Contact and the diversity of noun-noun subordination strategies among Western Iranic languages

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Abstract

Western Iranic languages display three distinct grammatical strategies for subordinating nouns to other nouns in possessive- and descriptive-type constructions (henceforth NN-subordination). While most W Iranic languages employ only one of the three NN-subordination strategies some employ multiple strategies, either to differentiate more nuanced syntactic structures, or as a function of variation in dialect or register. Furthermore, the distribution of NN-subordination strategies does not correspond to the traditional branching of languages within the W Iranic subgroup, strongly suggesting that innovation resulting from language contact --- and not inheritance from a common ancestor --- has played a role in the spread of one or more of these structures across W Iranic languages belonging to different branches.

In this study, I propose that shifts in the distribution and relative prestige of a number of W Iranic varieties across parts of the W Iranic-speaking world led to the spread of certain NN-subordination strategies. As a result, the geographical distribution of W Iranic languages today suggests three epicenters of linguistic innovation corresponding to 'strong' varieties of the three NN-subordination strategies, as well as three peripheral zones in which 'weak' varieties of each strategy suggest the confluence of one 'strong' variety with autochthonous methods of NN-subordination, or --- in some cases --- an alternative 'strong' variety. In many cases, while there is an undeniable connection between the origin and function of structures between two languages, there is an incongruity between the forms employed in a structure in one language and the analogous forms in the language from which it is supposed to have acquired that structure. This suggests that the form in one language was not borrowed wholesale but calqued from the other.

Windfuhr (1989, pg. 2) is aware of the inability of theories relying solely on traditional models of divergence to adequately explain the distribution of certain features in W Iranic, remarking on the necessity of incorporating contact phenomena --- including, explicitly, reinforcement --- into any explanation of the development of W Iranic. The present study contributes to the comparatively small but ever-expanding body of literature which considers contact between W Iranic varieties as a factor contributing to structural change within these varieties.

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1 Traditional genetic division of W Iranic

Generally speaking, the genetic division of W Iranic languages has been determined on the basis of shared phonological innovation, with some consideration of lexical and morphological similarities as well. It is not the primary purpose of this article to contest the prevailing model of genetic divisions within W Iranic; as such, I will present only those divisions which have wide acceptance among the linguistic community, and whose reality is strongly suggested by the shared retention not simply of single archaic units but of large archaic morphological paradigms (e.g., nominal gender distinctions). In the interest of space, I will also only show the contemporary languages for which data on NN-subordination strategies was available. Note also that I make distinctions between dialects of languages only when dialects differ significantly in terms of their NN-subordination strategies, e.g. Baloo[1] is listed as one language despite considerable differences between dialects because all Balo dialects employ the same NN-subordination strategy. Where varieties differ in their choice of NN-subordination strategy but the exact genetic relationship between which remains difficult to discern, I have listed them beneath a larger group label, indicated by majuscule lettering in parentheses, e.g. (CENT).

2 NN-subordination in W Iranic

In most of the examples of NN-subordination examined in this study, modifier nouns (MOD) can serve to as both possessors or descriptors of the head noun (HEAD). Where deviations from this generalization are relevant to the discussion of the genealogies of these subordination strategies, they will be discussed. The specific type of NN-subordination examined in this study is exemplified by the NPer *ezāfe* (EZ). (1) below gives an example of the NPer EZ:[2]

(1)   **NPer:** [pɛsær   -   ɛ   moʔælːɛm   ]
                 son   -   **EZ**   teacher

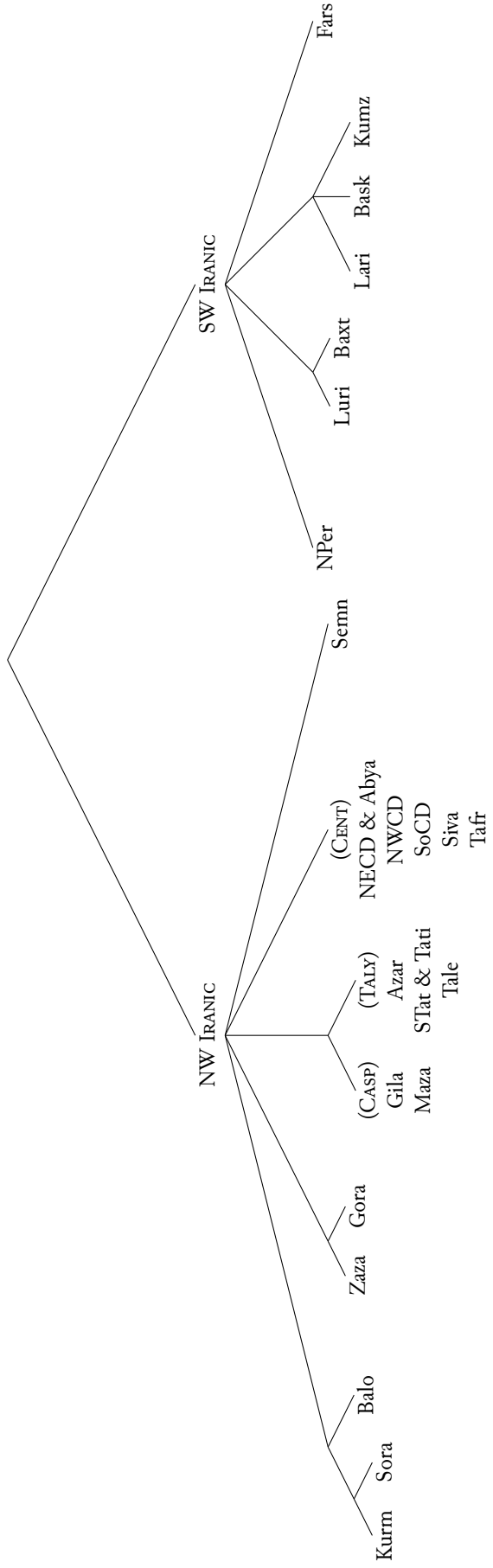   *the teacher's son* or *the son who is a teacher*

