

## The Inner Revolution: Old But Not That Old

Michael Weiss

Department of Linguistics, Cornell University

September 14, 2017, University of Copenhagen

*The Split: Reconstructing Early Indo-European Language and Culture*

1. If two languages descended from a common ancestor share a trait, this trait might be (a) inherited, (b) the result of a common shared innovation, (c) diffused from one to the other, or (d) independently innovated.

1.2. If these two languages are not adjacent, then the shared innovation and diffusion hypotheses become more costly.

1.2.1. But not impossible. Balochi, for example, spoken in Pakistan, Afghanistan, and Southeast Iran, is a North-West Iranian language and shares many features with Parthian and other NW Iranian languages. (Korn 2005:328–9). The Gallo-Italic dialects of Southern Italy and Sicily share many features with Lombard. (Rohlf 1931) These situations result from *migration*.

1.3. If the trait is lexical, then the hypothesis of independent innovation becomes more costly.

1.3.1. That two languages would create the same lexical item *ex nihilo* independently is only likely to happen rarely by chance.

1.3.2. But that a precursor meaning would independently develop in parallel fashion is quite plausible and well exemplified, e.g. HUMAN > MAN; CAUSE TO DIE > KILL. (Cathcart et al. 2015).

1.3.3. Another complication is the creation of identical lexical material from inherited roots and inherited derivational processes.

1.4. Thus the question of lexical matches between nonadjacent languages involving formally (almost) identical items is of some theoretical interest.

1.4.1. If we observe such items, they may result from the retention of shared archaism that were once common to the ancestors of all the daughter languages that converge at the same parent node.

1.4.2. On the other hand, such items might be evidence that the geography of the ancestors was once other than is found at the earliest date of attestation.

1.5. Another theoretical issue. If we observe shared lexical items between two nonadjacent languages, what is significant?

1.5.1. Presumably chance will lead to the situation that two languages descended from a common ancestor will occasionally preserve an item that survives nowhere else in the language family.

1.5.2. This question can only be answered by the number, quality, and semantic distribution of the matches. Are they more numerous and of better quality than those found between any two random non-adjacent languages not belonging to the same subgroup? Do the items concentrate in a particular lexical field or are they randomly distributed?

1.5.3. If the answer is “yes”, how do we decide between archaism and migration?

1.5.4. If we can show that a given lexical item must once have been present in intermediate languages, then we have proof for at least this one item that the archaism hypothesis must be correct.

1.6. If the shared lexical features are archaic and have been lost in intermediate languages in such a way as to leave a distinctive profile of archaism and innovation, what either permitted the survival or encouraged the replacement?

1.6.1. The explanation must be historical and/or sociological.

1.7. Some cautions from the study of Romance. I recently had the opportunity to review a volume of *Dictionnaire étymologique roman* (Buchi and Schweickard 2014), which seeks to reconstruct Proto-Romance without reference to the evidence of written Latin, but by strict application of the Comparative Method alone. This work regards Sardinian and Romanian as the first and second offshoots of the Proto-Romance family, the “Proto-Anatolian” and “Proto-Tocharian” of Romance. By the policies of the DÉR if an item is not found in Sardinian it can, strictly speaking, only be reconstructed for Proto-Continental Romance.

1.7.1. For example, \*/brum-a/ ‘winter’ does not have a Sardinian reflex and hence “ne peut être reconstruit de façon sûre que pour l’époque d’après la separation du protoroman continental du protosarde” (Birrer, Reinhardt, Chambon s.v. p. 385–6). In this instance, it is likely that the procedure has produced a correct result. The Central Sardinian word for ‘winter’ is *iverru* < *hibernum*, no doubt an older term for ‘winter’. The innovation hitting Proto-Continental Romance was the semantic change from ‘winter solstice’ to ‘winter season’. Sardinian, on the other hand, has simply lost the word \*/brum-a/ in any sense.

1.7.2. In contrast, although \*/aud-i-/ ‘hear’ likewise has no direct reflex in Sardinian, the authors of the article for this word show no hesitation about reconstructing this word for Proto-Romance. Why? In this case it is clear that the innovation lies on the Sardinian side where the word for ‘hear’ is *intendere*, the cognates of which show the meaning ‘extend’ (Rom. *întinde*), or ‘understand’ (Sp. *entender* etc.). The semantic development ‘extend’ → ‘direct (one’s mind, attention)’ → ‘listen/hear’ is obvious and the familiar Spanish meaning ‘understand’ probably derives from an earlier mean ‘hear’. So the Sardinian in fact is intermediate between Spanish and Romanian.

1.7.3. Items share exclusively by Ibero-Romance and Proto-Romanian, of which there are quite a few (e.g. Sp. *angosto*, Rom. *îngust* ‘narrow’, Sp. *hervir*, Rom. *fierbe* ‘boil’ see Dworkin 2012:51–3), are certainly old, but are, in my subjective view, scattered pretty evenly throughout the lexicon and many can be shown once to have existed in early forms of Romance where they are now missing (Sp. *yegua*, Rom. *iapă*, but OFr. *ieve* ‘mare’). They result from what J.N. Adams called “lexical shrinkage.”

1.8. In this talk I intend to examine some East-West lexical isoglosses, specifically items found only in Indo-Iranian and Italic and or Celtic that are concentrated in the religious and legal spheres. I call this set of data “the Vendryes Phenomenon”. I hope to show that these items

indeed are archaism from the point of view of Inner Indo-European and that their current distribution results from lexical shrinkage, not contact, but also that the Vendryes Phenomenon is actually an innovative stratum of lexicon that does not go back to highest-node Proto-Indo-European. This can be shown not only by the absence of these items in Tocharian and Anatolian, but also in some case by internal arguments that show how these items arose.

## 2. East-West Lexical Isoglosses. Some Questions.

2.1. Following the lead of Kretschmer 1896, Vendryes 1918 pointed out some lexical correspondences between Italo-Celtic and Indo-Iranian.

2.2. While Kretschmer explained these as the result of prehistoric migrations, Vendryes chose to explain them as archaisms preserved by the priestly organizations continued at the edges of the IE world. Thus he stressed the legal/religious nature of the archaisms.

### 2.3. Questions

2.3.1. Are lexical correspondences between IC and Iir. really more impressive than those between other nonadjacent branches? Polomé 1988 was skeptical of the whole concept.

