the claim that REHAB imputes to them, that all pronominal systems must use analogues of [speaker], [participant] and [plural].

To claim that there is a minimum size to the feature sets that generate pronoun systems, and hence to pronoun systems themselves, is to posit a combinatorial restriction: there are some feature sets that languages cannot choose. This directly contradicts the position taken in Harbour 2011a, 2014a, 2014b,

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The following abbreviations are used. : acting on (e.g., 1:2 = first person acting on second person), 1 first person, 2 second person, 3 third person, ASSOC associative, ATEL atelic, AUG augmented, CAUS causative, DEIC deictic, DIR directional, DISTR distributive, DL dual, EMPH emphatic, EVID evidential, EX exclusive, F feminine, FUT future, GEN genitive, HAB habitual, HORT hortative, HUM human, IMPF imperfective, IN inclusive, INDEF indefinite, INM intimate, INT interrogative, INTNS intensive, LOC locative, M masculine, MIN minimal, NEG negative, NINM nonintimate, NOM nominal, NSG nonsingular, O object, PART participle, PL plural, POSS possessive, PROH prohibitive, PROX proximal, S subject, s a Qawasqar morpheme, SG singular, SUB subordinate, TEMP temporal.

¹This is evident in the use made of the opening observation. The article characterizes agreement as rich—and, by stipulation, therefore argumental and located in a separate head, which triggers verb movement via the Stray Affix Filter of Lasnik 1981—if it uses the same feature set as the smallest pronoun system. In other words, the particularity of [speaker], [participant] and [plural] is established with respect to free pronouns and then, in a distinct step, is applied to verb agreement, which is *ipso facto* excluded from the notion of “pronominal system”.

according to which any choice of person (or number) features constitutes a legitimate person (or number) system. This position is supported by the systematicity of exceptions to (i)–(iii) laid out below.

This article, therefore, does three things. Section 2 analyses REHAB’s problems of fact, mapping out the reality of the world’s smallest pronoun systems and challenging the special attention that REHAB afford one language in particular. Section 3 corrects REHAB’s claims about features and demonstrates that the range of variation in small pronoun systems is precisely what is expected on a combinatorially unrestricted theory of features. And section 4 considers how REHAB might be rehabilitated.

2. What Kuman isn’t

REHAB asserts that Kuman has “the poorest pronominal [system] in the world’s known languages”. Consisting of just four members, it distinguishes singular–nonsingular in first person (*na* ‘I’, *no* ‘we’) but is number neutral for other persons (*ene* ‘you’, *ye* ‘he, she, they’):

	singular	plural
1	<i>na</i>	<i>no</i>
2		<i>ene</i>
3		<i>ye</i>

Kuman’s, though, is not the only four-cell system but is one of at least four (section 2.1). Nor are four-cell systems the smallest attested: both three- and two-cell systems exist too, and some languages have been argued not to have pronominal systems at all (section 2.2). The range of variation presented below shows that each and every of REHAB’s three purportedly universal contrasts can be eschewed.

2.1. Not the only four-cell system

There are at least three types of four-cell pronoun systems besides Kuman. These vary in having a different number distinction in first person (e.g., Kawi, section 2.1.1), or in having more persons but no number (e.g., Imonda, section 2.1.2), or more thoroughgoing number but fewer persons (e.g., Sanapaná, section 2.1.3). All therefore contradict the claim that “even the most minimal pronominal systems in the world have at least forms distinguishing between (i) speaker and non-speaker (ii) participant and non-participant and (iii) plural and non-plural”.

2.1.1. Singular–neutral first persons

A system very similar to that of Kuman is found in Kawi. As portrayed in Uhlenbeck 1968, Kawi has two pronouns for first person but lone number-neutral ones for second and third, as shown in the table below (variants omitted; second and third person additionally distinguish socially intimate from nonintimate forms). In contrast to Kuman, the Kawi first persons contrast not singular and nonsingular, but singular and, like the other persons, neutral. So, denotationally, *aku* does not complement *kami*; instead, they overlap.

	singular	neutral
1	<i>aku</i>	<i>kami</i>
2		<i>ko</i> (INM), <i>kita</i> (NINM)
3		<i>ia</i> (INM), <i>sira</i> (NINM)

Drawing on the Adiparwa epic, Uhlenbeck shows that intimate and nonintimate forms can be used for singular and plural alike. For second person, for instance, examples show that Bṛgu addresses the (singular) god Agni with *ko*, the same pronoun that Agni uses to address the (plural) *puyuh* birds; and that, elsewhere,

Bṛgu addresses (singular) Agni with *kamu*, a variant of *ko*, the same pronoun that Ruru uses to address the (plural) gods. For first person, however, he observes “a clear difference in meaning”: “*Aku* always indicates the single speaker of the sentence”, whereas “*kami* may do so too, but it may also refer to more than one addresser”.

Uhlenbeck’s is not the only interpretation of the Kawi pronoun system. According to Becker and Oka 1974, Kawi has no number distinctions in any person. Instead, first person, too, distinguishes merely intimate *aku* from nonintimate *kami*. (This interpretation has made its way into later literature; e.g., Mühlhäusler and Harré 1990, Corbett 2000, Harley and Ritter 2002a.) Given the articles’ dates, one might assume that Becker and Oka’s is the fuller view; and they do seem to have drawn on more sources. However, their paper is not a response to Uhlenbeck’s, of which they seem to have been unaware. And, there is a telling gap in their examples: they demonstrate nonintimate forms with singular reference but not intimate forms with plural reference. In other words, they have apparently overgeneralized from their data. So, until current experts tell us otherwise, I think we should side with Uhlenbeck, whose handling of data is more thorough and whose generalizations cover only what his data support.

It should be noted, though, that the grasp that the category of singular has on the language is even more tenuous than has so far been made plain. Not only is it confined to a lone pronoun, but that pronoun is generally confined to sentential subjects (*kami* is not so restricted). Moreover, when morphologically reduced, neither *aku* nor *kami* makes any number distinction: *-(i)ku* and *-mami* both mean ‘mine, our’ (though “possessive . . . is certainly too narrow” a translation), according to Uhlenbeck. Despite, or perhaps because of this tenuity of grasp, Kawi constitutes a different four-cell system from Kuman.

2.1.2. *Clusivity without number*

Another four-cell system dispenses with number altogether and, instead, introduces a clusivity contrast in first person.

A rich seam of such systems is found in the Waris language group, exemplified below by Imonda (left; Seiler 1985) and Waris (right; Brown 1990). Both sets of pronouns show first exclusive, first inclusive, second person, and third, without any number distinctions.

