How big can case systems get? Evidence from Scottish Gaelic

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Abstract

It is well known that case systems can be augmented by the accretion of adpositions to their objects. This paper documents and explores an extensive instance of such augmentation, far exceeding any studied to date, based on an analysis of a class of words in modern Scottish Gaelic (SG) the members of which have attributes of both prepositions and pronouns. Pedagogical materials tend to call these forms PREPOSITIONAL PRONOUNS, yet present the forms in paradigms organized by prepositional element, as if they represented person–number inflections on prepositional bases. This approach does not translate well into a synchronic description, however, because deriving these forms from underlying sequences requires numerous ad hoc morphophonemic stipulations.

Regardless of diachronic source(s), these forms are synchronically pronominal in distribution. Shifting to a whole-heartedly pronominal analysis entails a targeted expansion of pronominal paradigms, beyond the traditional 3 nominal cases to 14. Although a number of languages present a richer array of distinct pronominal case forms than those found among nouns (e.g. English, Spanish), SG is unique in the extent to which pronoun case forms exceed those of nouns. Moreover, English and Spanish pronouns show the remnants of a case system, whereas SG has created these distinctions.

1 Recognizing morphosyntactic metamorphosis

Two types of obstacles may stand in the way of reaching acknowledgement that a language has changed, or at least that a more elegant or felicitous analysis is available for a linguistic phenomenon. These obstacles both have to do with tradition, the first in the shadow of the Comparative Method misapplied, the second in the practice of descriptive liguistics either in general or as practiced by scholars and/or speakers of particular languages or language family groups.

Knowledge (or assumptions) about earlier states of a language can lead to adopting categorization of, and terminology for, linguistic elements that anachronistically reflect analyses that are poorly supported from a synchronic standpoint (see Joseph (2006) on Greek), e.g., they may presuppose diachronic sources as synchronic underliers. Such analyses often recapitulate the diachronic evolution of the elements in question, but may have little else to recommend them. Assimilating the description of a phenomenon in one language to homologous structures in related languages, on the other hand, can result in neat but inaccurate overgeneralizations about particular grammars. The resulting analyses may have an aesthetic appeal, but as science they are less than adequate.

The second type of obstacle to synchronic description may reside in an awareness of a long-standing and well-entrenched (and even well-respected) tradition of grammatical description. This is even more likely to be reflected in terminology and categories, and the discrepancies that may arise between the synchronic state of one language and the metaphors that have developed to describe its ancestor, sister, or cousin languages can potentially highlight the consequence of an un(der)acknowledged change and an opportunity for more objective characterizations.

For an analysis to be beholden to genetic or generative traditions that miss broader generalizations is mistaken loyalty. We present here evidence from Scottish Gaelic that suggests a synchronic resolution to a particular categorial ambiguity that is at odds with a recapitulation of its diachrony.

2 Scottish Gaelic (SG) *Prepositional Pronouns*

There are in the Celtic languages sets of combined ('composite') forms used obligatorily when a preposition would take a pronominal object (e.g. SG *agam* 'at me'). These forms are sometimes referred to as PREPOSITIONAL PRONOUNS (e.g. Blacklaw (1989: 12), Robertson & Taylor (1993: 37), Dwelly (1988: xiv)), which accords well with the distributional facts in SG, but one is apt to find them labeled as PRONOMINAL PREPOSITIONS (Christian Brothers 1901: 87; Boeckx 2003: 48), CONJUGATED PREPOSITIONS (Gillies 1993: 182), or INFLECTED PREPOSITIONS (Tallerman 1997: 22; Boeckx 2003: 48).

By contrast, full NP prepositional objects in SG appear with Dative[1] case-marking (e.g. *aig Tòmais* 'at Thomas', cf. *Tòmas* (nom.)). The combined forms are employed if and only if the construction would otherwise contain, all else being equal, the sequence of a preposition and a personal pronoun.

