Pronouns as Verbs, Verbs as Pronouns: Demonstratives and the Copula in Iranian

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The conversion of pronominals to copula forms is rather common cross-linguistically, and has also received a certain amount of attention in the literature, starting with LI & THOMPSON's article "A mechanism for the development of copula morphemes" (1977). The use of pronouns as copula forms has also been described for Eastern Iranian, but these data have not yet been compared to parallel patterns of other languages in the typological or general linguistic literature.[2]

So the first part of the article intends to link Iranian data investigated several decades ago with the research carried out more recently in linguistics on a great variety of languages other than Iranian. A presentation of the Eastern Ir. data will be followed by a comparison with parallel structures in other languages with view to the questions how such constructions emerge, and why languages recruit a new copula at all. The second part argues that some Western Ir. pronominal clitics might derive from copula forms or verbal endings. Here as well, the motivation of this process will be discussed.

1. Pronouns as copula

For the purposes of this paper, the term "copula" refers to a functional element that links a noun phrase with subject properties to another noun or adjective phrase (i.e. to "predicate nominals" and "predicate adjectives" in the categories of PAYNE 1997:111-128), but otherwise lacks lexical content. Sentences that contain such an element (e.g. *this is a question*, *her uncle is our teacher* ; *the sky is blue*) will be called "copula sentences". This definition excludes sentences expressing location (such as *the dog is in the house*; *there is a book on the table*) or belonging (*a book is with me* / *there is a book to me*, i.e. *I have a book*), i.e., Payne's "predicate locatives", "existentials" and "possessive clauses". The latter group of patterns will collectively be termed "existential sentences" here, and an overt verb used in them "existential verb". While many languages use the same verb as copula and existential verb, the distinction is relevant for several languages discussed below.

[2]   For instance, HAIG (2011:370-375) notes that the so-called "tense *ezāfe*" in Bahdini Kurdish "appears to be unique in Iranian" in crossing "from the D and N domain to the T domain" (p. 370). - The "tense *ezāfe*" shows similarities to pronominal copulas in that "it must have arisen through constructions where the initial NP was a left-dislocated topic, and the Tense Ezafe was an anaphoric/demonstrative referring back to that topic" (p. 373). However (as also noted by Haig), the structure differs from the Ir. constructions discussed here insofar as it only occurs in addition to a finite verb (copula or full verb) in the sentence. So it is, as Haig notes, rather similar to "stance particles" common in East Asian languages.

Copula sentences are common in Iranian languages, cf. the underlined elements in (1-2).

(1)   *azəm*   *ahmi*   *zaraϑuštra*   *haomō*   (...)
Avestan   I.NOM   be.PRES1SG   PN.VOC.SG   PN.NOM.SG
           "I am Haoma, o Zarathustra" (Y 9. 2)

(2)   *tɣw*   *ZY*   *ʾky*   *ʾyš*
Sogdian   you.SG.NOM   and   who   be.PRES2SG
           "and who are you" (cf. BENVENISTE 1946, l. 929)[3]

(3)   *ašəm*   *vohū*   *vahištəm*   *astī*
Avestan   truth.NOM/ACC   good.NOM/ACC   good.NOM/ACC   be.PRES3SG
           "Aša (Truth) is the best good" (Y 27. 14)

An alternative strategy is the use of a structure without a copula, juxtaposing two nominal phrases. This pattern, which will be called "nominal sentence" here, is also common in Old and most Middle Ir. languages (and in ancient Indo-European languages in general) specifically for the 3rd person indicative, but to some extent also elsewhere.[4]

(4)   *adam*   *dārayavauš*
Old   I.NOM   PN.NOM.SG
Persian   "I [am] Dareios" (DB 1.1, cf. KENT 1953:79)

(5)   *rty*   *cʾβ*   *ʾβsʾnx*   *ZK^H*   *zʾɣ^H*
Sogdian   and   how much   mile   ART.f   country
           "how many miles [is] this country [from here]" (cf. HESTON 1976:219)[5]

While these examples might suggest that the copula is optional, BENVENISTE 1950 argues that a nominal sentence in ancient IE languages did not "omit the copula", but originally had a different function: a nominal sentence marks the situation as being outside any time frame, "it always serves for statements of a general, even didactic character" ("elle sert toujours à des assertions de caractère général, voire sentencieux", BENVENISTE 1950:30), such as "X is a virtue; a monkey is fun for children", etc., while copula sentences appear in narratives and descriptions. So *omnis homo mortalis* ("every human [is] mortal") corresponds to *omnis homo moritur* ("every human dies [=is mortal]") while *omnis homo mortalis est* ("every human is mortal") is different, rather parallel to *... mortalis videtur* / *dicitur*, etc. ("... seems / is reported to be mortal", BENVENISTE 1950:26-28).

In addition to nominal sentences and to the use of a verb as copula, some Ir. languages show another pattern, viz. the use of a pronoun in copular function. These fall into two groups: pronouns which are used as copula forms and continue to be used as pronouns, and

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[3]   Sogdian uses various verbs in copular function (see BENVENISTE 1959:75, GERSHEVITCH 1954:116-118).

[4]   See REICHELT (1909:350f.) for Avestan, EMMERICK (2009:401) for Khotanese, HESTON (1976:215-223) for several Middle Iranian languages, and FORTSON § 8.15, BRUGMANN (1902:626f.) and MEILLET 1906 for Indo-European (see also Section 1.5 below).

[5]   I follow WENDTLAND 1998 in spelling Sogdian (in Sogdian script) word-final <h> with a capital to indicate that it does not stand for /h/ (in this sense <-h> is a heterogram); it is a graphic device to encode a word-final vowel, or to indicate feminine gender (as e.g. in *zʾɣ^H*). However, as some cases of <-h> do imply information about the pronunciation (differing from the "usual" Arameograms), I use a superscript H.

forms that have abandoned their pronominal function entirely.