2.3.2. Do these correspondences skew toward the legal/religious lexicon?

2.3.3. How well do the specific examples hold up? Some may be incorrect. Some may now be known from other branches. How does this affect the overall picture that Vendryes sketched?

2.3.4. Now that we have two higher nodes of the PIE family tree we have to ask if these alleged archaism appear in Tocharian (and thus at NPIE) or Anatolian and (thus at PIE).

2.3.4.1. If they don't appear and if we are convinced that they are archaisms at the Inner-PIE level, then can we decide whether they have been lost in the first branches off?

2.3.4.2. On the other hand, if this is not the case, than can we make an inference about the date of this supposed priestly organization, which Vendryes posits was the main channel for transmission and preservation of the forms in question.

3.1. Johannes Schmidt 1872 listed only 20 exclusive Italo-Indo-Iranian lexical isoglosses. Most of these are dubious. No Celtic data at all. Many are just wrong.

3.2. Paul Kretschmer 1896 offered a much-expanded list that included Celtic data for the first time.

3.2.1. The explanation offered is the prehistoric migration of a Western tribe to the East. Similarly, Specht 1939 attributed these agreements to migrations of the *Corded Ware c Culture* and most recently Koncha 2015 has revived this approach.

3.3. Ernout 1911:89: ils témoignent d'une communauté de vocabulaire italo-celtique et indo-iranienne, dont l'existence, pour déconcertante qu'elle soit, ne constitue pas un des faits les moins curieux de la linguistique indo-européenne.

3.4. Joseph Vendryes 1918 "Les correspondances de vocabulaire entre l'indo-iranien et l'italo-celtique." *MSL* 20:265–85.

3.4.1. Some wrong etymologies

*lēx* ‘law’ ≠ OAv. *rāzarē/rāzan-* ‘rule’ but instead belongs with Lat. *legō* ‘collect’. Note the same lengthened grade in *collēga*. The Avestan forms cannot be separated from *rāzaiieiti* ‘directs’ and the *rēx* family.

*ritus* ‘customary way’ ≠ *rtá-* ‘order’ instead cf. TB *rittetār* ‘is fitting’, Av. *raēθuuu-* (Weiss 2015). In this case, if my analysis is correct, we would substitute an even more archaic East-West match for the one Vendryes suggested, but the religious/normative specialization is independent in Italic and Tocharian.

*erus* ‘master’ not with Ved. *ásura-* ‘lord’ etc., but with Hitt. *išhāš* ‘master’. So another case of an even older layer of vocabulary.

OIr. *-oirg* ‘strikes’, OBr. *orgiat* ‘murderer’ not with YAv. *arəza-* ‘combat’ but with Hitt. *ḫark-* ‘perish’, Arm. *harkanem* ‘strike’.

*flāmen* ‘priest’ ~ *brahmán-* ‘priest’ Lat. instead with Go. *blōtan* ‘sacrifice’ and Ved. with Gaul. *briptom* ‘magical formula’, etc.? (although I admit that I still think there is something to this comparison!).

### 3.4.2. Some items now identified in other branches

Lat. *āra*, Osc. *aasa*, Umb. *asa* ‘altar’ ~ Ved. *ása-* ‘ash’, Hitt. *ḫāššā-* ‘hearth’, *ḫāšš-* ‘soap’, pl. ‘ashes’. In fact the semantic and formal match between Hitt. *ḫāššā-* ‘hearth’ and Italic *\*āsā* is superior.

MW *heidd*, MBr. *heiz* ‘barley’ < *\*sasiḷo-* *sasyá-* ‘grain in the field’, YAv. *hahūia-*, Ved. *sasá-* ‘grain field’, Hitt. *šēša(n)-* ‘fruit’ (Kloekhorst 2008 doesn’t consider the possibility and it is clear that the Hittite word doesn’t mean ‘grain’ and may be an r/n-stem, so this Celto-Indo-Iranian may still be exclusive.)

## 4. Some Case Studies

4.1. In a recent paper in a Festschrift dedicated to Birgit Olsen, *regina huius loci*, I tried to argue that the Inner-IE word for ‘king’ resulted from the personification of an abstract noun *\*h<sub>3</sub>rēḡ-s* ‘rule’ (Ved. *rāṭ* fem.) by way of the PIE analogue of the Ved. *idam bhū-* construction and further that feminine suffix *\*-ni<sub>h</sub>₂* could only be explained on the model of the unique pair *\*h<sub>3</sub>rēḡs* ‘king’ ~ *\*h<sub>3</sub>rēḡni<sub>h</sub>₂* ‘queen’. Thus wherever we find evidence for this suffix we can infer the quondam existence of the *\*h<sub>3</sub>rēḡs* ‘king’ ~ *\*h<sub>3</sub>rēḡni<sub>h</sub>₂* pair. I’d like to make one additional point. David Stifter has kindly called my attention to a 2012 article of his which identifies a compound name *Volturex* (cf. Av. *vasō.xšaθrō* ‘ruling at will’) found at Laibach (Emona) and Ig as evidence for the ‘king’ word in Northern Adriatic. Thus we see that the loss of *s* is indeed the result of lexical shrinkage.

4.2. Ved. *śraddhā* f. ‘trust’, *śrād...dhatta*, OAv. *zrazdā-* ‘trusting’ (Y. 31.1), with superlative YAv. *zrazdišta-* (Y. 53.7), and *zrazdātama-* (Yt. 13.25), O/YAv. *zrazdāiti-* ‘trust’, YAv. *zras-ca dāt* ‘and may she believe’ (Yt. 9.26), OP *\*drazdā-* (*adrazdā* ‘faithfully’ in the Aramaic “Letter of Artaxerxes” in Ezra 7.23 (Nober 1958) and *ādrazda-*, a personal name, see Tavernier 2007), Lat. *crēdō*, (*\*crēdēs?*), OIr. *creitid*, MW *credaf*, OBr. *critim* < *\*kred-dī-mā*, MCorn. *cris* < *\*kred-dīt* (Schulze-Thulin 2001:38) (already noted by Kretschmer).

4.2.1. There can be no doubt about the excellence and (so far) exclusiveness of this comparison. There are a few issues that call for some comment.