3 Combining prepositions and pronouns

There is certainly a resemblance between the prepositional pronouns and the corresponding sequences of preposition and pronoun; for instance, 'at me' has an [m] in the prepositional form ([akam]) that appears to echo the [m] of the pronominal form *mi*, and so also for some of the other forms listed in Table 1 below. However, as Table 1 also indicates, the reduction seen in the observed phonetic realizations as compared to the phonetic realizations that the semantic composition might lead one to

Table 1.

Semantic composition	Expected Phonetics		Form	Observed Phonetics
AT (*aig*) + ME (*mi*)	[ɛk]+[mi]	↔	*agam*	[akam]
AT (*aig*) + YOU {sg.} (*thu*)	[ɛk]+[u]	↔	*agad*	[akat]
AT (*aig*) + HIM (*e*)	[ɛk]+[e]	↔	*aige*	[ɛkʲə]
AT (*aig*) + HER (*i*)	[ɛk]+[i]	↔	*aice*	[ɛʰkʲə]
AT (*aig*) + US (*sinn*)	[ɛk]+[ʃin']	↔	*againn*	[aken']
AT (*aig*) + YOU {pl.} (*sibh*)	[ɛk]+[ʃiv]	↔	*agaibh*	[akev]
AT (*aig*) + THEM (*iad*)	[ɛk]+[at]	↔	*aca*	[aʰka]

Table 2.

AIG 'at'	Singular	Plural
1st	*agam*	*againn*
2nd	*agad*	*agaibh*
3rd	*aige* (m.)	*aca*
	aice (f.)	

expect goes well beyond any outcome of 'rapid speech' or 'phonetic erosion', as found in grammaticalization-type effects.[2]

Traditionally, these forms are collected into paradigms organized by PREPOSITION, then by person, number, and gender, as shown in Table 2, a type of organization we henceforth call the TRADITIONAL BY-PREPOSITION ANALYSIS (Blacklaw 1989, Robertson & Taylor 1993).

Implicit in this account is the claim that these forms are BASICALLY PREPOSITIONS with complements 'incorporated' in some way. This arrangement, although easy to understand and appealingly analogous to a verb paradigm, may not in fact be the most insightful arrangement of the forms.[3]

In what follows, therefore, we explore alternatives to this traditional analysis, and argue that there is a more insightful account that involves dramatically altering the basis upon which the forms are organized.

4 A fuller statement of the Traditional by-Preposition analysis

The following are the commonly encountered SG prepositions, all of which are systematically associable with prepositional pronominal forms:

(1)
aig	'at'	**air**	'on'	**ann**	'in'	**do**	'to'
gu	'to'	**le**	'with, by'	**ri**	'with'	**bho**	'from'
mu	'about'	**ro**	'before'	**fo**	'under'	**tro**	'through'

These prepositions combine with pronouns to yield the full set of prepositional pronominal forms listed in Table 3, which brings together the combined form paradigms for each of the prepositions.

Table 3.

	AIG	AIR	ANN	DO	GU	LE	RI	BHO	MU	RO	FO	TRO
1S	*agam*	*orm*	*annam*	*dhomh*	*thugam*	*leam*	*rium*	*bhuam*	*umam*	*romham*	*fodham*	*tromham*
2S	*agad*	*ort*	*annad*	*dhut*	*thugad*	*leat*	*riut*	*bhuat*	*umad*	*romhad*	*fodhad*	*tromhad*
3Sm	*aige*	*air*	*ann*	*dha*	*thuige*	*leis*	*ris*	*bhuaithe*	*uime*	*roimhe*	*fodha*	*troimhe*
3Sf	*aice*	*oirre*	*imte*	*dhi*	*thuice*	*leatha*	*rithe*	*bhuaipe*	*uimpe*	*roimhpe*	*foidhpe*	*troimhpe*
1P	*againn*	*oirnn*	*annainn*	*dhuinn*	*thugainn*	*leinn*	*ruinn*	*bhuainn*	*umainn*	*romhainn*	*fodhainn*	*tromhainn*
2P	*agaibh*	*oirbh*	*annaibh*	*dhuibh*	*thugaibh*	*leibh*	*ruibh*	*bhuaibh*	*umaibh*	*romhaibh*	*fodhaibh*	*tromhaibh*
3P	*aca*	*orra*	*annta*	*dhaibh*	*thuca*	*leotha*	*riutha*	*bhuapa*	*umpa*	*romhpa*	*fodhpa*	*tromhpa*