1.1 Pronominals that also function as copula

In Sogdian, the demonstrative pronoun *(ˀ)xw* may be used as a 3rd person copula,[6] as in the two underlined instances in (6). This construction is found in copula sentences while a verb is used in existential sentences (WEBER (1970:21-24).[7]

(6)	*rty*	*ˀmyn*	*wˀtδˀry*	*ZK*	*ptkˀrˀK^H*	*xyδ*	*wˀrˀk*	*prγn^H*	*ˀxw*
Sogdian	and	ART.GEN	living.OBL	ART	appearance	same	empty	mark	<u>DEM</u>
	ˀPZY		*ZK*	*wˀrˀk*	*prγn^H*	*xyδ*	*wˀtδˀr*	*prγn^H*	*ˀxw*
	and		ART	empty	mark	same	living	mark	<u>DEM</u>

"(lit. ca.:) and this being's appearance is in fact the sign of emptiness,
and the sign of emptiness is in fact the being's sign" (cf. WEBER 1970:21)[8]

As formulated by WEBER (1970:24), the pronoun in such instances "occupy the place of the verb in the sentence" ("nehmen (…) die Stellung des Verbums im Satz ein"). This applies in a double sense: in the copular function of the pronoun and in the position of the verb, as verbs are often sentence-final in Sogdian (while other positions are also common).

A similar phenomenon occurs with the pronominal clitics: in Wakhi, nominal sentences occur with and without such clitics as in (7). BASHIR (2009:841) comments on this phenomenon: "the pronominal clitics sometimes perform the copular function".[9]

(7a)	*sāišt*		*kūi*
Wakhi	you.PL		who

"who [are] you (pl.)?"

(7b)	*tu*	<u>*=t*</u>	*kūi*
	you.SG	<u>PRO.2SG</u>	who

"who are you (sg.)?" (both MORGENSTIERNE 1938:497)

Just like Sogdian *(ˀ)xw*, the Wakhi pronominal clitics are also used in pronominal function.

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[6]   See BENVENISTE (1959:75, noting that this use of *(ˀ)xw* is also found in the 3pl., see Section 1.4). - Sogdian has a three-way deictical system; *(ˀ)xw* is the distal pronoun (see SIMS-WILLIAMS 1994:41, 48-50). WEBER (1970:21-24) also notes other Sogdian pronouns and pronominal derivatives in copula function, but these forms are not quite clear (Antje Wendtland, personal communication).

[7]   Cf. also the examples in HESTON (1976:219-223). For discussion of expressions of possession (with nominal clause, "be", and "have") in Iranian and Indo-European, see WEBER (1970:23f.), WATKINS 1967, EDEL'MAN 1975 and BAUER (2000:151-195).

[8]   The "sign of emptiness" appears to mean "vain imagining, false discrimination between real and unreal" (MACKENZIE 1976/II: 42).

[9]   Note that the clitics are largely identical to the forms of the copula except for the 3sg., which has *=it* (copula) vs. *=i* (clitic). The pronominal clitics in Wakhi prefer the position on the first constituent of the clause, but are also found elsewhere (BASHIR 2009:835; see ibid. p. 842 for further examples and Section 1.2 below for further details on Wakhi). Variations in the rendering of Wakhi are due to the differing orthography in the sources, and to some extent also to dialectal variation. - Another language with pronominal clitics in copula function is Kilba, a language of Nigeria (see SCHUH 1983).

1.2 Copula forms that derive from pronouns

Eastern Ir. languages also show copula forms which do not function as pronouns synchronically, but are likely to derive from pronouns. The most important ones for our purposes are listed in Table 1.

Table 1: Forms of the copula and existential verb deriving from a pronoun[10]

Wakhi and other Pamir languages: existential verb	PRES *tey*, PAST *tu*	< OIr. DEM **aita-*
Pashto: 3rd person	m. *dəy*, f. *da*, pl. *di* (cf. DEM *day, da, duy*)	< OIr. DEM **aita-*
Yaghnobi: 3sg.	3sg. =*x* (DEM *ax*)	< OIr. DEM **hau- / awa-*
Ossetic: 3sg.	Iron *u* (DEM *u-*), Digor *æi*, Digor *ie* (DEM *ie*) Iron *i*, Iron *is*, Digor *ies*	< OIr. DEM **awa-* < OIr. DEM **ayam / i-* < OIr. DEM **ayam / i-* < OIr. DEM **ayam / i-* < OIr. DEM **aiša-*
Ossetic 1sg., 2sg.	1sg. *dæn* 2sg. *dæ*	*d-* (< **aita-* or **ta-*) + °*æn* cf. subjunctive *-on* °*æ* < OIr. **ahi*

One language with historically pronominal forms for "to be" is again Wakhi: *tey* (present) / *tu* (past, including a perfect stem formed from the latter) are used as copula and existential verb.[11] MORGENSTIERNE (1938:544) considers *tey* / *tu* as members of a group of Eastern Ir. 3rd person copular forms which are probably demonstrative pronouns integrated into the copula paradigm. *tey* and *tu* co-occur with pronominal clitics functioning as agreement markers, cf. (8).[12] Since the pronominal clitics are used as subject markers for both transitive and intransitive verbs in past and perfect tenses (BASHIR 2009: 835), *tu* may be said to have adopted verbal morphology, and *tey* would have been adjusted to that pattern.