4.3. *\*kred-* is definitely a form of the word for ‘heart’ and not ‘talisman’ vel sim., an idea popular among Francophone scholars. The Proto-Indo-Iranian word for ‘heart’ was remade as *\*ǵʰrd-* (Ved. *hṛd-*, Av. *zərād-*). Szemerényi 1970:519 suggested this was by contamination with a form comparable to Gk. *χορδή*. This seems very likely to me especially in the light of the *d*-stem in Hitt. *karāt-* ‘guts’ (written with ŠÀ the same Sumerogram used for *kēr* ‘heart’) < *\*ǵʰrh<sub>1</sub>-od-* (Kloekhorst s.v. *karāt-*) which would have yielded a PIr. *\*ǵʰrHad-* > YAv. *\*zaraδ-* Cf. perhaps YAv. *zaraδāyñiūi* (V.1.14 first part unanimously transmitted according to Geldner) ‘to strike the guts’ rather than ‘heart’?<sup>1</sup>

4.4. In the old fixed phrase the contamination did not take place in Indic, but it did happen in Proto-Iranian. The Proto-Iranians at least must have considered the phrase as containing a form of the word for ‘heart’. So already Darmesteter 1878:52-5. Meillet’s idea (1913) that *\*éradd<sup>h</sup>ā* underwent the last iteration of a pre-PIE assimilation of aspirates to become *\*f<sup>h</sup>radd<sup>h</sup>ā* is implausible, especially since this “assimilation” evidently only happened in Proto-Iranian and not in Indic, as noted by Sandoz 1973.

4.5. The arguments against connection with *\*kerd-* are not compelling. Benveniste 1973 [1969]: “The form *\*kred* is not identical with the name for heart in Indo-Iranian.” But no one doubts that the Indo-Iranian form of this word has been modified.

“Even in the western group where the form presents an initial *k-* we find for ‘heart’ *\*kerd-*, *\*kord-* *\*kṛd-* (zero-grade) but never *\*kred-*.” This is a more serious argument but we have ways of handling Schwebeablaut. See below.

“What is never attested in any Indo-European language is an analytical phrase like ‘to put one’s heart into somebody’ To anyone who is familiar with the phraseology, the style, the way of thinking of the ancients, this would be just as strange an expression as ‘to put one’s liver’.”

Actually the combination BODY PART + *\*d<sup>h</sup>eh<sub>1</sub>-* in an idiomatic fashion is exactly paralleled by PIr. *\*mans dhā-* < PIE *\*mens d<sup>h</sup>eh<sub>1</sub>* ‘to think’, lit. ‘set one’s mind’. We may also note Lat. *mandere* < *\*man(u) d<sup>h</sup>eh<sub>1</sub>-*

4.6. The one problem is the unparalleled location of the full grade. Schindler 1979 suggested this could be explained by positing an *s*-stem *\*kred-s* which would trigger Schwebeablaut as in *\*h<sub>2</sub>uek-s-* vs. *\*h<sub>2</sub>eug-*.<sup>2</sup> The problem with this idea is the complete absence of evidence for an *s*-stem form of ‘heart’ as NIL p. 423 point out. But it is plausible that *\*kred-s* was an analogical creation on the model of the archaic *s*-stem *\*mens* also combined with *\*d<sup>h</sup>eh<sub>1</sub>-*. Cf. the collocation ‘with heart and mind’ *utá hṛdótá mánasā* (RV 8.98.2) *zərādācā manañhācā* (Y. 31.12). Thus there is no need to posit the existence of an *s*-stem outside of the collocation. Such a *\*kred-s* would be

---

<sup>1</sup> Guillaume Jacques in a paper posted at Academia.edu suggests as an alternative that PIr. *\*f<sup>h</sup>rd-* results from a conflation with the root of *hṛñite* ‘gets angry’.

<sup>2</sup> See Ozoliņš 2015:133 for a variation on this approach.

indistinguishable in Indo-Iranian from *\*kred* in the forms in which it occurs, and the length of Lat. *crēdō* positively requires an *s* of some sort (the explanation by Lachmann's Law Schrijver 1991:134 doesn't work because we only have Lachmann's lengthening when the voiced stop is devoiced). OIr. *creitid* too might work starting from *\*kred-s-(d<sup>h</sup>e)d<sup>h</sup>eh<sub>1</sub>-*. Cf. MIr. *net* 'nest' [n<sup>h</sup>ed] < *\*nisdo-*. On the other hand, MW *credaf* with *d* < *\*dd* does not at first sight match MW *nyth* 'nest'. But there is no independent evidence for the outcome of *\*-dsd-* and that *\*-dsd-* should have a different outcome from *\*-sd-* is plausible. One way or the other the Brittonic forms of 'nest' have undergone a devoicing and it is plausible that the preceding voiced consonant prevented this from happening. *\*kred-s* seems to be a workable protoform.

**4.6.1.** Tentatively: If *\*kred-s* is dependent on *\*men-s* 'mind', then there must have been a verbal root *\*men-* 'think', but Tocharian and Anatolian only have clear evidence for *\*men-* 'remain' (TB *masketär* 'be', Hitt. *mimma-* 'refuse' (differently Kloekhorst)) and *\*men-* 'look at' (CLuv. *manā-* 'look upon', *māmmanna-* 'regard with favor', *mimma-* 'regard').<sup>3</sup> THINK ← LOOK AT → REMAIN. Cf. Gk. *σκέπτομαι* 'look, consider think' and NHG *warten* 'wait' < OHG *wartēn* 'watch for'.

**4.6.2.** Another school of thought. Sandoz 1973 (also Kellens 1974:208, Rix 1995:246, Tremblay 2004:582 and most recently Steer 2013:79) suggested that the form *\*kred* was an old endlingless locative and that the idiom was 'to put something in the heart for someone'. In Steer at least this is combined with a theory that tries to explain the Schwebeablaut. Steer suggests that Schwebeablaut was intended to distinguish the endlingless locative from the strong and weak stems. If we are dealing with an original *\*ē/e* root noun the endlingless locative would be expected to be *\*kērd* and if we are dealing with an *e/∅* root noun the endlingless locative would be *\*kerd*. By the usual theory of morphological Schwebeablaut, the neo-full-grade replaces an old zero-grade, but neither of the expectable endlingless locatives had a zero-grade. So the theory of Steer introduces an entirely new type of explanation for Schwebeablaut.