1EX	<i>ka</i>	1EX	<i>ka</i>
1IN	<i>pəl</i>	1IN	<i>pi</i>
2	<i>ne</i>	2	<i>ye</i>
3	<i>ehe</i>	3	<i>he</i>

In an appendix to his grammar, Seiler writes that he has “collected data on all Waris languages on the Papua New Guinea side of the border with the exception of Amanab”; hence, on Daonda, Imonda, Simog, Sowanda, Punda, and Waris. (In fact, he was the first to classify Imonda and Punda as distinct members, rather than dialects, of the family.) His discussion and word list strongly imply that all six languages have the same unnumbered four-person system. Anceaux 1965 reports the same system for Nimboran.

Distribution of the numberless four-person system is not confined to the Waris family. It is also found in Matses (Fleck 2003, if one ignores archaic second person plural forms, as indeed much of his discussion does). Depending on the analysis one gives to number words (Dryer 1989), one might also include Canela-Krahô (Popjes and Popjes 1986) in this class.

2.1.3. *First–nonfirst with singular–nonsingular*

A third four-cell system is found in Sanapaná (Gomes 2013) and other members of the Maskoy family (e.g., Lengua, Sušnik 1977, cited in Adelaar with Muysken 2014).² The pronouns distinguish first and nonfirst, and singular and nonsingular (and gender), but make no further distinctions as to person:

²Adelaar with Muysken 2014 also cite Lowes 1954. However, his study, a word list with an anthropologist’s focus on artefacts, does not record third person pronouns and so is not a reliable guide to the whole system. Adelaar and Muysken use it only for pronunciation

POOR PRONOUN SYSTEMS

	singular	plural
1	<i>ko'o</i>	<i>enenko'o</i>
2/3M	<i>hlejap</i>	<i>hlengap</i>
F	<i>hleja</i>	<i>hlenga</i>

Gomes is explicit about the second/third ambiguity to which this leads, stating on separate occasions, for instance, that “in Sanapaná, only two grammatical persons . . . are identified: ‘I’ [+1] and ‘not I’ [–1]”, which “pattern pervades the whole grammar of the language”. Possessives illustrate this thoroughgoingness, again differentiating only first from nonfirst and singular from plural:

	singular	plural
1	<i>hankok</i>	<i>jankaok</i>
2/3	<i>pankok</i>	<i>pankaok</i>

Use of the (nonfeminine) pronouns is illustrated below. Again, it is worth bearing in mind Gomes’ own comments about the ambiguity of the translations: those “that refer to ‘he’/‘she’ could equally well refer to ‘you’ . . . the person distinction is defined . . . by context”. Concretely, observe that, in the following three singular examples, the second and third share the pronoun *hlejap*, as against *ko'o* in (1):

- (1) *Hawe ko'o as- melaja.*
 NEG 1SG 1SG-slow
 ‘I am not slow.’
- (2) *Ta'asek akjehlna ap- ta- o hlejap?*
 which fruit 2/3-eat-INT 2SG/3SG
 ‘Which fruit did you eat?’
- (3) *Hlejap metko patakon ap- angok.*
 2SG/3SG NEG money 2/3-POSS
 ‘He doesn’t have money.’

Similarly, in the plural, second and third person share the pronoun *hlengap*, as against *enenko'o* in (4):

- (4) *E- hl- mame-kama enenko'o.*
 DEIC-PL-work- CAUS 1PL
 ‘We are working.’
- (5) *Taehlratemo ap- ke- len-mote-mo na'ak hlengap?*
 why 2/3-MASC-PL- sit- INT LOC 2PL/3PL
 ‘Why are you seated?’
- (6) *Taehlratemo hlengap ap- ke- len-tep- ma?*
 why 2PL/3PL 2/3-MASC-PL- leave-NOM
 ‘Why did they leave?’³

Thus, Imonda, Kawi, Sanapaná and the other languages mentioned above all challenge the special status that REHAB affords Kuman, showing that there are pronoun systems just as small as Kuman’s that yet make different distinctions.

of the first singular.

Gomes decomposes the first plural into *e-nen-ko'o* DEIC-PL-1. I abstract away from this here and gloss *ko'o* as 1SG and *enenko'o* as 1PL. Nonetheless, it is instructive to compare the pronominal gloss DEIC-PL-1 with the first plural verb of (4), as the deictic seemingly displaces person as the controller of agreement: DEIC-PL-work-CAUS.

³Correcting *le-ntep* to *len-tep* PL-leave, based on other examples in Gomes 2013, including (5).

2.2. *Not the smallest system*

A further challenge to the claimed universality of speaker, participant, and number distinctions comes from systems with fewer than four cells. As in section 2.1.2, all lack number, but they are less populated by persons. Of these, some distinguish three, amongst which, there are two subtypes: those that lexicalize all cells (e.g., Jarawa, section 2.2.1) and those defective for third person (e.g., Kiowa, section 2.2.2). Even more radically, some (extremely rare) systems distinguish just two persons (e.g., Winnebago, section 2.2.3). And, most radically of all, some languages have been argued to eschew pronoun systems all together (e.g., Wichita, section 2.2.4).

2.2.1. *Three-cell systems*

A straightforward case of a numberless three-person system is that of Jarawa (Kumar 2012). Its pronouns are shown below (allomorphs omitted):

1	<i>mi</i>
2	<i>ngi</i>
3	<i>əhi</i>

Kumar states explicitly that these pronouns are numberless and cover both singular and plural persons. An example of the resultant range of meanings is given below, for first and second person possessives (which use allomorphs with *a* for *i*). Observe that *nga* in (7) has the same meanings, numberwise, as English ‘your’, and that *ma* in (8) covers both ‘my’ and ‘our’:

- (7) *Ka nga-kaja pečame?*
 INT 2- mother die
 ‘Has your mother died?’
- (8) *Je: ma-kaja pečame.*
 yes 1- mother die
 ‘Yes, my/our mother has died.’

A similarly number-neutral example for third person is:

- (9) *əhi-təhə*
 3- sit.HUM
 ‘he/she sits, they sit’

Kumar notes in particular that the following sentence occurred in his corpus of natural speech with both singular and plural readings:

- (10) *Mi bəŋ^he-jə.*
 1 go- EVID
 ‘I/we are going.’