Note that the possessive and descriptive readings do not differ in structure, and it is only context which suggests a possessive or descriptive reading:

(2)   **NPer:** [mærjæm   do   ta   pɛsær   daræd   ]
                 Mary   two   MW   son   has

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[1]See appendix C for a guide to the four-letter language codes used throughout this article.

[2]Examples in modern languages will be given in IPA and enclosed in square brackets. Examples from historical languages will be given in the standard Latin transcription system for those languages.

Figure 1: Genetic division of W Iranic

W Iranic

NW Iranic

SW Iranic

Kurm Sora Balo Zaza Gora

(Casp)
Gila
Maza

(Taly)
Azar
STat & Tati
Tale

(Cent)
NECD & Abya
NWCD
SoCD
Siva
Tafr

Semn NPer

Luri Baxt Lari Bask Kumz

Fars

[	pɛsær	-	ɛ	moʔæl:ɛm	bozorgtær	æst	]
	son	-	**EZ**	teacher	bigger	is	

Mary has two sons. The son who is a teacher is bigger (older).

(3) **NPer:**

[	dær	χanɛ	bɛsjar	pɛsær	æst	]
	in	room	many	son	is	

[	pɛsær	-	ɛ	moʔæl:ɛm	bozorgtærin	æst	]
	son	-	**EZ**	teacher	bigger	is	

There are many sons (boys) in the room. The teacher's son is biggest (oldest).

In place of the EZ construction a number of W Iranic languages attach a suffix/particle which resembles the EZ in terms of some of its functions to the HEAD, plus some sort of oblique case marking (OBL) to the MOD, as in example (4) below from Kurm. Often the EZ-like element in these languages maintains some additional qualities of a relative pronoun which the NPer EZ has lost (see example (5));[3] therefore EZ-like elements in these constructions will be referred to as REL.

(4) **Kurm:**

[	gog	-	**a**	kætʃ	-	e	]
	ball	-	**REL**	girl	-	OBL	]

the girl's ball

(5) **Kurm:**

[	hæval	-	**e**	mɪn	**je**	kʉ	bɪʒiʃk	ɛ	]
	friend	-	**REL**	me	**REL**	that	doctor	is	]

my friend who is a doctor

In many languages which employ an EZ- or REL+OBL-type NN-subordination construction, the same marking appears on the head noun in adjectival descriptive constructions. Marking on HEAD nouns in adjectival phrases is outside the scope of this investigation, however where this feature is relevant to the comparison of NN-subordination constructions in two or more languages it may be mentioned briefly.

A third type of NN-subordination construction employed by some W Iranic languages involves the use of a special genitive case marking (GEN) on the MOD, and no special marking on the HEAD. Example (6) below illustrates a GEN-type construction in Balo.

(6) **Balo:**

[	sərdar	-	**əj**	dʒaməg	]
	chief	-	**GEN**	shirt	

the chief's shirt

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[3]See section 3.1 for a description of the origin of the NPer EZ in the OPer relative pronouns.

Whether the GEN construction in the W Iranic languages that have it can be used descriptively (as it can in some other Indo-European languages) is uncertain; in some varieties of Balo at least an attributive suffix -[i(ɣ)] has begun to meld with the GEN due to a similarity in surface form (Korn, 2008). A collapsing of the morphosyntax for possessive and descriptive constructions may be reinforced in these dialects by contact with NPer, in which the EZ performs both these functions.

3 Strategies by language

3.1 The OPer-MPer-NPer continuum

Pers presents a unique boon to those interested in the genealogy of NN-subordination constructions in W Iranic, as it is the only branch in which the evolution from one construction (GEN-type) to another (EZ-type) can be observed by means of primary source documentation (Haider and Zwanziger, 1981).[5]

Table 1: NN-subordination in Pers

Language	HEAD	MOD	First
OPer		GEN: *-hya/*-hyā, *-š, *-yā/*-vā, *-nām	MOD
MPer	REL: *-ī/*-i	OBL: *-ar, -∅, *-ān	HEAD
NPer	EZ: -[(j)ɛ]		HEAD

As shown in table 1, OPers employed a set of GEN suffixes derived largely from the Indo-European GEN case paradigm. MPer --- whose case system has been reduced to a NOM/OBL distinction --- displays vestiges of a transition from a GEN-type system to a REL+OBL-type system, employing OBL on the handful of HEAD nouns which retain overt case marking, as well as a REL suffix/particle *-i/-ī (< OPer indefinite relative pronoun *haya), the use of which increases with the full erosion of the case system culminating in the effectively caseless NPer. There is a considerable gap between bulk of extant OPer inscriptions and the bulk of extant MPer texts, so we are not privy to the details of this stage of the transition; however, the limited tendency to use the relative pronoun *haya in OPer descriptive NN-subordination

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[4]Where not explicitly cited, forms listed here are obtained from **?**.