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[10]   For the etymologies given here, see BENVENISTE (1959:74-76) and WEBER (1983:86-87) in general, SIMS-WILLIAMS (1994:49) for Wakhi and Yaghnobi. (Yaghnobi *ax*, obl. *aw-i*, is the distal demonstrative while the proximal deixis is expressed by *iš*, obl. *it*, < **aiša- / aita-* as in Sogdian). For Pashto, see BENVENISTE (1959:75) and MORGENSTIERNE (2003:22, 100, 1927:100); the forms of the demonstrative are adapted from LORENZ (1979: 33). The Pashto 1sg. and 2sg. are from the OIr. copula 1sg. **ahmi*, 2sg. **ahi*. For Ossetic, see WEBER (1983:87, 90ff.) and THORDARSON (2009:5f., Iron *u-* might also be from **hau-*), somewhat differently BENVENISTE (1959:75f.). Copular *u* and *æi* are used in identificational function and *i, is, ies* as existential verb while it is not clear whether *ie* is indeed used as copula (David Erschler, p.c.). The derivation of 1sg. *-æn* from **ahmi* (BENVENISTE 1959:75) is rejected by WEBER (1983:89) on the grounds that a regular change of word-final *-m > -n* happens only in Digor. However, this does not seem a strong counterargument, as the *-m* could have been adjusted to the ending of the subjunctive. The Digor plural forms may go back to the OIr. copula (WEBER 1983:84f.) while the Iron pl. forms are based on a stem *st-* (probably from the verb "to stand", BIELMEIER 1977:162f.); the latter explanation appears more likely than the derivation of the 3pl. from (3sg.) **asti* advocated by WEBER (1983:85-87). The Ossetic proximal pronouns are based on the stem *a-* (THORDARSON 1989:472). Potentially also relevant is Yidgha/Munji *češ* "is not", which might be compared to OIr. *čit* "anything" (SKJÆRVØ 1989:373).

[11]   For further discussion, see Section 1.4.

[12]   The clitic is optional in the 3sg. (BASHIR 2009:835, 841f.). However, BASHIR's (2009:836) Table 19.9 has 3sg. *tey*(=*it*) with optional use of the copula rather than the pronominal clitic *-i* (cf. note 9).

(8a)   *sāk*   =*ən*   *tū*
Wakhi   we   PRO.1PL   exist.PT
          "we were"
(8b)   *čis*   *xabar*   *tēi*
          what   news   exist.PR
          "what is the matter?" (both MORGENSTIERNE 1938:497)

The Yaghnobi 3sg. =*x* and the 3rd person copula in Pashto are nearly identical to demonstratives in these languages. Ossetic has several forms for the 3sg. copula, and they are even different for the two dialect groups Iron and Digor. However, *u-* and *ie* are indeed also the forms of the distal demonstrative in the respective dialects.

The Ossetic 3sg. is not the only form with a pronominal history: the 1st and 2nd sg. are prefixed with an element *d-* which is likely to derive from a demonstrative, probably from the same OIr. pronoun **aita-* that the Pashto 3rd person copula and the Wakhi existential verb derive from. This would imply that an originally pronominal element was reanalysed as verbal stem.

1.3 Conversion of pronouns as an isogloss?

Considering that all copula forms of pronominal origin mentioned so far are from Eastern Ir. varieties, one wonders whether this feature might be an isogloss of the Eastern Ir. languages as a group. However, the languages employ different pronominal stems. Indeed, all three sets of pronominal stems found in Old Iranian, plus the pronominal clitics, are employed as copula forms in some Eastern Ir. language (Table 2).

Table 2: OIr. pronominals used as copula or existential verb sorted by their protoforms

OIr. **ayam* (/ *ima-*) "hic"	Ossetic *i, æi, ye*
OIr. **aiša-* / *aita-* "iste"	Ossetic *is, yes* Ossetic *d-* Pashto *dai* / *dā* / *dī* Wakhi *tey, tu*
OIr. **hau* (/ *awa-*) "ille"	Ossetic *u* Sogdian *(ˀ)xw* Yaghnobi =*x*
OIr. pronominal clitics	Wakhi PRO

Particularly interesting are the elements deriving from the OIr. pronoun **aita-*. They include the 3rd person in Pashto with its masculine, feminine and plural forms, the Ossetic element *d-* and the existential verb in Wakhi. On the other hand, the oldest attested item in the group is Sogd. *(ˀ)xw*, echoed by the closely related modern Yaghnobi and by Ossetic. In Wakhi, the development of pronouns to copula forms even seems to have happened twice: the existential verb *tey* / *tu* comes from a demonstrative via copula, and the copular use of the pronominal clitics could be a more recent means to express copula function.

BENVENISTE (1959:75) notes: "So here is a group of three dialects [= Ir. languages]: Ossetic, Sogdian, Pashto, where the demonstrative pronoun functions as copula, without the innovation being a common one; every dialect uses a different pronoun. The coincidence is in fact all the more significant." ("Voilà donc un groupe de trois dialectes, ossète, sogdien, pašto, où le pronom démonstratif fonctionne comme copule, sans que l'innovation soit commune ; chaque dialecte se sert d'un pronom différent. La rencontre n'en est que plus significative.")

So the phenomenon appears to be a case of parallel development of a certain structure by means of etymologically unrelated elements; it might be seen in the context of the observation that Eastern Iranian cannot be established as a genetic group (in the sense of being descended from a protolanguage intermediary between Proto-Iranian and the attested varieties), but seems to have evolved as a *Sprachbund*, in this case a group of related languages (SIMS-WILLIAMS 1996:651). So far as the development of parallel structures without shared origin of the phenomenon is concerned, the conversion of demonstratives to pronouns in Eastern Iranian is similar to the development of a periphrastic perfect with "have / be" in various IE languages or the grammaticalisation of different adpositions as markers of the definite direct object in numerous Iranian languages.[13]

1.4 Typological framework

While the presence of Iranian pronominals in the paradigm of the copula has been noted since long ago, it has not been linked to observations on other languages so far.[14] The languages which are best known for pronominal copulas include Chinese and varieties of Arabic and Modern Hebrew, among many others.[15] For Cairo Arabic, EID (1983:197) notes that one "may use pronouns to perform copula functions" in the present tense, as in (9b).[16] Alternatively, one can also use a nominal sentence without any addition as in (9a). Essentially the same patterns are also seen in modern Hebrew.[17]

	Cairo Arabic			Modern Hebrew		
(9a)	*il=mudarris*		*laṭīf*	*ha=klavim*		*ne'emanim*
	ART=teacher		nice.m.SG	ART=dog.PL		faithful.m.PL
(9b)	*il=mudarris*	*huwwa*	*laṭīf*	*ha=klavim*	*hem*	*ne'emanim*
	ART=teacher	DEM.m.SG	nice.m.SG	ART=dog.PL	DEM.m.PL	faithful.m.PL
	"the teacher is nice"			"the dogs are faithful"		
	(adapted from EID 1983:198, 204)			(cf. DORON 1986:315)		

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[13]   Cf. the articles by WENDTLAND and SIMS-WILLIAMS, respectively, in this volume.