Pirahã has been argued to have this same system (Everett 1983, 1986):

	pronoun	clitic
1	<i>ti</i>	<i>ti</i>
2	<i>gíxai</i>	<i>gí</i>
3	<i>hiapióxio</i>	<i>hi</i>

The claim has attracted controversy, in part because Everett 2005 tries to tie the simplicity of Pirahã pronouns to wider claims about the relationship between culture and syntax (which have not been accepted in

all quarters; e.g., Nevins et al. 2009), and in part because an earlier account (of Pirahã verbal suffixes, Sheldon 1988) presents a singular–nonsingular distinction. Omitting gender (and using Everett’s orthography), the richer view of the system is:

	singular	plural
1	<i>ti</i>	<i>tiáitiso</i>
2	<i>gtxai</i>	<i>gtxaítiso</i>
3	<i>hi</i>	<i>hiáitiso</i>

Yet, if we accept Nevins, Pesetsky, and Rodrigues’ argument that the (alleged) simplicity of the Pirahã pronoun system is logically independent of broader claims in Everett 2005, then we can sidestep that larger debate and ask, more narrowly, which account of the pronoun system, Everett’s or Sheldon’s, is better supported.

Ideally, we would decide this by trawling a Pirahã corpus for pronouns with plural readings. Two are in development (a book of texts prepared by Everett and the corpus used in Piantadosi et al. 2012), but not yet available. Nonetheless, the balance of available evidence seems to me to favour Everett’s position.

First, Everett 1983, 1986 explicitly argues against Sheldon’s analysis (and Sheldon himself rejects his earlier account in favour of Everett’s; Sheldon p.c.). On the one hand, *xáitiso* is not a plural, but something along the lines of ‘also, in conjunction, too’. Only in some cases—for instance, (11) as opposed to (12)—is its meaning close to that of plurality:

- (11) *Ti xáitiso xis ohoa- i- haí.*
 1 too food procure-PROX-EVID
 ‘I too will go get food.’
- (12) *Paió hi xab óp ai so ti xáitiso xis ibá- bo-í- haí.*
 Paió 3 return go ATEL TEMP 1 too animal arrow-go-PROX-EVID
 ‘When Paió returns, I’ll go fishing (with arrows).’

On the other hand, plurality, if expressed, is served by any of a range of elements with comitative, associative or grouplike meaning, such as, respectively, (13) *pío*, (14) *xigí*, and (15) *xogíáagaó*:

- (13) *Ti gíxai pío ahá p- i- i.*
 1 2 also go IMPF-PROX-EVID
 ‘I and you / We are going.’
- (14) *Ti gíxai xig- o xopaohoa-i- bat.*
 1 2 ASSOC-LOC work- PROX-INTNS
 ‘I work a lot with you / We work a lot together.’
- (15) *Tüi xogí-xáaga-ó kahápií.*
 1EMPH big- be- DIR left
 ‘The lot of us left.’

Second, a (very) few pronouns in Everett 1983 occur without the purported plural ending *áitiso* but with both singular and plural translations:

- (16) *Hiapióxio kaiü.*
 3 house
 ‘It’s another’s / others’ house.’
- (17) *Hiapióxio soxóá xo- ó- xio.*
 3 already jungle-LOC-DIR
 ‘He/They went to the jungle.’

A third example, of first person, is translated as plural in Everett 1983 but as singular in Everett 1986:

- (18) *Gí ti xahaigí xigíábíí.*
 2 1 brother like
 ‘You are like our brother.’ (Everett 1983)
 ‘You are like my brother.’ (Everett 1986)

Naturally, independent observers may wonder whether these translations reflect the actual meanings of the sentences or Everett’s beliefs about their meanings. But these doubts arise for grammatical descriptions of almost any language, as few draw their examples solely from in-context uses, and it is the task of the descriptive grammarian to see beyond such examples in any event.

Lastly, other published sentences (Everett 2005) show plural readings again in the absence of *átiso*:⁴

- (19) *Ti ’ogi-’áaga-ó ’ítii’isi ’ogi-ó ’i kohoai-baaí, koga hói hi hi- i*
 1 big- be- DIR fish big- DIR 3F eat- INTNS nevertheless little INTNS INTNS-be
kohoi-hiaba.
 eat- NEG
 ‘We ate most of the fish. (My bigness ate a bigness of fish, nevertheless there was a little we did not eat.)’
- (20) *Hiaítíht hi ’ogi-’áaga-ó pi- ó kaobíí.*
 Pirahã 3 big- be- DIR water-DIR entered
 ‘All the people went swimming.’

In sum, the pronoun systems of Jarawa and Pirahã can, I think, both be regarded as distinguishing three persons in the absence of number. Mühlhäusler and Harré 1990 further exemplify this system with the early stages of two pidgins that only later went on to develop number marking: Panare Indians’ pidgin Spanish (Riley 1952) and Samoan Plantation pidgin English (Mühlhäusler 1987). (See also the discussion of Javanese in section 2.2.2.)⁵

⁴Everett 2005 glosses the pronouns in these examples as singulars (‘I’, ‘she’, ‘he’) but translates them as plurals. I have glossed them as ‘1’ and ‘3’, for consistency and to avoid confusion.

⁵Readers familiar with this topic will expect to see Classical Chinese mentioned here, as Norman’s (1988) claim that the language lacked numbered pronouns has filtered into the wider literature (Corbett 2000, Harley and Ritter 2002a, Cysouw 2003, Harbour 2014a). However, Unger 1987, Pulleyblank 1995, and Meisterernst 2012 all claim that the Kawi coupling of singular with neutral was present in the first and, possibly, second persons of Classical Chinese. Regrettably, discussion of pronouns in all these works is brief, leaving one unable to determine whether the singular forms were restricted in register (as some first person singulars definitely were, constituting an imperial *I* comparable to the royal *we*); Meisterernst (p.c.) regards this as possible. A richer literature is available on this topic, but in Chinese; and, after Yinglun Sun kindly synopsised some of it for me, I suspect that even a Chinese speaker might have to return to the Classical corpus to settle the issue. (For the record, Harbour 2014a required only that Classical Chinese have a numberless pronoun for each person, not that all forms be numberless. So, no problem arises, but readers are cautioned to consult a more informed source before replicating the actual data.)