[5]In the charts detailing the forms of elements involved in the formation of NN-subordination strategies which follow, elements which are optional appear in gray. A choice between elements is divided by a bar (|), whereas allomorphs of the same element are divided by a comma (,). Dialectal/register variants are divided by a forward-slash (/).

constructions --- that is, without the accompanying copula which would would expect in a true relative clause --- already begins to appear in the Behistun Inscription of the late 6th early 5th BCE:

(7) **OPer:** gaumāta **haya** maguš
Gaumāta REL Magus

Gaumāta who (is) Magus or *Gaumāta the Magus*

This usage parallels precisely the usage of the REL *ša in Akkadian, the Semitic language of the Akkadian Empire which was destroyed by the Persian Empire and whose language and administrative capacities the early Persian Empire had exploited. Until this time, I have found no explicit mention in the literature linking contact with Akka as the catalyst for the transformation of OPer *haya into EZ-like suffix/particle.[6] Why the connection seems to have escaped scholars so far is beyond my ken, as the resemblance is striking. The ongoing influence of Akka *ša also explains the shift in order of constituents (from MOD-first as in OPer to HEAD-first as in Akka), in addition to explaining why the reflexes of OPer *haya in MPer (*-i/-ī) begin to be used in possessive constructions with OBL marking on the MOD; Akka possessive constructions overwhelmingly use the REL *ša in between HEAD nouns and MOD with GEN case marking:[7]

(8) **Akka:** šarr - um **ša** māt - im
king - NOM **REL** land - GEN

king (who is) of the land

After the erosion of case marking, the OBL on the MOD of MPer possessive NN-subordination constructions disappeared. The old MPer REL *-i/-ī became more and more associated with NN-subordination, and its reflex in NPer -[(j)ɛ] has lost almost all remnants of its original REL functionality. The NPer element [kɛ] assumed the REL functions previously performed by MPer *-i/-ī, possibly under the influence of Part in which the analogous *kē performed both REL and EZ-like functions.

3.2 SW Iranic languages (excl. Pers)

The remaining SW Iranic languages all employ EZ-like elements in NN-subordination constructions.

Of the six SW Iranic language for which data were available three (Bask, Baxt, and Fars) exhibit EZ with forms exactly like those in NPer, and two others (Kumz

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[6]I am indebted to Jonathan North Washington --- a colleague of mine at Indiana University Bloomington --- for pointing out to me that Akka even had such a structure.

[7]Example taken from Deutscher (2000, pg. 31).

Table 2: NN-subordination in SW Iranic (excl. Pers)

Language	HEAD	MOD	First
Bask	EZ: -[(j)ɛ]		HEAD
Baxt	EZ: -[(j)ɛ]		HEAD
Fars	EZ: -[(j)ɛ]		HEAD
Kumz	EZ: -[(j)ɛ]/-[(j)æ]/-[i]		HEAD
Lari	EZ: -[(j)ɛ], -[nɛ]		HEAD
Luri	EZ: -[i]/-[(j)ɛ]		HEAD

and Luri) exhibit forsm which might be explained as mere phonological truncations or allomorphs of an underlying form resembling the NPer EZ. Only the Lari variant [nɛ] --- which appears after nouns ending in -[ɛ] --- is somewhat anomalous. The possible origins of this form will be discussed in section 4 below.

3.3 NW Iranic languages

By far the greatest variety in the types and forms of NN-subordination constructions appears in the NW Iranic sub-branch. Clearest in the NW Iranic sub-branch is also the fact that NN-subordination strategies transcend well-established genetic divisions, thereby attesting to the contact-induced nature of their development.

The Kurd group and the Zaza-Gora group are both divided in terms of their choice of NN-subordination strategy. Kurm and Zaza exhibit OBL case marking on MOD and REL-like marking on the HEAD. As explained in section 2 above, these REL markings are not true relative pronouns, but differ crucially from simple EZ-type morphemes in ways which preserve aspects of their ancestral pronominal forms (of which the most convincing are morphemic independence, gender and number agreement, and obligatory use in relative clauses). Sora and Gora also mark the MOD as OBL, but use a considerably atrophied reflex of the Old Iranic relative pronoun on the HEAD that more closely resembles the NPer EZ in function, if not in form. (The reason for the resemblance to Pers in one function and not in form will be discussed in section 4 below.) Some varieties of Tati also have a set of particles which parallel Kurm and Zaza REL in function, though their origin in a reflex of the Old Iranic relative pronouns is uncertain given their form.