[14]   BENVENISTE (1959:75) announced that he planned to do so, but apparently he did not.

[15]   See HEINE / KUTEVA (2002:108f.) for examples from other languages and references.

[16]   In what follows, statements about Arabic all refer to Cairo Arabic as presented by EID 1983, but other varieties of Arabic have similar constructions. The pronoun agrees with the subject in gender, number and person, see (11). For tenses other than the simple present (including a "habitual present"), Arabic has verbal copula forms. For the negations used for the various tenses, see note 18.

[17]   The optionality of the Hebrew pronoun depends on the types of nominal complements involved and on various factors of style, definiteness, etc.; there is no agreement in person, i.e. *hi* is used for f.sg. of the 1st, 2nd and 3rd person (cf. KATZ 1996:85-96). Hebrew also has another pronoun in copula function (m. *ze*, f. *zot*, pl. *ele*), for which see e.g. DIESSEL (1999:35).

There are several features demonstrating the verbal character of the demonstrative in such constructions. One of these is negation: in Cairo Arabic, the demonstrative is negated with the circumfix *ma=š* (10b, 11b), which is otherwise used with verbs while the negation *miš* is mostly used for nominals (10a, 11a). [18]

(10a)   *il=mudarris*   *miš*   *laṭīf*
Arabic   ART=teacher   NEG$_{NOMINAL}$ nice.m.SG
(10b)   *il=mudarris*   *ma=huwwā=š*   *laṭīf*
           ART=teacher   NEG$_{VERB}$=DEM.m.SG=NEG$_{VERB}$ nice.m.SG
(10c)   †*il=mudarris*   *ma=laṭīf=š*
           ART=teacher   NEG$_{VERB}$=nice.m.SG= NEG$_{VERB}$
           "the teacher is not nice" (cf. EID 1983:200f.)

(11a)   *inta*   *miš*   *mudarris*
Arabic   you.SG   NEG$_{NOMINAL}$ teacher
(11b)   (*inta*)   *ma=nta=š*   *mudarris*
           (you.SG)   NEG$_{VERB}$=you.SG=NEG$_{VERB}$ teacher
           "you are not a teacher" (EID 1983:201)

The conversion of pronouns to copula forms has been seen as a reanalysis of a topic-comment construction: "the subject pronoun which is coreferential with the topic (...) of a topic-comment construction is reanalyzed as a copula morpheme in a subject-predicate construction" (LI / THOMPSON 1977:420). Adapting their schema (ibid.), the Arabic example (9) above would be a pattern like (12):[19]

(12)   *teacher*   *he*   *nice*   *teacher*   *he*   *nice*
         NP   "that one"   NP   →   NP   COP   NP   ⇒   *he*   COP
         TOPIC   COMMENT   SUBJECT   PREDICATE

While LI / THOMPSON 1977 outline the historical process by which Chinese 是 *shì* changed from a demonstrative to a copula, descriptions of pronominal copulas mostly focus on deciding whether or not a given element is to be considered as copula. For instance, DORON 1986 dismisses the copular interpretation of the Hebrew pronoun mentioned above on the grounds that it does not show specifically verbal features (such as verbal negation). If the conversion DEM > COP is seen as a historical process of language change, the issue at stake is not a decision about "yes" or "no", but rather one of determining the stage reached by a given pronominal. Under this approach, the Hebrew pronoun could be described as having proceded less far on the way to a fully categorialised copula than the Chinese or Arabic elements. NICHOLAS 1996 suggests to distinguish the three stages shown in Table 3.

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[18]   With verbs in the present tense, both negations may be used, while *ma=š* is used with verbs in the past tense (e.g. *ʿalī ma=katab=š gawāb* "Ali did not write a letter") and *miš* with verbs in the future (e.g. *ʿalī miš ḥayiktib gawāb* "Ali will not write a letter", EID 1983:199-200). *ma=š* is also used in existential sentences like "there isn't a book in the drawer", "there isn't a book with me (i.e. I don't have a book)" (cf. EID 1983:198f.).

[19]   DIESSEL 1999 argues in favour of different ways of grammaticalisation depending on the category of the pronoun, and maintains that it is (only) the 3rd person pronouns which are reanalysed in the way described by Li / Thompson. In Iranian there is no difference between 3rd person pronouns and demonstratives, but in most cases the pronoun used as copula is the one (also) used as 3rd person pronoun. See also HEINE / KUTEVA (2002:108f., 235).

Table 3: Types of pronominal copula (from NICHOLAS 1996)

		category	description	example
↑	1	morphological copula	with verbal morphological features (e.g. marking of tense/mood/aspect or inflection for gender)	Arabic DEM
↑	2	non-morphological copula	with verbal syntactic / semantic features (e.g. negation that follows a verbal pattern)	Chinese 是 *shì*, Creole *da* (< *that*), *sa* (< *cela*)[20]
↑	3	incipient copula	"decategorialised" pronoun	Bahasa Indonesia *itu* (determiner & topic marker)

The most advanced type is shown by languages like Cairo Arabic. Chinese *shì* is the classic case of a copula that shows verbal features, but (necessarily) not on the level of morphology (thence "non-morphological copula"); and a topic marker which is losing its original function in favour of becoming a copular element, or broadening its use to include copula-like functions, might be called "incipient copula".