Readers may also expect mention of Qawasqar/Kawésqar here, as several studies (Cysouw 2003, Siewierska 2004, Daniel 2005, and indirectly Harley and Ritter 2002a) cite Clairis’ (1985) description of the language as lacking number in all three persons. However, Clairis’ scattered examples evidence number neutrality only for second and third person. First plural does not occur in any example that I can find and the best evidence the grammar provides for nondistinctness of first plural from first singular is speakers’ difficulty with the same distinction in Spanish. However, according to Aguilera 2011 (brought to my attention by Cysouw, p.c.), the language simply has not lexicalised first plural pronouns at all. This would explain both the absence of such examples from Clairis 1985 and his speakers’ difficulty with Spanish. However, the two accounts are factually at odds concerning second person plurals: Aguilera claims that they too are unlexicalised, whereas Clairis claims that they are identical to singulars, as in (i) and (ii). (These are, I think, unique as a minimal pair, and, so far as I can tell, number neutrality for third person is also evidenced by only one pair of examples, (iii) and (iv). I give all four for completeness.)

- (i) *Serpa caw afsa-naq.*
 Serpa 2/3 talk- EVID
 ‘Serpa, you are talking.’
- (ii) *Caw afsa-naq caw.*
 2/3 talk- EVID 2/3
 ‘You talk, you.’ (Clairis’ principal consultant addressing his sons; Clairis p.c.)

2.2.2. *Truncated three-cell systems*

Kiowa (Watkins 1984) and Salt Yui (Irwin 1974), amongst other languages, present truncated systems of three persons without number. That is, overtly, they present just two pronouns, first and second person, lacking third:

1	<i>náw</i>	1	<i>na</i>
2	<i>ám</i>	2	<i>ni</i>
3	—	3	—

Typologically, absence of third person pronouns is not unusual: many richer systems are similarly truncated (for instance, Sabanê has the Kuman system without third person; de Araujo 2004, and more generally see Bhat 2004). As is typical, Kiowa and Salt Yui deploy demonstratives to catch the slack: proximal *éyde/éyga* ‘this, these’ and distal *óyde/óyga* ‘that, those’ for Kiowa (piggybacking the number distinction for common nouns); masculine *yal i* ‘he/they’ (‘male this/these’) and feminine *al i* ‘she/they’ (‘female this/these’) for Salt Yui (still absent number).

Illustrating for Kiowa, a particularly elegant example is (21), in which *náw* occurs twice, first as first singular, then later as plural.⁶ The agreement prefixes on the subsequent verbs identify the intended number in each case (singular *a*, inclusive nonsingular *ba*):

- (21) *Náw an a- áwdep éyga émhaw Káuígú ba- kî- yáu- gau máun náw*
 1 HAB 1SG-think.IMPF now here Kiowas 1IN.PL-live-DISTR-NOM probably 1
Áwzá-t'áw- hop ba- dáw...
 udder-angry-travellers 1IN.PL-are
 ‘I think that we Kiowas who live around here, we are probably the ones who travelled off, angry over the udders...’

Similarly, *ám* ranges over second persons of any number, as the agreement prefixes, singular *em* in (22) and plural *bá* in (23), make apparent:

- (22) *Yál háu náw ám em- dáw, hâw?*
 wish INT 1 2 2SG-be eh
 ‘Don’t you wish you were me?’
- (23) *Poi dôî-binde ám bá- haab- ii- taw.*
 PROH too-greatly 2 2PL:3SG-smoke-IMP.FUT
 ‘Don’t you be smoking too much.’

With only two overt forms, one might be tempted to regard these as two-celled systems. But then one would incorrectly expect one pronoun to cover both, say, second and third person. Rather, the correct view of Kiowa and similar systems is that they distinguish three persons, but lexicalize only two.

Javanese offers further instances of this. Grammars of the prestige dialect (of Yogyakarta, Surakarta) list three numberless pronouns, *aku*, *kowe*, and *dhèweké* (e.g., Robson 2002; cf, Becker and Oka’s portrayal

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- (iii) *Qjos qtel- s xawjes.*
 3GEN name-S Xavier
 ‘His name is Xavier.’
- (iv) *Qjos q'waneq jenaq at seqwe-s qawesxar-jeqe-nanowaq?*
 3GEN all EVID house FUT- S Qawasqar-little-with
 ‘Will you be at home with the children, all of them?’

Given the disagreement and the potential incompleteness of description, I think we should not, for the moment, count Qawasqar as a numberless three-person system, even if it is, clearly, a very minimal one.

⁶Kiowa examples come from Dr Parker McKenzie’s correspondence, which Laurel Watkins glossed and translated as part of her National Science Foundation grant SBR 9109866. I have made slight changes to glossing and orthography.

of Kawi, “Old Javanese”). This puts Javanese on a par with Jarawa (section 2.2.1). However, *dhèweké* “is almost never used in speech, and is not produced during elicitation” (Thomas Connors p.c.; *kowé* is also rare, ceding ground to titles, names, *etc.*). Similarly, Ewing 2005 states that Cirebon Javanese has no dedicated third person and that *déwéké*, which sometimes serves in lieu, is literally ‘the self’ (self-DEF). Thus, Central Javanese (left) and Cirebon (right) too are truncated three-cell systems:⁷

1	<i>aku</i>	1	<i>isun</i>
2	<i>kowé</i>	2	<i>sira</i>
3	—	3	—

2.2.3. Two-cell systems

Just as there are three-person systems both with and without number, so, corresponding to two-person systems with number (Sanapaná, section 2.1.3), there are two-person systems without. These come in two kinds.

First, some systems distinguish only speaker from nonspeaker. One is Damin, in which *n!aa* covers all first persons, and *n!uu* all other persons (Dixon 1976, Hale and Nash 1997).⁸

1	<i>n!aa</i>
2/3	<i>n!uu</i>

Damin is, however, a special case, a ritual language with a very pared down vocabulary. In other areas of the grammar, however, it mirrors Lardil, the standard language of the community. As such, some might wonder whether it is a genuine language, in the sense relevant to generative theories.

There is, however, evidence of the same system in Elseng/Morwap, but documentation is scant. The two published sources are both the result of (relatively) brief contact, Laycock 1977 (who uses the name ‘Morwap’) as part of general area survey and Burung 2000 (who uses ‘Elseng’, and ‘Morwap’ more tentatively) following a six-hour visit of a speaker to his Ukarumpa office. (In addition, Donohue mentions, in a footnote to his 2004 grammar of Skou, having conducted fieldwork on Elseng; more on which below.) Even as reports on the pronoun system, both are incomplete. Taken together, however, each fills the other’s gaps; and they are in agreement where they overlap. So, bearing this (and the training of the linguists involved) in mind, I am inclined to take the reported system seriously.