**4.6.2.1.** This raises the question: put what in the heart? Tremblay suggested the original meaning 'to put something (ACC) in the heart (LOC) for someone (DAT)' i.e. 'to entrust something to someone' and with ellipsis of the accusative object this became 'to trust someone (DAT)'. But this does not seem very plausible. First what is the dative in this putative original construction doing? It appears to be a facultative expression of possession. It would presumably alternative with a genitive and hence the loss of the obligatory argument and the obligatorification of the possessive dative is surprising. Further, the constructions which Tremblay pointed to in Vedic as comparanda show that when one places something in the heart for someone one is not entrusting it at all but simply giving it and they don't normally include datives. Even an example like RV 7.86.8 where there appears to be a dative can just as easily be taken as two clauses:

---

<sup>3</sup> Admittedly TB *mañu* 'desire' and TA *mnu* 'desire, consideration' come very close to 'thought'. We could regard these as independent developments from 'look at'.

*ayám sú túbhyaṃ varuṇa svadhāvo*

*hrdí stóma úpaśritaś cid astu*

This praise song is for you, Varuna, who are of independent will:

let it be set within your heart. (J&B)

Note too that *śrad* was treated as an accusative direct object in Vedic since it was promoted to subject in a passive construction at RV 1.104.6 *śráddhitaṃ te mahatá indriyāya* “Trust has been placed in your great Indrian power.” RV 1.104.7 *śrát te asmā adhāyi* “Trust has been place in this (power) of yours.” On the other hand, in YAv. we have a direct object Yt. 9.26 *yā.mē daēnaṃ mazdaiiasnīm zrasca dāt* ‘that she may believe for me the Mazdayasnian religion’, but this replaces a dative construction in Old Avestan and the antiquity of the dative is guaranteed by the agreement with Latin and the Young Avestan does not continue the putative original construction semantically. The development from TRUST to ENTRUST is made possible by the absorption of the original object into the complex verb structure, which opens a space, so to speak, for an external object, as Hackstein 2012 has convincingly argued.<sup>4</sup>

**4.7.** The recentness of the compound in Celtic and Italic. Since the parts of the compound are still separable in Indo-Iranian, they could not have been fused already in PIE (Inner PIE). Thus there is no necessary prediction that it will behave like a primary dental plus dental cluster. Further, it is not clear that a sequence *TsT* with an underlying segmental *s* would necessarily have the same treatment as *TT* with a phonetic epenthetic *s*. In Celtic it is obvious that the cluster in *\*kred-(de)diti* was not treated like the word-internal sequence (i.e. *ss*).

**4.7.1.** The Italic situation is unclear. The only thing we can say with certainty is that *crēdō* must continue an earlier *\*kredzō*. Note CGL 5.54.12 *caesditum* : *creditum* where *cae* is a late spelling for *cesditum* as Lindsay prints. Perhaps for *\*kresditom* or phonological from *\*kersdatom* < *\*kresdatom*.

**4.7.2.** *\*kredzō*, in turn, must somehow continue *\*kredzdō* which somehow continues *\*kredz(d<sup>h</sup>e)d<sup>h</sup>ō*. Since we don’t know what would happen to *\*kredzdō*, it’s conceivable that the development was to *crēdō* (similarly Hill 2003:250). In fact *tst* at a recent morpheme boundary has lost the first *t* (*astō* < *\*at-stō*) and *VCzD* becomes *V:D* (*trādere* < *\*trans-dere*). However, the *hasta* ‘spear’ < *\*ghazd<sup>h</sup>ā* rule (cf. Go. *gazds*) which devoices medial *\*zd<sup>h</sup>* (or prevents it from revoicing) might apply here leading to †*crestō*. Thus either that rule did not apply when the *z* was preceded by another stop or the final voiced stop *d* was restored because of the morpheme boundary. The compound identity of *crēdō* may have been apparent well into the phonological history of Latin and in fact *crēdō* continues to function like a compound *-dere* verb with a paradigm exactly like *trādere*. Note too the forms *creduis*, *creduit*, *creduat*, *creduam*, *creduas*, *creduat* (all in Plautus) which show the analogical influence of the irregular subjunctive

---

<sup>4</sup>Somewhat different is RV 8.75.2. *śrad víśvā váryā kṛdhi* “Make our trust (in the sacrifice) into all things worth desiring.” (J&B) where *víśvā váryā* is a secondary predication.

paradigm of *do, dare*. Italic and Celtic not only inherited the cognates of the Indo-Iranian forms but kept them as incompletely unverbated parts well into their individual prehistories.

**4.8.** Semantic history. The Vendryes approach, which focuses on the religious sphere—and perhaps our own religious associations with belief and faith—have somewhat obscured what I believe is an essential aspect of the semantics of *\*kreds d<sup>h</sup>eh<sub>1</sub>-*.

**4.8.1.** If we examine the Latin side first we see that *crēdere* is not a religious word. One can find instances of *crēdere* plus something in the divine sphere but these are neither formulaic nor institutional. For example, there is nothing like the exhortation to trust in a god (RV 2.12.5 *śrād asmai dhatta* “Believe in him!”) or a declaration of trust (RV 10.147.1 *śrāt te dadhāmi*). In fact, the idiom *crēdere deos* does not occur before Seneca. (Ramelli 2000).

**4.8.2.** Thus it is quite unlike the standard picture of Ved. *śrād dhā* which Benveniste 1969:174 describes as follows: “Cette croyance n’est jamais en un chose; c’est une croyance personnelle, l’attitude de l’homme vis-à-vis d’un dieu; non pas même une relation d’homme à homme, mais d’homme à dieu.”

**4.8.3.** In fact, the one institutional use of *crēdō* is in the realm of credit and loans, *of things, people, or money entrusted to someone with an expectation that they should or must be returned*. In Plautus’ *Asinaria* the slave character Libanus sings a hymn to Perfidy (*Perfidiae laudes gratesque habemus merito magnas* 544) and his co-slave Leonidas mockingly tallies up his evil deed in high-flown style (*quae domi duellique male fecisti*). Libanus admits the truth of his charges and responds with his owe epic list of Leonidas’ crimes (perhaps in a mock legal style 566–72):

*Fateor profecto ut praedicas, Leonida, esse uera:*

*Verum edepol ne etiam tua quoque malefacta iterari multa*

*Et uero possunt: ubi sciens fideli infidus fueris,*

*Vbi prensus in furto sies manifesto et uerberatus,*

*Vbi periuraris, ubi sacro manus sis admolitus,*

*Vbi eris damno <et> molestiae et dedecori saepe fueris,*

*Vbi creditum quod sit tibi datum esse pernegaris,*

“I admit it’s true what you say, Leonidas,

But your many misdeeds can also be listed truly:

when you knowingly broke trust with someone who trusted you,

when you were caught thieving red-handed and beaten,

when you perjured, when you raised your hands to the sacred,

when you were a cause of trouble and shame for masters,

When you denied that what had been entrusted to you had been given.”

where denying what was entrusted had been entrusted ranks as a major offense. In the *Cistellaria* the Slave Halisca who actions have led Phanostrata to be reunited with her daughter comments that (*Cis.* 760-1):



*HA. Aequomst <reponi> per fidem quod creditum est*

*Ne bene merenti sit malo benignitas.*

“It’s right that what has been entrusted be returned so that a kind act not turn out badly for a person who deserves well.”