Among the Casp languages (Gila, Maza) there is a special GEN marking for the MOD, and no marking on the HEAD. Balo also exhibits a clear example of the GEN-type NN-subordination construction. Semn and Tale by contrast do not have a special GEN case, but mark the MOD in a NN-subordination construction with the OBL, while the HEAD --- as in a true GEN-type construction --- receives no marking. The forms of the GEN case markers in the Casp languages resemble one another, as do the forms of the OBL case markings in Azar, Semn and Tale. These

Table 3: NN-subordination in NW Iranic

Language	HEAD	MOD	First
Abya	EZ: -[a], -∅		HEAD
Azar		OBL: -[i]/-[ɛ]/-[a], -[o(n)]/-[un]	MOD
Balo		GEN: -[əj]	MOD
Baxt	EZ: -[(j)ɛ]		HEAD
Gila		GEN: -[ə]/-[i]	MOD
Gora	EZ: -[u], -[w]	OBL: -[i], -[j], -[ɛ], -[a]	HEAD
Kurm	REL: -[(j)e], -[i], -[(j)a], -[æ], -[(j)en]	OBL: -[(j)i], -∅, -[(j)e], -[(j)an]	HEAD
Maza		GEN: -[e]/-[i]	MOD
NECD	OBL?: -[ɛ]	OBL?: -[ɛ]	HEAD
NWCD	EZ: -[(j)ɛ]		HEAD
Semn		OBL: -[i]/-[j], -[un]/-[in]	MOD
Siva	EZ: -[i], -[j], -[a]		HEAD
SoCD	EZ: -[(j)ɛ]		HEAD
Sora	EZ: -[ɪ]	OBL: -[a]	HEAD
STat	EZ: -[(j)ɛ]/-[i]	POST: -[(r)a]	MOD
Tafr	3S: -[(ɛ)s]/-[(ɛ)ʃ]	OBL: -[i]/-[ɛ]	MOD/HEAD
Tale		OBL: -[i]/-[ɛ], -[an]/-[un]/-[on]	MOD
Tati	EZ: -[j]	REL: [an]/[en]	OBL:-[(j)ɛ]	HEAD
Zaza	REL: -[e], -[j], -[(j)a], -[de], -[da]	OBL: -[i], -∅, -[e], -[ɪ], -∅	HEAD

latter three in turn resemble the ancestral OBL markings which appear in numerous other W Iranic languages (most notably Kurd and MPer), especially where the nasal-final plural variants are concerned. This strongly suggests that, while the function of these OBL case markings in GEN-type constructions is borrowed, the forms of these markings are inherited.

Among the Cent NW Iranic varieties, Abya and Siva have obligatory EZ-type marking on the HEAD, with no marking on the MOD. They have a form -[a] in common, but it appears on considerably fewer words in Abya, and its appearance seems to be conditioned by some remnant of ancestral gender (LeCoq, 1989). Whether the form -[ɪ] and its allomorph -[j] in Siva are native or corruptions of MPer *-i or NPer -[(j)ɛ] is undetermined. Two of the remaining Cent varieties (NWCD and SoCD) optionally mark neither the HEAD nor the MOD in an NN-subordination construction. In these these varieties there is an alternative construction employing a form which looks and behaves exactly like that in NPer -[(j)ɛ] (NWCD and SoCD). NECD peculiarly marks either the HEAD or the MOD with a suffix -[ɛ], which may be an OBL marker and may be a borrowing of the NPer EZ (LeCoq, 1989). Even this is not obligatory, however; it too can mark neither HEAD nor MOD.

STat and Tafr both exhibit patterns which have been considerably altered by prolonged contact with local varieties of Turkic **??**. STat calques the Turkic GEN with a native postposition [ra], whereas Tafr chooses instead OBL case marking on the MOD. Tafr aslo goes so far as to attach native 3S marking to the HEAD as in Turkic. Still, in both of these languages the Turkic-derived options are just that: optional. Where [ra] is not used in STat, marking with an EZ-type suffix on the HEAD is obligatory; similarly, Tafr must use the OBL case on the MOD even which it does not use the 3S marker on the HEAD, meaning that these two NN-subordination constructions fit more-or-less well into the 'weak' REL+OBL- and 'weak' GEN-types, respectively.

4   Accounting for variation

Taking stock of the various NN-subordinations strategies employed by the W Iranic languages detailed in section 3, we are left with a picture that shows each language falling into either 'stong' or 'weak' versions of the types outlines in section 2, with a few languages seeming to exhibit multiple 'weak' constructions. Plotting each of these languages on a map (see figure 2), we can draw isogloss boundaries which divide up the W Iranic-speaking world into three geographically integral zones in which each language displays a 'strong' version of the same NN-subordination construction, and three corresponding peripheral zones in which languages display 'weak' versions of those same constructions. Where these overlap, languages exhibit a mixture of two opposing 'weak' systems. The one exception is Balo, which employs a 'strong'

Table 4: NN strategy types

Language	MOD	HEAD	both	∅
Abya		✓		
Azar	✓			
Balo	✓			
Bask		✓		
Fars		✓		
Gila	✓			
Gora			✓	
Kumz		✓		
Kurm			✓	
Lari		✓		
Luri		✓		
Maza	✓			
MPer			✓	
NECD	(✓)	(✓)		✓
NPer		✓		
NWCD		(✓)		✓
OPer	✓			
Semn	✓			
Siva		✓		
SoCD		(✓)		
STat		✓	(✓)	
Tafr	✓			
Tale	✓			
Tati	✓	(✓)	(✓)	
Zaza			✓	

GEN-type construction despite its relative distance from the other languages which have a GEN.