Relating this typology to the Iranian data, it is remarkable that most of the pronominal copula forms are only used in the 3rd person, and in the present tense (Table 4). This corresponds to the frequent use of nominal sentences in the 3rd person in Indo-European, although nominal sentences are found for all persons.

Table 4: Pronominal forms used as copula or existential verb in Eastern Iranian

	used for	synchronically also pronoun	verbal features
Ossetic	PRES 3sg. *u, ie*	yes	position; person marking; obligatory
	PRES 3sg. *is, yes, æi*	no	
	PRES *d-* in 1sg., 2sg.	no	
Wakhi *tey*	PRES *tey*, PAST *tu* + PRO: all persons (existential verb)	(modified to *yǝt*)	tense and person marking
Yaghnobi =*x*	PRES 3sg.	(yes: *ax*)	position; obligatory
Pashto	PRES 3sg. m.f., 3pl.	yes	
Sogdian *(ʾ)xw*	PRES 3sg., 3pl.	yes	position; no nominal inflection
Wakhi clitics	PRES and PAST: all persons	yes	person marking

The use of the Wakhi pronominal clitics as copula (see Section 1.1) would probably qualify as "incipient copula", implying that the pronoun in question has not yet been "reanalysed as a full copula", does not have specifically verbal features, and is synchronically also used as pronoun. Sogd. *(ʾ)xw* might be seen as being on the verge to a "non-morphological copula"

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20   For examples from Tok Pisin (3sg. predicate marker *i* < *he*, past form *i bin*), see HAIG (2011:374).

for reasons of its position in the sentence and for having lost its nominal features insofar as the same form also refers to the f.sg. and to the plural (see GERSHEVITCH 1954:208, YOSHIDA 2009:300). Among the other Eastern Ir. pronouns (see Section 1.2), the 3sg. copula forms of Yaghnobi and Ossetic are instances of demonstratives that have changed into an obligatory copula. Ossetic has gone comparatively far as its entire sg. copula is made from demonstratives, with endings added to the 1st and 2nd sg. Wakhi *tey* / *tu* has adopted verbal morphology as well. So the Wakhi existential verb and the Ossetic forms could qualify as having reached the stage of "morphological copula".

1.5 Motivations for the use of pronouns as copula

The process just discussed shows how copula forms may develop from pronominals, but it does not say why this process occurs at all. Indeed, as noted by LI / THOMPSON (1977:436f.), it is quite common for languages not to use a copula at all, and even more common to dispense with a copula at least in the present tense.

EID (1983:203) assumes that the presence of a pronoun in nominal sentences serves "to prevent potential ambiguity of a phrase vs. a sentence interpretation of a structure" in Cairo Arabic. However, this ambiguity is only hypothetic: an example like (9) *il=mudarris laṭīf* only allows a sentence interpretation since an attributive adjective agrees with its head noun in gender, number and definiteness (*il=mudarris il=laṭīf* "the nice teacher", EID ibid.).[21]

While it seems questionable whether avoidance of ambiguity is really the motivation, it is worth noting that the situation postulated by Eid exists in Iranian (and other IE languages): there is (only) agreement in gender and number, and it has the same form for noun phrases and nominal sentences.[22] So structures like (13) permit two interpretations when viewed without context, and (14) could be interpreted as "the best-remembering-of-assaults Ahura Mazda (i.e. Ahura Mazda, who rembers assaults best)" (thus HUMBACH et al. 1991:I/121). As the following relative clause appears to depend on *sax^yārə̄*, the sentential interpretation by Reichelt and others[23] seems preferable to me, but the interpretations suggested illustrate the ambiguity. If (as argued by Benveniste, see Section 1.0) a nominal sentence conveys a sense different from that of a copula sentence, the use of the inherited copula would not be viable to resolve the ambiguity. So a newly recruited copula would identify a predicative construction as a sentence.

(13)   *nmānəm*   *srīrəm*
Avestan   house.NOM/ACC.SG.n   beautiful.NOM/ACC.SG.n
              "(a / the) beautiful house" (Yt 17.60), potentially also "the house is beautiful"

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[21]   The same applies to Hebrew (*ha=klavim ne'emanim* "the dogs are faithful" vs. *ha=klavim ha=ne'emanim* "the faithful dogs"). Eid does not discuss the indefinite pattern, which is indeed ambiguous at least in Hebrew: *klavim ne'emanim* means "faithful dogs" and "dogs are faithful". So the use of the pronoun (*klavim hem ne'emanim*) is rather common to get the latter reading (Lucia Raspe, p.c.).

[22]   The position of adjectives is rather free as well, although there are some preferences, cf. KENT (1953:95), HESTON (1976:2-6), GERSHEVITCH (1954:237), YOSHIDA (2009:314), SKJÆRVØ (2009:221f.), DURKIN-MEISTERERNST (5.2.1.1).

[23]   INSLER (1975:29), KELLENS / PIRART (1988:108).

(14)   *mazdå*   *sax^ʸārə̄*   *maⁱˊ rištō*
Avestan PN.NOM.SG.m   assault.ACC.PL.n   best.remembering.NOM.SG.m
         "Ahura Mazda [is] the best rememberer of assaults"
         (Y 29.4, REICHELT 1909:350)

Another possible motivation for the emergence of a new copula may be found in the languages spoken in the same area. For instance, it has been suggested that the Modern Hebrew copula could be due to the fact that many immigrants to Israel have been speakers of European languages, most of which have a copula (cf. LI / THOMPSON 1977:438). So one might consider the possibility that similar factors could have triggered Sogdian copular *(ˀ)xw* (see Section 1.1).