The system comprises first person *ka* and nonfirst *so* (Laycock’s transcription):

1	<i>ka</i>
2/3	<i>so</i>

Laycock cautions that his data “is not of high reliability”, because he was working through Malay, a language he did not speak well: “nevertheless, persistent testing failed to elicit more than two pronouns”:

The pronouns I recorded were *ka* and *so*; in el[i]citing a paradigm of the verb ‘eat’ all pronouns after the first were given as *so*. I am not quite sure whether this means that *ka* is first singular only, and *so* all others, or whether (which seems more reasonable) that *ka* is first person, all numbers, and *so* is all other persons and numbers.

⁷Ewing 2005 gives a richer variety of forms than in the table, covering rural speakers, urbanites, and speakers from Bebasan. Though lexically different, in part through Bahasa and Arabic borrowings, all have the same pattern. (Ewing glosses, for instance, *isun* as 1SG, but he makes clear that singularity is not semantically inherent; if it were, phrases where an effort is made at explicit plurality, like *isun wong loroan* (1 person two), meaning here ‘our’, would be contradictory.)

⁸Interestingly, *n!aa* spreads into all three persons for object deixis, covering ‘this’, ‘that’, and ‘yon’. Featureally, this suggests that *n!uu* is specific to –author whereas *n!aa* realizes the deictic root (ϕ in the theory of Harbour 2014a) alone: it is therefore confined to first person when it competes with *n!uu* but covers all persons elsewhere.

The uncertainty lies, then, in whether the first person plural is *ka* or *so* (presumably, through the veil of Malay, he was unsure whether his first form of ‘eat’ meant both ‘I’ and ‘we’, or ‘I’ alone).

Burung 2000, too, is equivocal in the description of the system, stating merely that “I suspect” it has just a first–nonfirst distinction. The later part of his paper reveals the likely source of his hesitation. It comprises a word list giving doublets of Papuan Malay (or maybe Bahasa Indonesia) and English together with their translations. The part concerning pronouns runs as follows:

150.	<i>saya</i> – I	<i>ka</i>
151.	<i>kamu</i> – you	<i>so^u</i>
152.	<i>kita</i> – we	<i>ka</i>
153.	<i>dia</i> – he/she/it	<i>so^u</i>
154.	<i>mereka</i> – they	<i>so^u</i>

Unlike Laycock’s, this list explicitly elicits both singular and plural first person. It is missing second plural *kalian* though (*kamu*, in the list, is singular). However, this was not a person-number combination with which Laycock reported difficulty. Jointly, then, the two reports appear to offer a complete and consistent picture of a numberless first–nonfirst system.

A complication, however, is that Donohue (p.c.) recorded a richer system consisting of exclusive, inclusive, and second person (plus third person forms identical to demonstratives). Two sources of the discrepancy are likely: either, despite their mutual consistency, Laycock 1977 and Burung 2000 are wrong about the simplicity of the system; or there is significance to Burung’s equivocation about names. If the latter, then Laycock and Burung may have described one language, and Donohue, another, possibly closely related. And if so, *ka–so* might still stand as an example of the two-cell system. (I indicate this uncertainty with a superscripted question mark in (34), (36).)

A different, and less controversial, two-cell system is found in Winnebago (Lipkind 1945). It differentiates the participants, that is, first and second person, *ne*, from third, *e*. (Noyer 1992 corroborates this, citing personal communication from Ken Hale; he writes the pronouns as *nee* and *’ee*. More comprehensively, see Hartmann and Marschke 2010 and Helmbrecht and Lehmann 2010, who call the language Hocąk.)

1/2	<i>ne</i>
3	<i>e</i>

Examples from Lipkind (my glossing, with slight changes to his very phonetic orthography) show that *ne* covers (24)–(25) exclusive, (26) inclusive, and (27) second person, and ranges in number between (24) minimal and (25) augmented, these categories all being indicated by affixes on the verb:

- (24) *Ne wĩ- ře.*
1/2 1EXO-be
‘It is me.’
- (25) *Ne- śān ha- ji- wi.*
1/2-only 1EXS-come-AUG
‘We only came.’
- (26) *Ne wangg-êre.*
1/2 1INO- be
‘It is you.SG and I.’
- (27) *Ne nĩ- ře.*
1/2 2O-be
‘It is you.SG.’

Similarly, though *e* covers only third person, it too ranges in number over (28) minimal and (29) augmented:

- (28) *E re.*
 3 be
 ‘It is him.’
- (29) *E-ʒə ra-irê- kjəne.*
 3-INDEF go-3AUG-FUT
 ‘One of them will go.’

2.2.4. Null systems

The smallest a pronoun system can be is empty, and such languages have been argued to exist in two distinct fashions.

First, pronominal meanings may be borne by nonnominals (or nonsimplex nominals), like clauses. Rood 1976 analyses Wichita in precisely this way:

Wichita has no monomorphemic citation forms for pronouns. Translations for English personal pronouns are personally inflected participles for the verb ‘be’: *nacʔih* ‘I’, *nasʔih* ‘you sg.’, *hirasʔarih* ‘you dual’, *nasá:kʔih* ‘you pl.’, etc. The demonstrative *há:riʔ* ‘that’ or ‘those’ is used for third person forms.

Based on Rood’s discussion, I think the following glosses are reasonably accurate (though the morphosemantics of number is more intricate than implied below):

- (30) *na- c- ʔi- h*
 PART-1-be-SUB
 ‘I’
- (31) *na- s- ʔi- h*
 PART-2-be-SUB
 ‘you.SG’
- (32) *hi- ra- s- ʔar-ʔi- h*
 NSG-PART-2-DL- be-SUB
 ‘you.DL’
- (33) *na- s- á:k-ʔi- h*
 PART-2-PL- be-SUB
 ‘you.PL’

Second, in place of pronouns, languages may use epithets, like ‘sibling’, ‘servant’, or ‘body’. The phenomenon is particularly common in Southeast Asia (see for instance Cooke 1968 and, in a related vein, Gil 2001). Indeed (Gil p.c.), many registers of Malay/Indonesian eschew normatively sanctioned pronouns entirely, employing only epithets instead. If a register is considered to be a complete I-language, then these constitute cases of languages without pronouns.

2.3. Summary

The world’s languages therefore present the following range of counterexamples to REHAB’s three empirical claims:

- (34) i. Some do not have pronoun systems distinguishing first person from others (Winnebago, section 2.2.3; Wichita, section 2.2.4).
 ii. Some do not have pronoun systems distinguishing participants from others (Sanapaná, section 2.1.3; Damin, Elsen/Morwap[?], section 2.2.3; Wichita, section 2.2.4).