5 Problems with the by-Preposition analysis: segmentation and derivation

The by-Preposition analysis faces some serious problems that call its suitability into question.

There is no plausible synchronic segmentation of all or even a majority of these forms to correspond to putative input from free forms. If we line up some forms by both prepositional and pronominal aspects, we see no obvious synchronic (morpho-) phonological account to derive, e.g., the forms in this chart from *ri + i, fo + i, ann + i* versus *ri + sinn, fo + sinn, ann + sinn*, respectively:

(2)   *rithe* [rijə]   ⇔   *foidhpe* [fojpə]   ⇔   *innte* [intʃə]

    ⇕   ⇕   ⇕

   ruinn [rʊin']   ⇔   *fodhainn* [foen']   ⇔   *annainn* [anen']

Segmentation here is both difficult and unmotivated because the 'prepositional' initial portions are no more readily identifiable than the 'pronominal' final portions. One can reasonably ask (i) how far in from the left edge the preposition extends, and (ii) at what point in from the right edge the pronoun begins. That is, should *foidhpe* be segmented as //foidh-pe//, based on //fodh-ainn//? If so, how to reconcile that with the apparent segmentation of //thuic-e//? Or, if //foidhp-e//, based on //thuic-e//, how is that to be reconciled with //roimh-pe//? Similar issues arise for just about all of these forms.

Some interesting *pseudo*-morphemes[4] may be posited in these paradigms, e.g. the [p]-element in the 3Sf and 3P (but *not* in 3Sm) of *bho, mu, ro, fo, tro*. The segment presumably had its origin as an excrescent consonant between a nasal and a vowel (e.g. *uim*[p]*e*, but also *roimh*[p]*e* and *troimh*[p]*e*, and then was extended by analogy to the corresponding cells in the paradigms associable with *fo* and *bho*, where there never was a nasal in the appropriate position). Another instance of the influence of analogy on these forms is seen in the <mh> found throughout the paradigms associable with *ro* and *tro*. The model for this <mh> seems to be the first singular related to *do* <dhomh> but rather than developing into a consistent marker of 1S, the <mh> was reanalyzed in these cases as stem, rather than ending, material.

The deviation from what one would expect from phonological processes as well as the presence of at least two types of analogical extension among these forms makes it difficult to consign the phenomena in synchronic modern SG to the operation of morpheme concatenation feeding into ordinary morphophonology.

Even if segmentation and identification with free forms were possible, i.e., if the 'input' in each of these cases were truly to contain the basic preposition and the basic pronoun, respectively, still any derivation would require ad hoc phonological adjustments vis-à-vis a combination of free forms:

(3)   • initial <d> ∼ <dh> (representing [d] ∼ [γ]) in forms associated with *do*,
      • final <m> ∼ <mh> (representing [m] ∼ nasalization) in 1Sg of *do*, and
      • initial <g> ∼ <th> (representing [g] ∼ [h]) in forms associated with *gu*.

Therefore, deriving these prepositional pronouns in the synchronic grammar from a combination of a preposition with a pronoun requires significant license in the

representations and rules, abstractness not required with other word classes. For this reason, an alternative analysis needs to be sought.

6 Looking back

Owing to SG's origin as a dialect of Irish via the migration of Irish speakers to Scotland in approximately 500 CE (Gillies 1993: 145), the ancestral phenomenon in Old Irish (OI) is relevant (Thurneysen 1941/1975: 270–76).