The task is now to explain the origins of each of these constructions, and their distribution according to the central and peripheral zones observed in the map in figure 2. It is safe to assume that the GEN-type construction is the ancestral one, since it is the type exhibited by the oldest attested W Iranic language (OPer), not to mention the system employed by the ancestral Indo-European from which Iranic languages are descended. If that is the case, he 'strong' GEN-type of language seems to be the result of an incomplete erosion of the ancestral Iranic case system --- a phenomenon which might have taken place under the influence of any number

Figure 2: Map of NN-subordination strategies in W Iranic
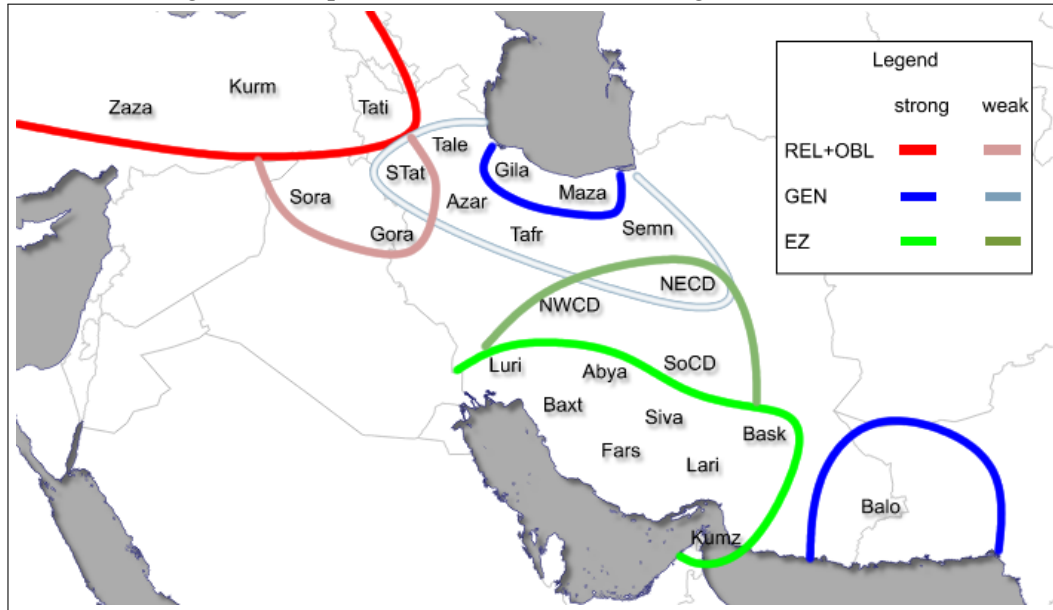
of languages.[8] The 'weak' GEN-type languages are simple languages whose case systems had been eroded to a two-way NOM/OBL distinction, but in which the use of the OBL as a GEN case was bolstered by contact with the 'strong' GEN-type Casp group. This should come as no surprise; the Kingdom of Tabaristan --- which encompassed Golestan, Mazandaran, and Semnan --- ruled from the 6$^{\text{th}}$ to the 16$^{\text{th}}$ c. CE, and was at times a center of pre-modern Maza literary production. There can be no doubt that there was at least some prestige influence exerted by Casp language varieties during this period.

Let us therefore turn to the REL+OBL- and EZ-type constructions, the genealogies of which have been elucidated by textual evidence as detailed in section 3.1. We have already established that the primary catalyst for the use of what was once a relative pronoun in NN-subordination constructions in OPer was analogy with the Akka REL *-ša, and that the REL+OBL system in MPer is the result of the erosion of the OPer case system, combined with the increasing necessity of the REL *-i/ī to

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[8]The assertion that all W Iranic languages leveled to a two-case (NOM/OBL) during the Middle Ages, and that subsequently the GEN cases is in the languages that have them are a secondary development (IV 2010, pg. 242, among many other) seems to be based more on the undue privilege accorded to MPer and Part than it does to any actual data from the languages which have GEN cases. Given that the GEN case marker in all these languages is reminiscent in form to the OPers *-hyā, there seems to be no reason to discount the possibility that the case system eroded unevenly in different parts of the W Iranic-speaking world, and that the GEN in the Casp and Balo languages are indeed retentions of an historic GEN case.