- iii. Some do not have pronoun systems distinguishing plural from singular (Imonda, Matses, Waris, section 2.1.2; Jarawa, Pirahã, section 2.2.1; Kiowa, Javanese, Salt Yui, section 2.2.2; Damin, Elseng/Mor-wap⁷, Winnebago, section 2.2.3; Wichita, section 2.2.4).

Of these, Noyer 1992 mentions or discusses the pronoun systems of at least Kiowa and Winnebago; Corbett 2000, those of Kawi, Pirahã, Winnebago; and Harley and Ritter 2002a, all of the aforementioned, plus Wichita. In addition, Corbett and Harley and Ritter mention Classical Chinese as a language without numbered pronouns (though this turns out questionable; see note 5). All these studies are cited in REHAB, yet, remarkably, none of the (potential) counterexamples they adumbrate is mentioned. On the contrary, REHAB grounds its erroneous statement about Kuman by citing Corbett 2000 and Harley and Ritter 2002a.

In fact, Harley and Ritter (2002a) do not discuss any language of the Kuman type. The closest they come is to footnote that Berik (Westrum and Wiesemann 1986, discussed in Harley and Ritter 2002b) is excluded from Harley and Ritter 2002a because its verbs make number distinctions that its pronouns do not. The references just cited show that Berik makes the same pronominal distinctions as Kuman (1SG *ai*, 1PL *ne*, 2 *aame*, and 3 *je*). Given that REHAB's generalization concerns only pronouns, not verbs, it might have indeed cited Harley and Ritter, subject to a change in publication and language.⁹

All in all, REHAB's generalization about small pronominal systems is questionable at several levels. However, as we will see in the next section, the range of variation in small systems is almost exactly what is predicted if any choice of person features is a legitimate person system, and similarly for all choices of number features (Harbour 2011a, 2014a, 2014b).

3. What {±author, ±participant, ±atomic} isn't

Like its statements of typological fact, REHAB's conclusions about feature systems are problematic, both in light of section 2 and more broadly.

REHAB posits the vocabulary below for Kuman 1SG *no*, 1PL *na*, 2 *ene*, 3 *ye*:¹⁰

- (35) +author +atomic ⇔ *no*
 +author –atomic ⇔ *na*
 +participant ⇔ *ene*
 –participant ⇔ *ye*

This posits three features: ±author, distinguishing groups that include the speaker from those that do not; ±participant, distinguishing groups that include speaker, hearer, or both from those that do not; and ±atomic, distinguishing groups that have cardinality 1 from those that do not. Given its view that Kuman is the smallest pronoun system of the world's languages, REHAB then deduces that all pronoun systems use at least these three features.

This is wrong in three ways. First, given section 2, none of these three features is obligatory (section 3.1). Second, there are theories according to which Kuman can be described with person features alone (section 3.2). Third, some richer pronoun systems also use three features, but not those in (35). So, there is a methodological fallacy in REHAB's use of Kuman (section 3.3).

⁹In Harley and Ritter 2002a, the languages with number only in first person, Kwakiutl (Boas 1947) and Maxakalí (Popovich 1986), also exhibit clusivity. This makes them more complex than Berik and Kuman. Moreover, the Kwakiutl example concerns only verbal affixes, making it irrelevant to REHAB's generalization. (The claim that number in Maxakalí pronouns is confined to first person is, incidentally, disputed by a later study, Campos 2009.)

¹⁰REHAB states that formulation of the Rich Agreement Hypothesis “does not hinge on a particular choice of these features”, “What is crucial is . . . the feature distinctions minimally underlying pronominal systems”. Koenenman (p.c.) explains this to mean that neither the feature names nor feature valence is crucial for their proposal, just having features that definitionally distinguish author–nonauthor, participant–nonparticipant, and plural–nonplural is. Accordingly, I maintain strict bivalence in keeping with Harbour 2007, 2011a, 2011b, 2014a, 2014b and rewrite their ±speaker as ±author and ∓plural as ±atomic.

I have simplified REHAB's Kuman exponents by removing –author from *ene* and *ye* as (i) –participant suffices to restrict *ye* to third person, and (ii) +participant *ene* is outcompeted for first person by more specific *na* and *no* and, hence, confined to second person.

3.1. *Not the smallest feature system*

The first of these errors is the clearest, as one can simply rephrase (34) and its statements about distinctions (e.g., first versus nonfirst) as (36), in terms of features (e.g., \pm author):

- (36) i. Some pronoun systems eschew \pm author (Winnebago, section 2.2.3; Wichita, section 2.2.4).
 ii. Some eschew \pm participant (Sanapaná, section 2.1.3; Damin, Elsen/Morwap[?], section 2.2.3; Wichita, section 2.2.4).
 iii. Some eschew \pm atomic (Imonda, Matses, Waris, section 2.1.2; Jara-wa, Pirahã, section 2.2.1; Kiowa, Javanese, Salt Yui, section 2.2.2; Damin, Elsen/Morwap[?], Winnebago, section 2.2.3; Wichita, section 2.2.4).

An alternative way of stating this is that most proper subsets of REHAB's putatively minimal feature set are attested as pronoun systems. This is laid out in the table below. The table assumes the theory of person features in Harbour 2014a, which derives (absence of) clusivity from the order of composition of \pm author and \pm participant, without recourse to a third person feature (traditionally, \pm hearer):¹¹

Feature set	Pronominal contrasts	Language
{ }		Wichita
{ \pm author}	1 23	Damin, Elsen/Morwap [?]
{ \pm participant}	12 3	Winnebago
{ \pm author, \pm participant}	1 2 3	Jarawa, <i>etc.</i> ; Kiowa, <i>etc.</i>
{ \pm author, \pm participant}	1EX 1IN 2 3	Imonda, Matses, Waris
{ \pm author, \pm atomic}	1 23 \times SG PL	Sanapaná

The two unattested cases are { \pm atomic} and { \pm participant, \pm atomic}. The first of these generates a personless but numbered (singular–plural) pronoun system. Its nonattestation is hardly surprising if personal pronouns are fundamentally about persons (Harbour 2014a presents arguments that person is closer to the root of the functional sequence—hence, in a plausible sense, more fundamental—than number). The second system would be Winnebago with a number contrast. Again, nonattestation is untroubling, given that there are very heavy conditional probabilities against \pm participant as the sole person feature for pronouns (Winnebago is so far the unique exception) and against a number contrast with a sole person feature (Sanapaná and its relatives are as yet the unique family of exceptions).