Even though many of these prepositional pronouns were already established in OI, some have left the category and others have entered. In (4) are listed several well-attested OI prepositions for which combined forms for all person and number pairs are found.

(4) **ar** 'for, on account of' **co** 'to' **di** 'from'
     do 'to' **eter** 'between' **for** 'on'
     fri 'against' **i** 'in, into' **im** 'about'
     la 'with' **ó, úa** 'from, by' **tri, tre** 'through'

Other less frequently attested OI prepositions with at least some combined forms include:

(5) **a** 'out of' **ís** 'below'
     amal 'as' **oc** 'at, with'
     cen 'without' **ós, úas** 'above'
     co 'with' (*arch. only*) **re, ri** 'before'
     fíad 'in the presence of' **sech** 'past, beyond'
     íar 'after' **tar, dar** 'over, beyond'

Thurneysen presents the OI forms in full paradigms (where attested forms are available) organized BY PREPOSITION. This is consistent with his categorization of the phenomenon together with suffixed object pronouns on verbs in his *Grammar*, despite the fact that the corresponding marks are not phonetically homologous[5] (e.g. -*us* for the feminine 3S *morthus* 'magnifies her' <*moraid + us*, compare *impe* 'about her' </*imm/ + /he/* (surely not /*imm*/ + /*us*/)).

Inspecting the forms shows that there were already segmentation difficulties in OI, and there was, not surprisingly, considerable variability in the orthographic representation of the vowels.

(6) *duit, dait, deit, dit* = 'to you (sg)' (**do** 'to')
     lem(m), lim(m), leim, lium(m) = 'with me' (**la** 'with')

Thurneysen's analysis (or at least some related tradition) has undoubtedly had a lasting effect on the way these forms are described even to the present day, but an alternative analysis is possible.

7 Rotation, if not revolution... A Case-marking analysis

As mentioned in section 2 above, the template of a verb paradigm is conveniently both available and compact, but given the problems outlined in sections 4–5, it is natural to ask: Is there another way to conceptualize this?

Even though commonly referred to as PREPOSITIONAL PRONOUNS, this name is not generally taken seriously—rather, the prepositional aspect is the focal point. What if, instead, the paradigms were organized by person and number first, and only THEN by the prepositional relation? That is, what if this were better described as CASE-MARKING of the pronoun?

By shifting the focus from the prepositional element to the pronominal, a 1S paradigm is easily constituted:

Table 4. First person singular pronominal forms (Note: for the more 'exotic' case labels, see Beard (1995).)

(Default)	*mi*		Nominative/Accusative	*mi*
'of'	*mo*		Genitive	*mo*
'at'	*agam*		Locative	*agam*
'on'	*orm*		Suressive	*orm*
'in'	*annam*		Inessive	*annam*
'to'	*dhomh*		Dative	*dhomh*
'toward'	*thugam*	⇒	Adessive	*thugam*
'with, by'	*leam*		Agentive/Instrumental	*leam*
'with'	*rium*		Comitative	*rium*
'from'	*bhuam*		Ablative	*bhuam*
'about'	*umam*		Thematic	*umam*
'before'	*romham*		Antecedent	*romham*
'under'	*fodham*		Subessive	*fodham*
'across'	*tromham*		Transessive	*tromham*

Extending this organization to the entire set of pronominal paradigms we obtain the analogue of Table 3, the Traditional by-Preposition analysis, pivoted around a left-to-right declining diagonal axis; that is to say, swapping axes in the table, but deliberately ordering cases in order to reflect a plausible (if provisional) ordering from direct to more oblique cases.[6] (Table 5 below.)