compensate for the loss of the GEN case. One might be tempted to think that a similar process affected the development of the REL+OBL systems in Kurm and Zaza as well. While this may very well be the case, there is less evidence for contact between Akka and the ancestors of Kurm and Zaza. Indeed, the exact identity of the genetic precursors to these languages remains unknown. There is a considerable amount of scholarly literature connecting Proto-Kurd of some form with the Median Empire.[9] Though this connection is by no means without difficulty, if we presume that the Proto-Kurds were at least part of the Median Empire, then the fact that widespread bilingualism in Akka among the Medians cannot be attested, unlike in the case of OPer makes direct influence from Akka unlikely. In any case, even if there were some direct influence from Akka, it is safe to say that the development of the REL+OBL system Kurm and Zaza is a more direct result of prolonged cohabitation with speakers of OPer and MPer, both of which were high-prestige languages in Eastern Anatolia at various times until the development of NPer. Under such a scenario, the areas which exhibit a 'strong' REL+OBL-type system would have developed their NN-subordination strategy using native relative pronominal material and based on analogy with OPer and MPer. Examining the disparity between the forms for the OPer and MPer relative pronouns and REL particle on one hand, and the REL particles of Kurm and Zaza on the other suggests that this is precisely what occurred. The 'weak' REL+OBL systems can be explained as the result of increasing simplification on the basis of analogy with Persian; Sora and Gora, instead of maintaining the relative qualities of the ancestors to their EZ morphemes relied increasingly on the use of [ko] in relative clauses, and relegated the old REL particles/suffixes to their position as markers of NN-subordination, paralleling Persian. While Sorani-speaking areas lay at the border between the Safavid and Ottoman Empires, belonging sometimes to the sphere of NPer linguistic dominance and sometimes not, Gora-speaking territories were firmly planted in the Safavid NPer stronghold. What influence Sora did not experience directly as a result of contact with NPer, it may have experienced as a result of contact with Gora, which exerted considerable prestige influence on Sora at the local level throughout the era of Ottoman-Safavid conflict (Leezenberg, 1992).

If the development of the EZ-type NN-subordination construction in NPer is the result of overcompensation for the loss of nominal case marking on the MOD as suggested above, then it is probably likewise responsible for the development of similar 'strong' EZ-type constructions in other languages. One might be tempted to suggest that continuing influence of NPer plays a factor, but this is not strictly necessary; it is not clear when the differentiation of SW-Iranic languages occurred, and so the influences relevant to the development of the NPer EZ may have been exerted on these languages before they were fully differentiated. Even the deviant forms of the EZ which appear in Kumz, Lari, and Luri can be easily explained with reference

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[9]For an amalgamation and discussion of this body of literature, see Limbert (1968).

to late OPer forms based on the relative pronoun *haya. The optionality of the EZ in languages which employ 'weak' EZ-type constructions can easily be explained by the recent influence of NPer. The languages of the Cent group have overwhelmingly done away their case system, such that neither HEAD nor MOD in NN-subordination constructions can receive special markings. With the exception of Siva and Abya --- which seems to have acquired their EZ morphemes from some non-NPer SW Iranic language, possibly at a much earlier date --- optional EZ marking in all the Cent varieties is exactly like that of NPer, strongly suggesting that speakers compensated for the lack of overt marking for HEAD and MOD in NN-subordination constructions by the wholesale adoption of the NPer EZ. Indeed, there is some documenting such a change; Bailey's 1936 grammar, which LeCoq (1989) cites in his description of the SoCD dialect of Yazd, suggests that there is no marking on either HEAD or MOD in possessive constructions, where as fieldwork conducted by Farudi and Toosarvandani in 2004 shows use of the NPers EZ throughout.

One question which remains is why two areas --- the Caspian and Balochistan --- should escape the full erosion of the ancestral case system and subsequent strengthening of REL+OBL- or EZ-like tendencies which have befallen all other W Iranic languages. The Casp languages' maintenance of relative political autonomy since the collapse of the Sassanid Empire may be indicative of relative isolation and a high degree of ethnonationalism, both of which could contribute to the maintenance of features alien to encroaching languages. Balo shows no sign of ever having had a REL+OBL- or EZ-type construction.[10] This is exactly what one should expect if Balo moved to its current location, outside the sphere of influence of the Achaemenid Emprie in which the contact between OPers and Akka which encouraged these processed occurred. The erosion to a three-way case system there remains to be explained, though strong evidence of an E Iranic substrate in Balochi (Elfenbein, 1989) suggests that an E Iranic language with a three-way NOM-GEN-OBL case system may be involved. Coincidentally, this also places the arrival of the Baloch to their current location at a very early date, since whatever E Iranic language contributed substrate influence to Balo is no longer present there.[11]

Combining the explanations provided throughout this section into a more-or-less chronological list of extra-linguistic events and corresponding linguistic changes yields a chart as in table 5 below. Some of the events not directly pertaining to the introduction or spread of relevant features have been included as possible catalysts for certain as-of-yet insufficiently explained linguistic processes. More research will be required to confirm the actual origin of these changes.

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[10] al Rahman Barker and Mengal (1969) points out that the EZ only occurs in place names and titles, where it is clearly a loan from NPer, and Jahani (2008) demonstrates convincingly that the unit in some Balo dialects which mimics the archaic usage of the NPer in certain instances of relative clauses is a very recent borrowing from conservative dialects of NPer.

[11] Several of the purported E Iranic features in Balo exclude Pashto as a possible contributer.