The missing feature systems are instantiated for object, rather than person, deixis (see Harbour 2014a for detailed discussion of the parallels between these). In Bulgarian, for instance, singular/plural (feminine) objects in the participants' vicinity are referred to by *tazilonazi* and those beyond their vicinity, by *tezi/onezi*. The system thus distinguishes \pm participant and \pm atomic, but not \pm author. And in most varieties of German, object deixis distinguishes number without reference to speaker or participant at all: *der/die*, for instance, refer to singular/plural (masculine) objects irrespective of vicinity. Featurally, this distinguishes just \pm atomic and eschews person features.

With these provisos in place, REHAB's counterexamples are almost combinatorially perfect. Its three features yield seven proper subsets. One of these (that with two person features) generates two different systems, depending on order of semantic composition (Harbour 2014a). Of the resulting eight possibilities, six are attested as pronoun systems, and the remaining two are attested as systems of object deixis. This range of variation, though troubling for REHAB, fits perfectly with the view of features as parameters that may be activated or deactivated with mutual independence (Harbour 2011a, 2014b, 2014a, Harbour and Elsholtz 2011). Thus, the real facts find a comfortable home within generative theory.

¹¹For the purposes of the table, I do not distinguish between a pronoun system with an absence of features and the absence of a pronoun system, as both are equally problematic for REHAB. In reality though, a more careful theory ought to distinguish these (and Harbour 2014a does).

3.2. *Not a valid deduction I*

REHAB's problems are not confined to data it failed to consider. Its central deduction, from four Kuman pronouns to three phi features, is also unwarranted. At least two theories can capture Kuman without recourse to number features.

The first of these is Harley and Ritter 2002a, meaning that, once again, REHAB has attributed to a source a view it does not endorse. Harley and Ritter treat Maxakalí (Popovich 1986) and Kwakiutl (Boas 1947) as languages without number features (see note 9). These have exclusive singular, exclusive plural, inclusive plural, numberless second, and numberless third, for which Harley and Ritter propose the following representation (I have flattened their geometry and ignored diacritics but retained their feature names and valence):

- (37) 1SG = [participant]
 1EX.PL = [participant speaker]
 1IN.PL = [participant speaker addressee]
 2 = [participant addressee]
 3 = \emptyset

Similarly, for Pirahã, they propose the following (flattened) person representations, again devoid of number:

- (38) 1 = [participant]
 2 = [participant addressee]
 3 = \emptyset

Given that Kuman is of a complexity intermediate between Maxakalí and Pirahã (no clusivity, but one number contrast), one can easily interpolate that Harley and Ritter would treat it as the numberless system below:

- (39) 1SG = [participant]
 1PL = [participant speaker]
 2 = [participant addressee]
 3 = \emptyset

And, indeed, this is the analysis that Harley and Ritter 2002b afford to Berik, which has the same pronoun system as Kuman (note 9).

The theory developed in Harbour 2014a also permits a representation of Kuman pronouns without number. There, person features denote power sets minus the empty set: \llbracket author \rrbracket is the power set (minus \emptyset) of the author alone; \llbracket participant \rrbracket , of author and hearer; and $\llbracket \emptyset \rrbracket$, the pronominal root node, of author, hearer, and all (animate) others. Within this theory, there are two ways represent first person singular. The long way is by full specification: person features act on the root node, $+author(+participant(\emptyset))$, to produce a set of sets containing the author; number acts on these to pick out the only singleton, $+atomic(+author(+participant(\emptyset))) = \{i\}$. The short way is by underspecification: the power set of the author, $\{i\}$, is $\{\{i\}, \emptyset\}$; removing \emptyset leaves $\{\{i\}\}$, making $\{i\}$ the only possible referent set. Transparently, these specifications converge, but the latter has no need of number.

Of course, REHAB can hardly be expected to have cited Harbour 2014a. But the general point is this: REHAB, laudably, wishes to remain nonpartisan with respect to the hubbub of debate about features. However, phi-theorists debate because their theories are not notational variants. If REHAB aims to be serious about phi-features in syntax, it should begin by paying heed to what is claimed about phi-features in general. And statements about deductions or analyses that purport to be valid within all theories should be made with due care.

3.3. *Not a valid deduction II*

Such care would have forestalled a further error, one that invalidates one of REHAB’s core methodological assumptions. Implicit in REHAB’s use of Kuman is the notion that, if the smallest pronoun system uses some feature set, then every larger system will too. However, it is explicit in Harley and Ritter 2002a and especially Noyer 1992, which REHAB cites, that this is not the case.

A fundamental distinction in number features, first explicitly described by Thomas (1955) for Ilocano, is that between atomicity and minimality (in the terminology of Harbour 2014b). The difference is most obvious in how languages with clusivity treat the speaker–hearer dyad. Wandala (Frajzyngier 2012), for instance, uses the number feature \pm atomic, resulting in a singular–plural distinction. Accordingly, the speaker–hearer dyad is classed with all other inclusives, as all are nonatomic. This yields a seven-cell system with the inclusive singular cell empty:

	singular	plural
1EX	<i>íyyà</i>	<i>ngrè</i>
1IN		<i>míyà</i>
2	<i>àkká</i>	<i>kùré</i>
3	<i>ngánè</i>	<i>ítàrè</i>

Hdi (Frajzyngier 2001), by contrast, uses \pm minimal, resulting in a minimal–augmented system. Like singular–plural, this distinguishes, for instance, speaker from speaker-plus-others (exclusive minimal versus exclusive augmented) and hearer from hearer-plus-others (second person minimal versus second person augmented). However, it also distinguishes the smallest inclusive from larger ones, hence the speaker–hearer dyad from dyad-plus-others (inclusive minimal versus inclusive augmented). This yields an eight-cell system:

	minimal	augmented
1EX	<i>íí</i>	<i>ángní</i>
1IN	<i>úú</i>	<i>ámú</i>
2	<i>kághá</i>	<i>kághúní</i>
3	<i>tsátsí</i>	<i>xáxà̀n</i>

Even within languages that lack a systematic clusivity contrast, the difference is apparent: in hortatives. In French, say, all hortatives are plural (e.g., *Allons* ‘Let’s go’ is the verb *all-ons* go-1PL). However, in Ewondo (Onambélé 2012), the hortative distinguishes (40) minimal from (41) augmented, that is, speaker and hearer alone from speaker, hearer, and others:

- (40) *Ń- dí- íg.*
HORT-eat-MIN
‘Let’s (both) eat.’
- (41) *Ń- dí- àn.*
HORT-eat-AUG
‘Let’s (all) eat.’