8 Some Consequences of the Case-marking analysis

While it might seem that nothing significant has resulted from this simple rotation, several theoretical implications do indeed arise:

- CATEGORIALLY, there are fourteen case categories to be distinguished in SG.
- INFLECTIONALLY, personal pronouns in SG have many more distinct case-forms than nouns do.
- FUNCTIONALLY, these case-marked pronouns alternate with garden-variety PPs with full NP Dative objects.
- DIACHRONICALLY, given that earlier stages of SG had a five-case system (cf. Old Irish, Thurneysen 1946/1970: 155), case systems can expand (as well as collapse, cf. English, Romance, etc.) from a morphological standpoint.

Each of these points might seem controversial, so we take them up in turn in what follows.

Table 5.

	1S	2S	3S(m.)	3S(f.)	1P	2P	3P
Nominative/ Accusative	mi	thu	e	i	sinn	sibh	iad
Genitive	mo	do	a	a	ar	ur	an
Locative	agam	agad	aige	aice	againn	agaibh	aca
Suressive	orm	ort	air	oirre	oirnn	oirbh	orra
Inessive	annam	annad	ann	innte	annainn	annaibh	annta
Dative	dhomh	dhut	dha	dhi	dhuinn	dhuibh	dhaibh
Adessive	thugam	thugad	thuige	thuice	thugainn	thugaibh	thuca
Agentive/ Instrumental	leam	leat	leis	leatha	leinn	leibh	leotha
Comitative	rium	riut	ris	rithe	ruinn	ruibh	riutha
Ablative	bhuam	bhuat	bhuaithe	bhuaipe	bhuainn	bhuaibh	bhuapa
Thematic	umam	umad	uime	uimpe	umainn	umaibh	umpa
Antecedent	romham	romhad	roimhe	roimhpe	romhainn	romhaibh	romhpa
Subessive	fodham	fodhad	fodha	foidhpe	fodhainn	fodhaibh	fodhpa
Transessive	tromham	tromhad	troimhe	troimhpe	tromhainn	tromhaibh	tromhpa

8.1 Many cases to be distinguished in the grammar

Although fourteen is a relatively large number of morphological case distinctions, it is certainly not without precedent.[7] E.g., Finnish is typically analyzed (Branch 1990: 214–18) as having 15 cases in its nominal and adjectival paradigms:

(7) NOMINATIVE   TRANSLATIVE   ABLATIVE
     ACCUSATIVE   INESSIVE   ALLATIVE
     GENITIVE   ELATIVE   INSTRUCTIVE
     PARTITIVE   ILLATIVE   COMITATIVE
     ESSIVE   ADESSIVE   ABESSIVE

8.2 Personal pronouns with more distinct case-forms than nouns

In SG, case-marked pronouns alternate with PPs with Dative NP objects. This is NOT to say that SG pronouns have a wider potential distribution than NPs, only that they have a richer paradigm of synthetic inflected forms. There are undeniable asymmetries in the number of distinct case forms for different subclasses of nominals, as defined by certain features or featural combinations.[8]

Other asymmetries between cases distinguished in some nominal classes but not in others include the following:

- Old Irish masculine and feminine nouns generally distinguish five cases, but neuters only three (N/V/A being syncretic).

- Old Irish duals distinguish three cases, whereas singulars and plurals distinguish as many as five.
- In English: Nom/Acc/Gen distinction occurs in pronouns, with at best questionable inflectional case distinctions in nouns at all.
- Plank (2003) notes the different distribution of the category {NUM: dual}, e.g., in nouns as opposed to pronouns in the EUROTYP project[9] and other typological samples. Thus morphosyntactic categories more generally need not show morphological realization categorically among all types of nominals, even given the potential for semantic felicity (countability, in this instance).

8.3 Analytic and synthetic realization of the same properties or categories[10]

In Plank's (1986: 36) cross-linguistic survey of average numbers of case terms, where divergences in case paradigms existed between 'nominal and suppletive pronominal[s], ...nominal paradigms alone are taken into account.' The significance of 'suppletive' is relevant here. Labelling a form as SUPPLETIVE or PORTMANTEAU does not allow us to place it outside the system of syntactic categorization. It may well be exceptional in some way, but the SG forms in question are richly systematic and coherent.