Indeed, a comparison with Turkic has been suggested (Henning apud GERSHEVITCH 1954:208). For instance, *ˀˀsy xw* in (15) corresponds exactly to Turkic *alγu ol* "are to be taken" (SIMS-WILLIAMS / HAMILTON 1990:24, 26).[24]

(15)   *cnˀnklˀγy*   *tmy ˀwyzy*   *nβˀntˀ*   *ctβˀr*   *krmyr*   *21*   *ˀspyty*   *rγzy*
Sogdian PN.OBL   PN.OBL   at   four   red   21   white   (cloth)
         ˀˀsy   *xw*
         take.PRTC.FUT   DEM
         "in Čanglaγ [place name] 4 red and 21 white pieces of *raγzi* cloth are to be
         taken from Tämir-öz" (cf. SIMS-WILLIAMS / HAMILTON 1990, text A line 2-3)

However, the texts with a Sogdian-Turkic bilingual background are from ca. 900 AD (SIMS-WILLIAMS / HAMILTON 1990:9), and it seems questionable whether all examples of Sogdian copular *(ˀ)xw* can be explained in this way. Turkic influence appears particularly unlikely for the Buddhist texts (which are a rather conservative type of text in Sogdian), where copular *(ˀ)xw* is chiefly found (cf. example 6).[25] Since nearly all these texts are translations from Chinese (SIMS-WILLIAMS 1989:175), and Chinese is the classic case of a pronominal copula (see Section 1.4), it would be tempting to see a connection.[26]

Obviously, if contact with Chinese motivated the copular use of Sogdian *(ˀ)xw*, this needs to have happened during a period when 是 *shì* had both functions. According to LI / THOMPSON (1977:425f.), "the use of shì as a copula was productive by the late Han period (1st-2nd century A.D.) (...) By the beginning of the Tang Dynasty (6th c. A.D.), there was no trace of the demonstrative use of shì", which would limit the relevant time frame to between ca. 200 and 600 AD. However, recent Sinological research has suggested that *shì* was used in both functions for a much longer period: copular *shì* is attested at least since 180 BC,[27] and *shì* continued to be used as a demonstrative even after 600 AD (Wolfgang Behr, p.c.). Indeed, in a study on a Buddhist Chinese text (from 693 AD) that was translated into

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[24]   For Turkic *al-γu ol* (take-PRTC DEM), cf. ERDAL (2004:526). Another good example of copular *(ˀ)xw* is in text H 1 ("this is XY [name]", SIMS-WILLIAMS / HAMILTON 1990:77).

[25]   Cf. GERSHEVITCH 1954:208 (with further details).

[26]   Note also that the use of both *(ˀ)xw* and *shì* is limited to copula sentences (to the exclusion of existential sentences, cf. note 6).

[27]   Thus PEYRAUBE / WIEBUSCH 1994, also presenting even earlier examples that could show copular *shì*. The issue of the Chinese copula is much more complex than indicated here; other relevant topics include copulas other than 是 *shì* (see PEYRAUBE / WIEBUSCH 1994), and the relation between *shì* and other demonstratives.

Sogdian, MEISTERERNST / DURKIN-MEISTERERNST 2009 quote sentences which happen to contain two instances of *shì* as demonstrative (是人 "this man", p. 317, 是念 "these thoughts", p. 319). While the issue surely needs more investigation, it seems at least possible for the Sogd. use of *(ʾ)xw* to be influenced by the double function of *shì* in Chinese.[28]

2. Copula as pronoun

2.1 Candidates

We now turn to the integration of verbal forms into the pronominal paradigm. The New Persian sg. pronominal clitics are generally considered to go back to the OIr. genitive/dative clitics (*-am, -at, -aš* < Old Persian *-maiy, -taiy, -šaiy*, cf. e.g. RASTORGUEVA / MOLČANOVA 1981:82) while the pl. is based on the sg. (with addition of the pl. suffix *-ān*). This pattern applies to the majority of Middle and New Iranian languages.

However, there are also several other patterns. Some forms go back to other case forms of the OIr. clitics (e.g. from the accusative).[29] There is also a group of clitics in Western Ir. languages which might derive from copula forms or verbal endings (Table 5, next page). These varieties include languages from the North-West of Iran, from the Semnan region, from Luristan and Balochistan.

Example (16) illustrates some uses of the pronominal clitics. The 1sg. *=un* ([=on] in the Bal. dialects of Iran) is used as agent of an ergative construction in the first clause and in possessive function in the second one.

(16)	*dars=on=a*		*want*	*dabīrestān*	*ā-wahd=ī*
Balochi	lesson=PRO.1SG=V.EL		read.PT	high school	that-time-REL
(Iran)	*ke*		*pānzdah*	*sāl=on=at*	
	SUB		fifteen	year=PRO1SG=COP.PT3SG	

"I was studying at high school when I was 15 years of age (lit. my year was 15)" (BARANZEHI 2003:92)

For the 1sg. pronominal clitic of Balochi, Bartholomae suggests that its *-n* could be due to analogy with the stressed pronoun *man* "I" ("dessen *n* offenbar aus dem hochtonigen *man* bezogen ist", BARTHOLOMAE 1906:60). However, such an analogy appears rather unlikely, because a 1sg. clitic *=m* would correspond quite well to *man*, specifically since the 2sg. has a clitic *-t* vs. full pronoun *tau*, which would surely favour a retention of a 1sg. *=m* rather than its being abandoned in favour of *=n*.[30]

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[28]   Sogdian contacts with China go back at least to the 2nd century BC "and continued to the end of the Tang and beyond" (SIMS-WILLIAMS 1996a:45), and the "sūtra" script variety used for the Buddhist texts may have emerged ca. 500 AD (HENNING 1958:55). The so-called "Ancient Letters" (early 4th c. AD, found near Dunhuang and bearing evidence of major Sogdian colonies in China) are the oldest major Sogdian texts (YOSHIDA 2009:280).

[29]   For more discussion, see KORN 2009.