At *Curculio* 494–5 the title character doubts whether he should trust the word of the pimp Cappadox about emancipating Planesium if she is proved to be freeborn.

*Egon ab lenone quicquam*

*Mancipio accipiam, quibus sui nil est nisi una lingua,*

*Qui abiurant, siquid creditumst?*

I should take anything formally from a pimp?! who have nothing of their own but their tongue, who swear falsely if anything is entrusted to them.

Here we find this same focus on the criminality of denying what is entrusted to you.

The same pimp Cappadox soliloquizes about the business of loans (*Curc.* 679-81). This is a difficult passage, which has been variously interpreted and emended, but here is a way I think it could be interpreted:

*Argentariis male credi qui aiunt nugas praedicant*

*nec bene nec male credi dico. id adeo ego hodie expertus sum*

(Lambinus: *nec bene nec male* for *nam et bene et male*)

*Non male creditur qui numquam reddunt, sed prorsum perit.*

“People who say it’s bad to trust in bankers are talking nonsense.

For I say there is no bad or good trusting. And I experienced that today.

It’s not badly entrusted to people who never repay you. It’s just gone.

The essence of 681 seems to be that the relationship of entrusting cannot have degrees. You can’t even call it bad entrusting when people aren’t going to repay you. It’s just throwing money away. We can extract a few key features of the credit relationship: violating it is a serious offense. Failing to return what has been entrusted may have bad consequences for the person who fails to return. A credit relationship is not gradable. It is either is or isn’t. The obligatory nature of loan repayment is explicitly stressed in the later discussion of Seneca (*De Beneficiis* 4.12) where he defines a “benefit” as a *creditum insolubile* but then goes on to distinguish a *beneficium* from an actual loan *cum dico ‘creditum’, intellegitur ‘tamquam creditum’ ... adicio ‘insolubile’, cum creditum nullum non solvi aut possit aut debeat*. “When I say *creditum* ‘loan’ I mean “as if a loan” and I add *insolubile* “which cannot be repaid” because every real loan can or should be repaid.” Legal works also emphasize this obligatory aspect.

4.9. The meaning ‘entrust’ must be quite old since it is only this meaning that allows the close secondary association with *dō*, *dare* ‘give’ which resulted in the creation of a subjunctive *creduis*, *creduit*, *creduat*, *creduam*, *creduas*, *creduat* (all in Plautus).

4.10. As Meillet pointed out in 1922 the verbal noun of *crēdō* is *fidēs*. (*Aul.* 581 *tuae fidei concredidi aurum* “I entrusted the gold to your trust) (addressed to the goddess, *Fides*”). Meillet even suggested, plausibly I think, that *fidēs* owed its shape to the one-time existence of *\*krēdēs*. < *\*krēd-d<sup>h</sup>eh<sub>1</sub>s*, though this can hardly be demonstrated.

4.10.1. Fraenkel 1916 showed that in Old Latin *fides* does not normally mean ‘faith’ or ‘belief’ but ‘trustworthiness’ ‘trust’ or ‘tutelage’ “worauf man sich verlassen kann, Garantie im weitesten Sinne.” To be sure this view cannot be maintained quite as rigidly as Fraenkel argued, but it does get at an important aspect of the word’s early use.

4.10.2. In another famous article, Heinze 1929 argued for double meaning ‘a trust relationship’, i.e. both trust which one puts in another and trustworthiness In Heinze’s summation (165): “Der Römer fühlt sich in seinem geschäftlichen, gesellschaftlichen, öffentlichen Leben durch seine *fides* in mannigfaltigster Weise seinen Mitbürgern gegenüber sittlich gebunden, andererseits durch ihre *fides*, ja auch die seiner Götter gesichert.”

4.10.3. Some idioms. *in fidem populi Romani venire* “to come into a *fides*-relationship of the Roman people”. To be in the client relationship was *in fide alicuius esse* (CIL 1<sup>2</sup>.583) and the *tessera hospitalis* supposedly from Fundi, a bronze fish, (CIL 1<sup>2</sup>.611, early 2nd cent. BCE) says *in eius fidem omnes nos tradimus et covenumis*.

4.10.4. *fidēs*, which perhaps replaces earlier *\*krēdēs*, is a key term describing trust, between borrower and lender, between conqueror and conquered, and between guest and host.

4.11. Thus, if Benveniste is correct in his description of Indic *śraddhā* there is a notable disconnect between Indo-Iranian and Italic meanings and the best one could do to save the strong Vendryes hypothesis would be to say that the term was laicized on the Italic side only to become a religious term again with the advent of Christianity (so Meillet 1922).

4.12. But Benveniste is wrong—or more fairly, he is describing the usage of the RV alone. There is a clear nonritual, nonreligious use for *śraddhā*. Thieme 1938, Heesterman 1993, and in most detail, Jamison 1996 have pointed out that *śraddhā* “expresses the trust or agreement between strangers in a hospitality relationship” (Jamison 1996:178)

RV 10.39.5

*tā vāṃ nū nāvyaṃ āvase karāmahe ’yāṃ nāsatyā śrād arīr yāthā dādhat*

Now we shall make you new (for you) to help us, o Nāsatyas, so that this stranger will place his trust (in us?). (J&B)

The Ashvins are being asked to inspire social trust in a stranger.

*Chāndogya Upaniṣad 4.1.1:*<sup>5</sup>

*jānaśrutir ha pautrayānaḥ śraddhādevo* [corrected from *śraddhādeyo*] *bahudāyī bahupākya āsa sa ha sarvata āvasathān māpayāṃ cakre sarvata eva me 'tsyantīti*

Jānaśruti Pautrayāna was (one) having *Śraddhā* as his deity, giving much, having cooked much (food). He had lodging places built everywhere (thinking) “Everywhere (people) will eat my (food).”