As a comparative note within Celtic, Welsh inflected prepositions may have passed through a phase such as the SG case under discussion, but now a free pronoun appears as prepositional object in Welsh, redundantly reinforcing (or, alternatively, agreeing with) person and number marking (Borsley 1989: 342).

(8) *wrthyf i*   'by me'   *wrthym ni*   'by us'
     wrthyt ti 'by you (sg.)' *wrthych chwi* 'by you (pl.)'
     wrtho ef   'by him'   *wrthynt hwy*   'by them'
     wrthi hi   'by her'   (cf. *wrth* 'by', used with full NPs)

This would seem a much better case for so-called 'inflected preposition' elements than the SG case. Recall the comment from the introduction (§1) that homologous elements even in two closely related languages need not have the same synchronic status.

8.4 Expansion, rather than collapse, of a Case system

Whole or partial COLLAPSE of case systems is well-known, e.g.:

- ENGLISH (Old English five cases to Modern English none (except in pronouns, as in (11) above)),
- BALKAN SLAVIC (Common Slavic seven cases to Modern Bulgarian, Macedonian with none in nouns (except possibly for Vocative case), though with three cases in pronouns),
- ROMANCE (Latin five (or even six) cases to Modern Italian, French, Spanish with none (except in pronouns, where two or three cases are found)), and
- GREEK (Ancient five cases to Modern four).

Still, there are documentable instances of the expansion of case systems. For instance, Turkish presents a small-scale example of case system expansion (assuming univerbated

forms to be innovative). Alongside constructions using the comitative postposition *ile* 'with' (e.g. *Ahmet ile* 'with Ahmet,' *Fatma ile* 'with Fatma') there is the possibility of using a suffix-like element *-(y)le* (with harmonic variant *-(y)la*; e.g. *Ahmetle*, *Fatmayla*).

Additionally, in Old Lithuanian (Stang 1966: 175–6, 228–32) there was a broader innovative expansion of the system in terms of what are called 'secondary local' cases, including the following:

- The ILLATIVE, e.g. *galvôn* 'onto the head', formed from the accusative plus the postposition **nā* (with variant form **na*) 'in', probably connected with Slavic *na* 'on',
- The ALLATIVE, e.g. *galvôspi* 'to(ward) the head', formed from the genitive plus *–p(i)* (from the postposition **pie* (an enclitic form of **priê* 'at')), and
- The ADESSIVE, e.g. *diêviep* 'near/close to god', formed most likely from the old locative plus *–p(i)*[11].

9 Conclusion

Summing up, the present Pronoun Analysis of Scottish Gaelic 'prepositional pronouns' is well motivated, especially in that it avoids the morphophonological messiness of the Traditional by-Preposition Analysis.

Moreover, each of the implications (see §8) of the Pronoun Analysis corresponds to an independently attested phenomenon in natural language—what sets Scottish Gaelic off in this regard is the cooccurrence of all 4 of these consequences and perhaps also the sheer numerical scope of the case expansion warranted by the Pronoun Analysis.

Finally, this account points out rather tellingly the interaction between synchronic analysis and how we view diachronic developments—only in the account given here does the question of a dramatic expansion of a case-system arise at all.

We do not see this as problematic, as we feel our analysis is well-supported, but we mention this as a cautionary note, namely that our understanding of diachrony must always be filtered through our best analysis of the beginning stage and the end stage under investigation.