[30]   Alternatively, one could assume that the 1sg. has been generalised from the 1pl., which is also *=Vn* in Balochi, Koroshi, South Baskhardi and Sorani dialects (these 1pl. clitics are likely to derive from OIr. **=nah*, cf. KORN 2009:165-167). However, the vowel is not always identical (1pl. West Bal. *=ēn, =in*), and Semnani and Biyabuneki have 1pl. *=mun*.

Table 5: Western Ir. pronominal clitics potentially derived from copula / verbal ending[31]

	Pronominal clitic		copula/verb. ending[32]	notes
1sg.	West & Ir. Bal.	=un	+ān, +un, -īn	also PRO1SG =um
	South & East Bal.	=ā̃, =õ̃, =ū̃	+ā̃, +ū̃	
	Semnan region	=(a/e/i)n	-in, -un, =on	
2sg.	South & East Bal.,	=ē	+ē	also PRO2SG =it
	Vafsi, North	=i	+i	also Tatic PRO2SG =∅;
	Talyshi			< OIr. *=tai?
3sg.	Semnani	=ā, =i	-ā̃, -e, -u, =i	
	Laki (Luristan)	=te[33]		also PRO3SG =e; cf. =Vt in Sorani, Fars etc.
2pl.	Laki	=ino(n)	+in(o)	cf. PRO1PL =imo(n)

So the idea cautiously suggested by LECOQ (1989:257): "emprunté aux désinences?" ("[perhaps] borrowed from the [verbal] endings?") deserves consideration. Indeed, all Western Ir. varieties with a 1sg. clitic in -n also have a 1sg. verbal ending in -n. In Balochi, the vowel of the 1sg. clitic is identical to the one seen in the verbal ending and/or copula. In Semnani, =in is common to both clitic and verbal ending, and the variants =an and =en may have taken their vowels from the 2nd and 3rd sg. clitic, respectively.[34]

If Lecoq's suggestion is valid for the 1sg. clitic of Balochi, and by extension also for varieties of the Semnan region, it is worthwhile to consider the same logic also for other clitics.

For instance, some Tatic varieties have a 2sg. clitic which consists in a palatal vowel (=i in Vafsi and Northern Talyshi dialects), while other Tatic varieties have zero, among these the Talyshi of Lenkoran (LECOQ 1989a:299). For Talyshi, SCHULZE (2000:43, following PIREJKO 1991:103) suggests a derivation of the palatal vowel clitic from the OIr. 2sg. clitic

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[31]   Several varieties have additional clitics (of different origin) for the mentioned persons. The Bal. data are from BARKER / MENGAL (1969/I:243f.), FARRELL (1990:54), GRIERSON (1921:344) and GILBERTSON (1923:71, 117f.), BASHIR (1991:61), see also JAHANI / KORN (2009:654). Some Bal. dialects do not use 1st and 2nd person clitics. Since nasalisation mainly affects long vowels + n (KORN 2005:238), the nasalised clitics are likely to stand for /-ān/ etc. Semnani data from LECOQ (1989a:307-310), Biyabuneki from MORGENSTIERNE (1960:96f.), town of Semnan also from MAJIDI (1980:113ff.). Also counted as clitics are those which (as in Semnani) have been generalised as verbal endings for transitive verbs in the past domain and lost their pronominal function altogether. Talyshi data are from LECOQ (1989a:302f.), Vafsi from STILO (2004:227, 232). Vafsi is spoken in some villages on the border between the provinces of Hamadan and Markazi. Laki data from LAZARD (1992:217-219).

[32]   In this column, the symbol = specifically marks the copula; this includes forms which are also used as endings of the intransitive perfect (which historically, if not still synchronically, consists of the past participle and the copula). The symbol - is used for the verbal endings of the present domain (which historically uses the present stem plus endings); this may include forms also used as copula, but for which the source does not give copula forms. The symbol + marks forms which are used in the functions of both copula and present endings.

[33]   This form is the object clitic. Laki also has a set of agent clitics; the forms are nearly identical.

[34]   A spread of the vowel from one pronominal clitic to another one has also been assumed for Middle Persian and Parthian, the 2sg. of which is likely to have taken its linking vowel from the 1sg. (BARTHOLOMAE 1906:61, SIMS-WILLIAMS 1981:172). Maybe the vowel of Bal. =un has been adjusted to the variant =um (cf. note 37).

=tai on the grounds that postvocalic *t* was lost in Talyshi. This is indeed the case (cf. e.g. *vo* "wind", *jo* "separate", *zoe* "son", past stem suffix *-ā* < Middle Ir. *-ād*), but the derivation of a palatal vowel from **=tai* would imply that an OIr. word-final diphthong is preserved, while it is otherwise always lost.[35]

Also, the derivation from the OIr. 2sg. clitic would not be viable for Balochi because intervocalic *t* is not lost in Balochi. On the other hand, the copula and verbal ending of the 2sg. is *-ē*. In Vafsi and the Tati varieties of the same type, the verbal 2sg. is also *-i*, thence identical to the 2sg. clitic; so it seems possible that the copula was generalised to encode also the 2sg. clitic in these varieties, or at least some of them. In this case, the zero seen in some Tatic dialects as 2sg. clitic might be the regular result, which could then have been "replaced" by the verbal ending in other varieties.

As far as the 3sg. is concerned, Semnani has *=ā* and *=i* (in addition to a 3sg. clitic *=eš* as in New Persian). Maybe one might explain these as taken from the verbal ending *-ă* (*-a* tr. present, *-ă* itr. past) and *=i* (perfect).[36] A verbal origin might also be possible for the Laki 3sg. object clitic *=te*. Admittedly, no verbal ending *-te* has been reported for Laki, but there is an ending *-(V)t* in other varieties, e.g. in various Fars dialects, in Bashkardi, and Sorani dialects. If so, a borrowed *=t* may have been adjusted to the other Laki clitic variant *=e*.