*MBh. 5.36.33:*

*śraddhayā parayā rājann upanītāni satkṛtim  
pravṛttāni mahāprājña dharminām puṇyakarmaṇām*

“According to the highest *śraddhā*, o king, (these) are presented as producing hospitality by those who possess *dharma* and meritorious actions, o very wise one.”

When a new king takes office he send the counterkings (*pratirājans*) gifts through the agency of the *satyadūtas* ‘messengers of truth’. They report the words of the king *abhyāṣikṣi rājābhūm* “I have been anointed. I have become king.” By accepting these gifts they become his allies (*mitra*-BŚS 12.19) “they place their faith in him who has been inaugurated”. *śraddhāsmāi susuvāṇāya dadhati* (MS 4.4.9). (Heeseterman 1957, 1993).

**4.13.1.** Another important aspect of Ved. *śraddhā*. The standard work on this word family is Hans-Werbin Köhler’s 1948 thesis first published in 1973. This work posits a meaning development from *Vertrauen* ‘trust’ to *Treue* ‘faith’ to *Hingabe* ‘devotion’ to *Opferfreudigkeit* or *Spendfreudigkeit* ‘joy in sacrifice or giving’. But a lesser known work, a response to Köhler by Paul Hacker (1963) uncovers what I think is a key aspect of the use of this word. Implicit in *śraddhā* is *a desire for obtaining something in return*. To take one example, which is especially instructive: RV. 7.32 is an Indra hymn by Vasiṣṭha. The hymn is loosely constructed but the unifying theme is evident. To quote Jamison and Brereton’s introduction: “Indra’s generous giving and our grateful receiving to an extent unusual even in an Indra hymn. Moreover, it is not only Indra’s giving that we seek: it is repeatedly emphasized that Indra helps and gives to mortals who themselves give, that is, the patrons of the sacrifice.” Stanza 14 reads

*kās tām indra tvāvasum ā mārtyo dadharṣati  
śraddhā it te maghavan pārye divī vājī vājam siṣāsati*

What mortal will dare against him who has you as his possession, Indra?

It is with trust in you, bounteous one, that on the decisive day the one vying for the prize *seeks to win* the prize.

---

<sup>5</sup> Examples and translations from Jamison 1996.

or ‘trusting in you’ if *śraddhā* is for *śraddhāḥ*. According to Hacker *śraddhā* is “ein stark wunschhaltiges, begehrendes Vertrauen oder Hoffen.” In RV 10.151, a hymn dedicated to a divinized *Śraddhā* and attributed to *Śraddhā Kāmāyani* ‘Trust descendant of *desire*’ we read in stanza 4 :

*śraddhām devā yājamānā vāyūgopā ūpāsate śraddhām hṛdayyāyākūtyā śraddhāyā vindate vāsu*  
Trust do the gods revere, sacrificing for themselves with Vāyu as their herdsman—trust, with a  
*purpose that comes from their heart*. By trust one gains possession of the good. (J&B)

which succinctly summarizes the nexus of trust and expectation of wish fulfillment and even localizes the desire in the heart. The point of trusting is not just blind faith but entering in to a relationship in which one expects to give and get good. From this meaning the later sense ‘desire’ prominent in Classical Sanskrit is a natural development.<sup>6</sup>

4.14. In the Old Irish period the picture is dominated by the Christian-oriented glosses where *creitid* and its derivatives occur abundantly in the modern Christian sense of ‘belief’. See Guyonvarc’h 1973. But there are some interesting secular passages in the Middle Irish literature. The Annals of Ulster for 1343 report that a certain Brian Ua Briain expelled the former king of Thomond Diarmait Ua Briain and was acknowledged by the nobles (AU 2.474.26): *Maithi Tuath Muman do chredium dó* literally “The nobles of Thomond for his trusting” with the old verbal noun of *creitid*. The situation of acknowledging a new king by acknowledging the trust relationship is reminiscent of the *rājasūya-*. In the *Cogad Gaedel re Gallaib* (186.28) a panegyric for Murchad son of Brian Boru calls him *int Ectoír int amlaigtech ar credium* “The likeness of Hector for *credim*”. Since Hector was a pagan and by all accounts Murchad was not notably religious, but the last man in Ireland who killed a hundred men in a day, the DIL is correct in taking *credim* in the meaning ‘trustworthiness’, ‘reliability’.

4.15. On closer examination, it is not so clear that this *Paradebeispiel* of the Vendryes phenomenon holds up in quite the way Vendryes imagined. We do not find consistent religious use of the term in the earliest Western branch. And yet we do find strikingly parallel functions in Latin, Vedic, and later Sanskrit. *\*kred(s)-d<sup>h</sup>eh<sub>1</sub>-* was undoubtedly a very important idiom in the stage of PIE represented by East-West agreements, but it was not primarily a religious term. The credit act was one of putting yourself or your property in the hands or power of another with the expectation that the other individual would give good in return. This credit act was predominantly between individuals often with a power differential (patron ~ client) and thus naturally could be extended to the relationship between men and gods as we see with so many other terms.

---

<sup>6</sup> Benveniste makes much the same point p. 137 “the god who has received the *śrad* returned it to the faithful in the form of support in victory.”

## 5. Further issues

5.1. What about lexical isoglosses between the Western languages and the two first outliers:

5.1.1. Anatolian-Tocharian-Italo-Celtic (Lat. *urbem condere* ‘city’ ~ Hitt. *warpa dai-* ‘enclose’, TA *warpi* ‘garden’, TB *werpiye*; Driessen 2001, Brachet 2014).

5.1.2. Anatolian-Italo-Celtic (Hitt. *arkuwai-* ‘plead a case’, Lat. *arguō* ‘assert prove’, Melchert 1998)

5.1.2.1. Sample of Anatolian religio-legal lexicon: ‘law’ *ḫandatar* ‘right’, *šāklāi-* ‘custom, rite’ *išhiul* ‘treaty, obligation’; ‘to judge’ *ḫanna-*, *ḫanneššar ḫanna-*; ‘witness’ *kutruwan-*; ‘confess’ *kanešš-*; ‘innocent’ *parkui-* lit. ‘pure’; ‘guilty’ *paprant-* lit. ‘impure’; ‘punish’ *zankilai-*; ‘god’ *šiuš-*; ‘libate’ *išpand-*; ‘belief’ *ḫā-*; ‘believing’; ‘worship’ *ḫaink-/ḫenk-*; ‘heaven’ *nepiš-*; ‘sacrifice’ *išpand-*; ‘magic’ *alwanzatar*.