Table 5: Chronology of relevant environmental factors

Time Period	Event	Result
8th--6th c. BCE	Expansion of the Median Empire	Speakers of Pre-Kurd & Pre-Zaza-Gora move W, speakers of Pre-Balo move E
6th--4th c. BCE	Expansion of the Achaemenid Empire into Akka-speaking territories	Increased use of OPer REL in NN constructions by analogy with Akka
5th--4th c. BCE	Expansion of the Achamaenid Empire into Pre-Kurd, Pre-Zaza-Gora, & Part-speaking territories	Increased use of Kurdish, Zaza-Gora, & Part relative pronouns in NN constructions by analogy with OPer
4th--1st c. BCE	Makedonian & Seleucid Periods	Increased bilingualism across the W Iranic-speaking world leads to gradual erosion of case system to NOM-OBL in most areas, NOM-OBL-GEN Caspian and (possibly) Balochistan; Abya & Siva split from the rest of SW Iranic (MPer)
3rd c. BCE--3rd c. CE	Expansion of Parthian Empire into N Persia	Reinforcement of MPer, Abya, & Siva tendency to use *kē* for relative clauses, old REL gradually relegated to ezafe-like functions
3rd c.--7th c. CE	Expansion of Sassanid Empire	Great simplification of REL system in Gora & Sora under the influence of MPer
9th c.--11th c. CE	Temporary collapse of Iranic linguistic supremacy under numerous Arab rulers	Greater linguistic regionalism; differentiation of MPer into NPer, Luri, Baxt, Fars begins, along with near disappearance of REL function of ezafe
6th--16th c. CE	Gradual expansion of Tabaristan	Preference for OBL marking on MOD expands from Gila & Maza to Tale, Azar, Semn, Tafr, STat
10th c. CE onward	Ghaznavid reconquest & succession of NPer-speaking rulers	Very gradual spread of ezafe into NWCD, NECD, SoCD, Yazd

5   Conclusion

There are three types of NN-subordination constructions --- REL+OBL, EZ, and GEN --- employed by W Iranic languages, along with a fourth option of marking neither constituent. The REL+OBL construction is the results of a two-way erosion of the Old Iranic case system, coupled with direct influence by analogy with Akka REL *ša, or indirect influence through contact with NPer which inherited and strengthened this feature from OPers. The EZ construction is a result of full erosion of the case system, and the replacement of the old relative use of the NPer REL *-i/ī by analogues of NPer [kɛ] (likely reinforced by Part). Dialects of the Cent group of NW Iranic languages seem to have acquired their EZ morphemes gradually from SW Iranic languages, and some still have the option of marking neither the HEAD nor the MOD of an NN-subordination construction. The GEN constructions in the Casp and Balochi languages are the result of relative isolation, in terms of social and physical space, respectively.

   Throughout this study, we have seen demonstrated numerous times the principle whereby two linguistic structures with shared function but no shared form are almost certainly the result of language contact. In one case --- i.e., the development of the REL use of OPer *haya by analogy with Akka *ša --- the speech community of the recipient language exhibited heavy bilingualism in the donor language. However, in the majority of these cases the factor motivating borrowing was largely prestige, and features which are clearly the result of contact seem to have been transferred without the need for extensive bilingualism. This seems to suggest that, among closely related languages, there need not be widespread bilingualism as long as there is a population which is competent enough in the donor language to make analogies which then spread to other segments of the population.

References

Muhammad Abd al Rahman Barker and Aqil Khan Mengal. *A Course in Balochi*, volume 1. McGill, Quebec, 1969.

H. W. Bailey. Yazdi. *Bulletin of the School of Oriental Studies*, 8, 1936.

Guy Deutscher, editor. *Syntactic Change in Akkadian: The Evolution of Sentential Complementation*. New York, Oxford, 2000.

Josef Elfenbein. Balōčī. In Rüdiger Schmitt, editor, *Compendium Linguarum Iranicarum*, pages 350--364. Reichert, Wiesbaden, 1989.

Annahita Farudi and Maziar Doustar Toosarvandani. The Dari Language Project: 2004 Fieldwork Endeavour -- SUmmary of Findings. Unpublished. Obtained via personal correspondance., 2004.

Hubert Haider and Ronald Zwanziger. Relatively attributive: The 'ezāfe'-construction from Old Iranian to Modern Persian. In Jacek Fisiak, editor, *Historical Syntax*, pages 137--172. Mouton de Gruyter, Berlin, 1981.

Benjamin W. Fortson IV. *Indo-European Language and Culture: An Introduction*. Wiley-Blackwell, Sussex, 2010.

Carina Jahani. Restrictive Relative Clauses in Balochi and the Marking of the Antecedent -- Linguistic Influence from Persian? In Paul Titus Carina Jahani, Agnes Korn, editor, *The Balochi and Others: Linguistic, Historical and Socio-Political Perspectives on Pluralism in Balochistan*, pages 139--166. Reichert, Wiesbaden, 2008.

Agnes Korn. The Nominal Systems of Balochi: How Many Grammars? In Paul Titus Carina Jahani, Agnes Korn, editor, *The Balochi and Others: Linguistic, Historical and Socio-Political Perspectives on Pluralism in Balochistan*, pages 167--194. Reichert, Wiesbaden, 2008.