The 2pl. *=ino(n)* in Laki could be taken from the verbal ending as well, which may then have been adjusted to the 1pl. clitic as schematised in (17):

(17)	verbal ending		pron. clitic			
1pl.	*-im(o), -imən*		*=imo(n)*			
2pl.	*-in(o)*	=	x	$\Rightarrow$	PRO2PL	*=ino(n)*

2.2 Mechanism

The question now arises how copula / verbal forms may have come to be used as pronominal clitics. I argue that this could be related to the fact that the Western Ir. languages showing such clitics are also characterised by their use of ergative constructions. In Ir. languages, this pattern takes various forms, but essentially looks as in (18):

	Balochi	present	past
(18a)	intrans. verb	*kap-ān* fall.PR-1SG "I fall"	*kapt-ān* fall.PT-1SG "I fell"
(18b)	transitive verb	*harkat* *kan-t* movement do.PR-3SG "s/he starts (sets out)"	*harkat=ī* *kurt-Ø* movement = PRO3SG do.PT "s/he started"

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[35] One might defend the hypothesis by saying that the input was a disyllabic clitic **=Vtai* (> **=Vai* > **=ī*?).

[36] Another possibility would be to explain *=ā* as a cliticised demonstrative (Thomas Jügel, p.c.). Such a process has been assumed for some 3rd person clitics in other Ir. varieties (see KORN 2009:164). In this case, it seems somewhat less certain as the Semnani demonstratives are *en, an, un* (LECOQ 1989a:307), although the loss of a nasal in a clitic appears not unlikely.

The subject is indexed by the verbal ending of an intransitive verb and of a transitive verb in the present system. In the past system, it is indexed by a pronominal clitic in sentences that do not have a nominal subject (and sometimes even if there is one), i.e. the $=\bar{\imath}$ in (18b) *harkat=ī kurt* indexes the 3sg. So the verbal ending (which is identical to the copula) is used to index the subject in three of these four patterns, which may be a motivation to generalise the majority pattern.

Technically speaking, an analogy as in (19) may have operated. In Section 2.1, it was argued that the 1sg. pronominal clitic in Balochi is one candidate for the hypothesis that some clitics may have been taken from the verbal paradigm. It could previously have had the form $=um$ as it does in Middle Persian and Parthian,[37] and might have been replaced by $=\bar{a}n$ in ergative constructions consisting of the verb alone, so that the clitic is attached to the verb. Such patterns are obviously common enough to trigger a generalisation of the clitics as verbal endings for the past domain in several Ir. varieties, e.g. in Semnani (cf. LECOQ 1989a:308). In this way the verbal ending could have been generalised to transitive verbs in the past and reanalysed as pronominal clitic.

(19)   intr. verb   tr. verb
    present   *kap-ān* "I fall"   *war-ān* "I eat"
              fall.PR-1SG   eat.PR-1SG
    ───────────────────────── = ─────────────────────────
    past   *kapt-ān* "I fell"   **wārt=um* "I ate" ⇒ *wārt-ān* "I ate" ⇒ $=\bar{a}n$
              fall.PT-1SG   eat.PT=PRO1SG   PRO1SG

In this context, it may be significant that the clitics with verbal origin discussed above involve the 1st and 2nd person, while the instances of verbal derivation for those of the 3rd person are more uncertain. This could be seen in the context of the 3rd person (specifically the 3sg.) being unmarked (e.g. 3sg. *kapt-∅* "s/he fell"), which would prevent an analogy as in (19) from operating.[38]

The process just postulated is to a certain extent parallel to the situation in Sorani, where the verbal ending has assumed pronominal functions in the past domain (see JÜGEL 2009:153f.), including reference to the direct object, the indirect object, the complement of adpositions, and the possessor. However, the verbal endings remain attached to the verb in Sorani, and their pronominal function is limited to the past domain of transitive verbs.[39]

A move of copula forms into pronominal paradigms has also been claimed by Katz for Biblical Hebrew *hu* (20): the Proto-Semitic verb "to be" develops into a pronoun (which is the one that is used as copula in Modern Hebrew):[40]

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[37]   The Bal. 1sg. is in fact $=um$ in some dialects, but it is possible that this form has been borrowed from Persian.
[38]   I owe the gist of this thought to Thomas Jügel.
[39]   See also HAIG (2008:290-301) for further discussion.
[40]   KATZ (1996:118ff.) also posits such a development for the Turkish pronoun *o* (which she derives from a 3sg. *ol* "is" via DEM *ol*). However, this is mistaken as it confuses the Turkish verb *ol-*, which comes from *bol-* (thus still in other Turkic languages, see RÄSÄNEN 1949:169f., 1969:79, 360), with the Turkic demonstrative *ol* (which yields *o* in modern Turkish, cf. RÄSÄNEN 1957:27, 1969/I:356, 360). Conversely, the DEM *ol* is commonly used in copular function (cf. note 23).

(20)   Proto-Semitic   >   Biblical Hebrew:
        haya / hawa   (→)   *howo*   →   *hu*
        "to be"   (e.g. →)   "his being"   →   "he"   (KATZ 1996:189)

If the interpretations suggested above are correct, Iranian would present evidence for both the change of pronouns to copula and of copula / verbal ending to pronominal clitic.

Abbreviations

ART	article	OIr.	Old Iranian
Bal.	Balochi	PAST	past tense
COP	copula	PIE	Proto-Indo-European
DB	inscription of Dareios at Bisotun	pl., PL	plural
DEM	demonstrative pronoun	PN	name
f.	feminine	PR	present stem
GEN	genitive	PRES	present tense
IE	Indo-European	PRO	pronominal clitic
Ir.	Iranian	PRTC	participle
itr.	intransitive	PT	past stem
m.	masculine	sg., SG	singular
NEG	negation	tr.	transitive
NOM	nominative	VOC	vocative
NP	noun phrase	Y, Yt	Yasna, Yasht
obl., OBL	oblique case		(Avestan text collections)

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Erratum

In ex. (15) *tmy ˀwyzy* should read *tmyr ˀwyzy* and *nβˀntˀ* should read *nβˀnt.*

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