5.1.3. Tocharian-Italo-Celtic: nothing really. TA *sākar*, TB, *sākre* ‘happy’, MW *hagar* ‘ugly’, Gaul. PN *Sacrobena*, Lat. *sacer?* But the Tocharian forms may be an Iranian loanword Pre-Khotanese \**sagra-* (Khot. *sīra-* ‘content, happy, satisfied’, MPers. *sgr*, etc.) is actually a better semantic match (Tremblay 2005).

5.1.3.1. Sample of Tocharian religio-legal lexicon: ‘law’ TB *pele*, *pelaikne*, TA *pal*, *mārkam-pal*; ‘judge’ TB *prekšanta*; ‘to judge’ TB *keš tā-*; ‘witness’ TB *reme*, TA *ram*; ‘confess’ TB *wināsk-* (mid.), TA *kāntsās-*; ‘guilt’ TB *peri*, TA *pare*; ‘innocent’ TB *snai-nāki* ← *nāks-* ‘reprove’; ‘guilty’ TB *trānkossu* ← *trañko* ‘sin’; ‘punish’ TA/TB *en-*; ‘god’ TB *ñakte* TA *ñkāt*; ‘libate’ TA/TB *ku-*; ‘belief’ TB *śraddhauññe*; ‘believing’ TB *takarške*; ‘trust’ TB *spantai yām-*, TB *pākw-*, TA *puk-* ‘rely on’; ‘worship’ TB *wināsk-*, TA *winās-*; ‘reverence’ TB *yarke*, TA *yärk*; ‘heaven’ TA/TB *eprer*; ‘sacrifice’ TB *telki*, TA *talke*; ‘magic’ TB *yātalñe*. In general the physiognomy is a poor match for both Italo-Celtic and Indo-Iranian. See Weiss fcm.

6. Contrast Kretschmer’s list of Latino-BSL. matches, which is strikingly downscale:

Lat. *faba* ‘bean’, OCS *bobŭ*, OPr. *babo*; Lat. *cāseus* ‘cheese’, OCS *kvasŭ* ‘fermented milk’; Lat. *secŭris* ‘axe’, OCS *sekyra*; Lat. *fornus* ‘oven’, RCS *grŭno* ‘cauldron’; Lat. *dōlium* ‘jar’, OCS *dely*; Lat. *rēte* ‘net’, Lith. *rėtis* ‘sieve’; Lat. *ansa* ‘handle’ Lit. *qšà*; Lat. *varus* ‘stye’, Lith. *viras* ‘pustule in pork’; Lat. *blatta* ‘cockroach’, Latv. *blakts*; Lat. *combrētum* ‘comfrey’, Lith. *šveñdrai*; Lat. *simpulum* ‘ladle’, Lith. *semù* ‘I scoop’; Lat. *merda* ‘shit’, Lith. *smirdėti*, OCS *smerdėti* ‘to stink’, Lat. *dormire* ‘to sleep’, OCS *drěmeti*; Lat. *glūtīre* ‘to swallow’, OCS *glŭtŭ* ‘throat’; Lat. *aurum* ‘gold’, Lith. *áuksas*. Lat. *mentīri* ‘to lie’, OPr. *mentimai* ‘we lie.’

## References

- Benveniste, Émile. 1969. *Le vocabulaire des institutions indo-européennes. 1. économie, parenté, société*. Paris: Minuit. English translation by Elizabeth Palmer 1973.
- Brachet, J.-P. 2014. “Lat. *urbem condere* : de la pratique au rituel.” *La fondation dans les langues indo-européennes : religion, droit et linguistique*, 25-37. Paris : L’Harmattan.
- Buchi, Éva and Wolfgang Schweickard (eds.). 2014. *Dictionnaire étymologique roman (DÉRom)*:

- Genèse, méthodes et résultats* Beiheft zur Zeitschrift für Romanische Philologie, Band 381  
Berlin: De Gruyter.
- Cathcart, Chundra, William Chang, Andrew Garrett, and David Hall. 2015. "Ancestry-Constrained Phylogenetic Analysis Supports the Indo-European Steppe Hypothesis." *Language*.
- Darmesteter, James. 1878. "Notes sur l'Avesta *Çrad-dhâ*, *Credo*, *Zaraz-dâ*." *MSL* 3:53–7.
- Driessen, Michiel. 2001. "On the Etymology of Lat. *urbs*." *JIES* 29:41–68.
- Dworkin, Steven. 2013. *A History of the Spanish Lexicon: A Linguistic Perspective*. New York: Ernout, Alfred. 1911. "Skr. *çrad-dhâ*, lat. *crēdō*, irl. *cretim*." *Mélanges d'indianisme, offerts par ses élèves a M. Sylvain Lévi*, 85–9. Paris, E. Leroux.
- Fraenkel, E. 1916. "Zur Geschichte des Wortes *fides*." *Rheinisches Museum* 71:187–99.
- Guyvonvarc'h, Christian-J. 1973. "Notes d'étymologie et de lexicographie gauloises et celtiques. 161. "Irlandais *cretem* 'foi'; gallois *credu*; cornique *creisy*; Breton *krediñ* 'croire'; irlandais *crábud*, gallois *crefydd* 'foi, dévotion'; irlandais *cretar*, gallois *creir*, Breton *kreir(ioù)* 'reliques'. *Ogam* 22-4:241–6.
- Hacker, Paul. 1963. "*śraddhā*." *Wiener Zeitschrift für die Kunde Süd- und Ostasiens* 7:151–89.
- Hackstein, Olav. 2012. "When Words Coalesce: Chunking and Morphophonemic Extension." In H. Craig Melchert (ed.), *The Indo-European Verb*, 87–104. Wiesbaden: Reichert.
- Heesterman, J. C. 1957. *The Ancient Indian Royal Consecration: the Rājasūya Described According to the Yajus Texts and Annotated*. 's-Gravenhage: Mouton
- Heesterman, J. C. 1993. *The Broken World of Sacrifice. An Essay in Ancient Indian Ritual*. Chicago: University of Chicago Press.
- Heesterman, J. C. 2008. "Zum Begriff der *śraddhā*." In Gerhard Oberhammer and Marcus Schmücker (eds.), *Glaubensgewissheit und Wahrheit in religiöser Tradition*, 217–36. Vienna: Österreichische Akademie der Wissenschaften.
- Heinze, Richard. 1929. "Fides." *Hermes* 64:25–58.
- Hill, Eugen. 2003. *Untersuchungen zum inneren Sandhi des Indogermanischen: der Zusammenstoß von Dentalplosiven im Indoiranischen, Germanischen, Italischen und Keltischen*. Bremen: Hempen.
- Jamison, Stephanie. 1996. *Sacrificed Wife/Sacrificer's Wife. Women, Ritual, and Hospitality in Ancient India*. New York: OUP.
- J&B = Jamison, Stephanie W., and Joel P. Brereton. 2014. *The Rigveda: the Earliest Religious Poetry of India*. New York: OUP.
- Kellens, Jean. 1974. *Les noms-racines de l'Avesta*. Wiesbadn: Reichert.
- Kloekhorst, Alwin. 2008. *Etymological dictionary of the Hittite inherited lexicon*. Leiden: Brill.
- Koncha, S.V. 2015. "К вопросу об арио-итало-кельтских лексических изоглоссах." In Н.Н. Нижнева (ed.), *Мир языков: ракурс и перспектива : материалы VI Междунар. Vol I. - Minsk: БГУ <http://elib.bsu.by/handle/123456789/120684>*
- Köhler, Hans-Werbin. 1973. *Śrad-dhā- in der vedischen und altbuddhistischen Literatur*. Wiesbaden:

- Steiner.
- Korn, Agnes. 2005. *Towards a Historical Grammar of Balochi*. Wiesbaden: Reichert.
- Kretschmer, Paul. 1896. *Einleitung in die Geschichte der Griechischen Sprache*. Göttingen.
- Meillet, Antoine. 1913. “À propos de Avestique *zrazdā*.” *MSL* 18:60–4.
- . 1922. “Latin *credo* et *fides*.” *MSL* 22:215–8.
- Melchert, H. Craig. 1998. “Hittite *arku-* ‘chant, intone’ vs. *arkuwāi-* ‘make a plea’.” *Journal of Cuneiform Studies* 50:45–51.
- Nober, Peter. 1958. “*adzradā* (*Esdras* 7, 23).” *Biblische Zeitschrift*, N.F., 2 1:134–8.
- Ozoliņš, Kaspars. 2015. *Revisiting Proto-Indo-European Schwebeablaut*. Ph.D. dissertation, UCLA.
- Polomé, Edgar C. 1988. “Indo-Aryan Lexical Correspondences with Celtic and Italic.” *Das sprachtheoretische Denken Eugenio Coserius in der Diskussion: sprachliche Variation, Sprachgeschichte, Sprachtypologie: studia in honorem Eugenio Coseriu* 1 213–22.
- Ramelli, Ilaria. 2000. “Alcune osservazioni su *credere*.” *Maia* 2000 52:67–83.
- Rix, Helmut. 1995. “Griechisch *ἐπίσταμαι*. Morphologie und Etymologie.” In Heinrich Hettrich, Wolfgang Hock, Peter-Arnold Mumm et al. (eds.), *Verba et Structurae. Festschrift für Klaus Strunk*, 237–47. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.
- Rohlf, Gerhard. 1931. “Gallo-italienische Sprachinseln in der Basilicata.” *ZRPh* 51:249–79.
- Sandoz, Claude. 1973. “La correspondance lat. *crēdō* : skr. *śraddhā-* et le nom indoeuropéen du ‘coeur’.” *Arbeitspapiere Institut für Sprachwissenschaft Bern* 10:1-8.
- Schmidt, Johannes. 1872. *Die Verwandtschaftsverhältnisse der indogermanischen Sprachen*. Böhlau.
- Schindler, Jochem. 1979. Review of Kellens, Jean. 1974. *Les noms-racines de l’Avesta*. Wiesbaden: Reichert, *Sprache* 25.1.
- Schrijver, Peter. 1991. *The Reflexes of the Proto-Indo-European Laryngeals in Latin*. Amsterdam: Rodopi.
- Schulze-Thulin, Britta. 2001. *Studien zu den Urindogermanischen o-stufigen Kausativa, Iterativa Und Nasalpräsentien im Kymrischen*. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- Specht, Franz. 1939. “Sprachliches zur Urheimat der Indogermanen.” *Zeitschrift für vergleichende Sprachforschung* 66:1–74.
- Steer, Thomas. 2013. “Uridg. *\*d<sup>h</sup>(e)ǵ<sup>h</sup>ōm* ‘Erde’ und *\*ǵ<sup>h</sup>(e)īōm* ‘Winter’. Eine kurze Revision der Stammbildung.” *Indogermanische Forschungen* 118:55–92.
- Szemerényi, Oswald. 1970. “The Indo-European Name of the ‘Heart’.” In V. Rūķe-Draviņa (ed.), *Donum Balticum: To Professor Christian S. Stang on the occasion of his seventieth birthday, 15 March 1970*, 515–33. Stockholm: Almqvist and Wiksell.
- Tavernier, J. 2007. *Iranica in the Achaemenid Period*. Leuven: Peeters.
- Thieme, Paul. 1938. *Der Fremdling im Ṛgveda*. Leipzig.
- Tremblay, Xavier. 2004. “Die Ablautstufe des Lokativs der akrostatischen Nomina. Apophonica III.” In Adam Hyllested, Anders R. Jørgensen & Jenny H. Larsson (eds.) *Per aspera ad*

- asteriscos. Studia indogermanica in honorem Jens Elmegård Rasmussen sexagenarii Idibus Martiis anno MMIV, 573–89.* Innsbruck: Institut für Sprachen und Literaturen.
- Vendryes, Joseph. 1918. “Les correspondances de vocabulaire entre L’indo-iranien et l’italo-celtique.” *MSL* 20:265–85.
- Weiss, Michael. 2015. The *rite* Stuff: Lat. *rite*, *ritus*, TB *rittetär*, TA *ritwatär*, and Av. *raēθβa-*.” *Tocharian and Indo-European Studies*. 16:181–198
- . 2017. “King. Some Observations on an East-West Archaism.” In Bjarne Simmelkjær Sandgaard Hansen et al. (eds.), *Usque ad Radices: Indo-European Studies in Honour of Birgit Anette Olsen*, 793–800. Copenhagen: Museum Tusulanum Press.
- . fcm. “Tocharian and the West.” In a forthcoming festschrift.