Pierre LeCoq. Les dialectes du centre de l'Iran. In Rüdiger Schmitt, editor, *Compendium Linguarum Iranicarum*, pages 313--326. Reichert, Wiesbaden, 1989.

Michiel Leezenberg. Gorani Influence on Central Kurdish: Substratum of Prestige Borrowing? Germany, 1992.

John Limbert. The Origins and Appearance of the Kurds in Pre-Islamic Iran. *Iranian Studies*, 1(2), Spring 1968.

Gernot Windfuhr. New West Iranian. In Rüdiger Schmitt, editor, *Compendium Linguarum Iranicarum*, pages 251--262. Reichert, Wiesbaden, 1989.

A Appendix of linguistic data

Language	HEAD	MOD	First
Abya	EZ: -[a], -∅		HEAD
Azar		OBL: -[i]/-[ɛ]/-[a], -[o(n)]/-[un]	MOD
Balo		GEN: -[əj]	MOD
Bask	EZ: -[(j)ɛ]		HEAD
Baxt	EZ: -[(j)ɛ]		HEAD
Fars	EZ: -[(j)ɛ]		HEAD
Gila		GEN: -[ə]/-[i]	MOD
Gora	EZ: -[u], -[w]	OBL: -[i], -[j], -[ɛ], -[a]	HEAD
Kumz	EZ: -[(j)ɛ]/-[(j)æ]/-[i]		HEAD
Kurm	EZ: -[(j)e], -[i], -[(j)a], -[æ], -[(j)en]	OBL: -[(j)i], -∅, -[(j)e], -[(j)an]	HEAD
Lari	EZ: -[(j)ɛ], ?-[nɛ]		HEAD
Luri	EZ: -[i]/-[(j)ɛ]		HEAD
Maza		GEN: -[e]/-[i]	MOD
MPer	REL: *-ī/*-i	OBL: *-ar, -∅, *-ān	HEAD
NECD	OBL?: -[ɛ]	OBL?: -[ɛ]	HEAD
NPer	EZ: -[(j)ɛ]		HEAD
NWCD	EZ: -[(j)ɛ]		HEAD
OPer		GEN: *-hya/*-hyā, *-š, *-yā/*-vā, *-nām	MOD
Semn		OBL: -[i]/-[j], -[un]/-[in]	MOD
Siva	EZ: -[i], -[j], -[a]		HEAD
SoCD	EZ: -[(j)ɛ]		HEAD
Sora	EZ: -[ɪ]	OBL: -[a]	HEAD
STat	EZ: -[(j)ɛ]/-[i]	POST: -[(r)a]	MOD
Tafr	3S: -[(ɛ)s]/-[(ɛ)ʃ]	OBL: -[i]/-[ɛ]	MOD/HEAD
Tale		OBL: -[i]/-[ɛ], -[an]/-[un]/-[on]	MOD
Tati	EZ: -[j] | ?: [an]/[en]	OBL:-[(j)ɛ]	HEAD
Zaza	EZ: -[e], -[j], -[(j)a], -[de], -[da]	OBL: -[i], -∅, -[e], -[ɪ], -∅	HEAD

B Appendix of abbreviations for linguistic terminology

Abbreviation	Meaning
3S	third-person singular
EZ	ezāfe
FEM	feminine
GEN	genitive case marking
HEAD	head noun, possessum (i.e., thing being possessed) in possessive constructions
MOD	modifier noun, possessor in possessive constructions
MW	measure word
NOM	nominative case marking
OBL	oblique case marking
PLUR	plural
REL	relative pronoun/particle
SING	singular

C Appendix of four-letter language codes

Code	Language(s)
Abya	Abyānei
Akka	the Semitic Akkadian language
Azar	the Iranic Āzari language
Balo	all varieties of Balochī
Bask	Baškardi
Baxt	Baxtiāri/Bakhtiāri
Casp	all varieties of Caspian (i.e. Gila, Maza, Tale)
Cent	all varieties of Central (i.e., Abya, NECD, NWCD, Siva, SoCD, Tafr)
Fars	dialects of the province of Fārs in Iran
Gila	Gilāki
Gora	Gorāni
Kumz	Kumzāri
Kurd	both varieties of Kurdish (i.e., Kurm, Sora)
Kurm	Kurmancî/Kurmanji
Lari	Lāri
Luri	Luri/Lori
Maza	Mazandarāni
MPer	Middle Persian
NECD	dialects of Northeastern Central Iran, excluding Abyānei
NPer	New Persian
NWCD	dialects of Northwestern Central Iran
OPer	Old Persian
Parth	Parthian
Pers	all varieties of Persian, historical and modern (i.e., OPer, MPer, NPer)
Semn	Semnāni
Siva	Sivandi
SoCD	dialects of Southern Central Iran
Sora	Soranî
STat	Southern dialect of Iranic Tāti
Tafr	Tafreshi
Tale	Tāleshi
Taly	all varieties of the Talyshi group (i.e., Azar, STat, Tale, Tati)
Tati	Iranic Tāti, excluding Southern Tāti
Zaza	Zâzâkî