Elsewhere, Ewondo, like French, lacks clusivity (and the dual). For instance, first plural present tense agreement, *by*, covers exclusive/inclusive and dual/plural:

- (42) *By- ǎ- sye.*
1PL-PRES-work
‘We eat.’

- (43) *Bĩ wǎ by- ǎ- sye.*
 we you.SG 1PL-PRES-work
 ‘You and I work.’
- (44) *Bĩ mínúnga by- ǎ- sye.*
 we woman 1PL-PRES-work
 ‘The woman and I work.’

The range of variation between Ewondo, French, Hdi, and Wandala is problematic for REHAB’s inference from Kuman pronouns to the feature inventories of other languages. First, minimal–augmented Ewondo and Hdi use a different number feature from French, Wandala, and, according to REHAB, Kuman. Second, Hdi and Wandala differ from Ewondo, French, and Kuman in having a clusivity contrast. Harbour 2014a, uniquely I believe, attributes this difference, not to feature inventory, but to order of composition. Everywhere else, presence of clusivity demands different features from its absence. In Noyer’s (1992) theory, for instance, one can analyse languages like Hdi and Wandala as using $\{\pm\text{author}, \pm\text{hearer}\}$, in contrast to $\{\pm\text{author}, \pm\text{participant}\}$ of Ewondo, French, and Kuman.

There are, then, two errors of reasoning here. On the one hand, REHAB, again, cannot maintain its proposed featural ecumenism: the extent to which the features of Kuman are shared by other pronoun systems depends on the precise features assumed. On the other hand, there is no theory that I know of according to which Kuman is the only three-feature system. For Noyer-type theories, there are four:

$$\{\pm\text{author}\} \times \left\{ \begin{array}{l} \pm\text{hearer}, \\ \pm\text{participant} \end{array} \right\} \times \left\{ \begin{array}{l} \pm\text{atomic}, \\ \pm\text{minimal} \end{array} \right\}$$

For Harbour’s (2014a) theory, only the choice of number feature is at stake, but that choice is ineliminable: properties of Kiowa noun classification (Harbour 2007) and of the semantic composition of the trial (Harbour 2011a) require atomicity and minimality to be distinct features, not alloemes of a single broad concept.

Even if REHAB abandons Kuman and substitutes one of the more minimal feature systems of (36), the claimed universality still does not hold, as several of the feature systems are pairwise disjoint: Sanapaná $\{\pm\text{author}, \pm\text{atomic}\}$ and Winnebago $\{\pm\text{participant}\}$, let alone Wichita $\{ \}$, for instance. In consequence, REHAB must relinquish its core contention that Kuman, or any other putatively poorest inventory, can reveal a nonnull feature set universal to all pronoun systems.

4. Consequences and conclusions

How might a charitable reader rehabilitate REHAB’s statement of the Rich Agreement Hypothesis whilst avoiding the Kuman fallacy? And what lessons can we draw from the foregoing?

Given that pronoun systems alone are not rich enough to confer universality on $\{\pm\text{author}, \pm\text{participant}, \pm\text{atomic}\}$, one could look to the overlay of pronouns with agreement in the hope that these, jointly, might always refer to all three features. Certainly, some languages above are conducive to this view: as already illustrated, agreement in Kiowa (section 2.2.2) and Winnebago (section 2.2.3) carries much more information than their pronouns do, differentiating, for Kiowa, four persons and three numbers, and, for Winnebago, four and two.

But, obviously, this cannot be what REHAB intended: if it had, it would not have phrased the Rich Agreement Hypothesis in terms of cleavage between pronouns and agreement (viz., “A language exhibits rich subject agreement iff agreement involves at least the same featural distinctions as those manifested in the smallest (subject) pronoun inventories universally possible”). Moreover, its exemplum would not have been Kuman, as (the overlay of its pronouns with) its agreement (below, Foley 1986 citing Piau 1985) is richer than that of English, say.

	singular	dual	plural
1	<i>-i</i>	<i>-bugl</i>	<i>-mun</i>
2	<i>-n</i>	<i>-bit</i>	<i>-iw</i>
3	<i>-uw</i>		

Even without these provisos, though, the appeal to agreement fails. It still ignores that some languages do not use \pm atomic (Winnebago, section 2.2.3; Ewondo, Hdi, section 3.3). Moreover, the exposition of Kawi (section 2.1.1), Sanapaná (section 2.1.3), Jarawa and Pirahã (section 2.2.1) is illustrative of the fact that verbs in these languages do not bear any more information about person and number than their pronouns do; indeed, some bear less.

Nonetheless, matters are salvageable. What is striking for someone of pronominal and typological bent reading REHAB is how boring all its languages are: much Germanic, some Romance, a smidge of Celtic, a smudge of Slavic. All have the same pronoun system—first, second, and third with singular and plural number. Hence, all use, for their pronouns, the feature set that REHAB, via the Kuman fallacy, regards as universal. The obvious solution, then, is to relativize richness to the feature inventory of the pronoun system of the languages at stake:

(45) *Relativized Richness*

Subject agreement is rich in L if and only if it uses at least the features of the (subject) pronoun system in L.

I do not myself endorse or advocate this view, and suspect it may still prove problematic. I observe merely that it leaves the bulk of REHAB (viz., its analysis of sundry Germanic, Romance, Celtic, Slavic) intact and permits productive investigation of the revised Rich Agreement Hypothesis in languages beyond Europe, a step that REHAB appears to promise.

Given what a quick fix this is, this article may seem a pershittie screed on a lobcocked claim. But the foregoing is not mere bumfiddling. First, it is imperative for the field to take systematic heed of the true state of variation in the world's languages. Second, the languages examined above, nearly all of them socially marginal and endangered, do have something fundamental to teach us about the nature of feature systems. In a variety of work (Harbour 2011a, 2014a, 2014b, Harbour and Elsholtz 2011; section 3.2), I have argued against the idea of dependencies between features (of the type proposed most notably by Harley and Ritter 2002a). Instead, I have urged a combinatorial freedom according to which any choice of person features and any choice of number features is grammatically legitimate. This entails that the range of counterexamples to REHAB's claimed minimal system, $\{\pm$ author, \pm participant, \pm atomic $\}$, is exactly what we would hope to find: every subset of these features is attested as a deictic system, and almost all of them as systems of person deixis. This tells us that freedom from geometric constraints and the definitions of person and number features that make this possible are, in all likelihood, fundamentally correct.

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