Notes

1. Dative is a traditional name for this form, but because it (1) is governed by all modern SG simple prepositions, and (2) carries no inherent 'dative' semantics and thus cannot be used alone, a more accurate name for this case is simply Prepositional (Stewart 2004: 28).
2. One can compare the non-transparent (and non-constituent) combinations of preposition plus article in French (where, e.g., *du* occurs where *de le* would be expected) and German (where, e.g., *vom* occurs where *von dem* would be expected). See Hinrichs (1984) on the synchronic non-analyzability of the German situation.
3. Although PEDAGOGICAL appeal or efficacy is a potential benefit, such an application is not in itself a reason to decide among analyses from a GRAMMATICAL standpoint.
4. Were these shared phonological elements distributed less sporadically and more categorically over the set of prepositional pronouns, a case could be made for a classical morphemic analysis in those cases. In the synchronic grammar of modern SG, however, the evidence

for a 3rd person –*p*– morpheme is isolated and the case for segmenting it as an affix less than compelling.

5. Indeed, some of the pronominal marks are more like subject suffixes than the corresponding object suffixes, suggesting a possible more abstract unity of the highest-ranking pronominal arguments required by the verbal/prepositional predicate. Our appreciation to a member of the audience at the International Conference on Historical Linguistics (2005, University of Wisconsin-Madison) for raising this. Thanks also to Greg Stump (p.c.) for noting a parallel formal kinship in Breton pronominal arguments, specifically with subject and prepositional object marking. Since verbs in modern SG contrast subject person and/or number inflectionally in only the conditional and imperative systems (and not in all dialects), the connection is not a synchronic feature of the modern SG language.

6. Stewart (1886: 118–19) and Calder (1923: 175) each present tables comparable to our Table 5, but in fact organized alphabetically by preposition down the vertical axis, and not with reference to case frequency, etc., as a deliberately pronominal paradigm analysis would be. Stewart (1886: 117) introduces his table as follows: 'The following are the Prepositions which admit of this kind of combination, incorporated with the several Personal Pronouns', whereas Calder (175) captions his table as 'The Personal Pronouns combined with Prepositions'. Their presentations thus remain preposition-based, and the arrangement in these grammars would seem to be motivated solely by page layout concerns.

7. Cf., e.g., Hungarian (18 cases in Kiefer (2000: 580)) and Basque for other examples of similarly prodigious case systems. See also Comrie & Polinsky (1998) for an analysis of 'record-setting' case systems in Caucasian languages, as well as arguments on how best to count cases.

8. Iggesen (2005) argues at length against assuming that, for any given language, the class of nominals showing the most differentiated set of case distinctions is definitive for the language as a whole, with case syncretism invoked to describe less-differentiated nominal classes. In languages where only a small minority of nominals show case distinctions that other nominals do not, Iggesen proposes the notion of *case assymetry*, tied to classes of *NP-types*, which are 'nominal lexemes [. . .] that constitute natural classes set up on the basis of shared semantic or functional (but not purely morphological, phonological, or lexico-syntactic) properties' (23). Although 'personal pronoun' is a useful and frequent NP-type in Iggesen's analysis of a broad typological sample of languages (260 in all), his comments on the two Celtic languages in his sample are as follows: Irish pronominals arguably lack a pronominal Genitive, whereas Irish nominals in general do have such a form (422–3); and Welsh nominals are claimed to show 'no nominal case' (and thus, exemplify (vacuous) case-symmetry in his terms; 623). The present analysis of SG would seem all the more significant in light of Iggesen's findings. While many languages show asymmetry, the degree of the asymmetry is generally much smaller, and not on the order of the (±10) proposed for SG here.

9. For information on EUROTYP, consult http://wwwlot.let.uu.nl/Research/ltrc/eurotyp/index.htm

10. See Sadler & Spencer (2001), Ackerman & Stump (2004), Stewart & Stump (2007), and Beard (1995).

11. Tocharian as described by Krause & Thomas (1960: 83–90) may provide yet another example. A set of so-called 'Primary' cases—Nominative / Vocative / Oblique / Genitive—were augmented with a set of 'Secondary' cases, involving forms apparently built on the Oblique via univerbation with certain postpositions.

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