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Evaluating Semantic Shifts: The Case of Indo-European *(s)meuk- and Indo-Iranian *muc̄-[1]

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1. INTRODUCTION

Progress towards a general theory of semantic change has always been slow, and thus an independent characterization of what constitutes a "natural" semantic change has proven somewhat elusive. It is not clear, for instance, if there is a well-enough articulated theory of lexical semantics to allow for conclusions about changes in the signified associated with a given signifier, and if there is such a theory, it has not been well-integrated into historical studies. Nor is it clear that there is any sort of independent corroboration available to back up any tentative conclusions one might reach about the naturalness of a given semantic change.

The situation is different with change in other components of the grammar. For instance, sound change has phonetics as a point of reference to provide guidance on naturalness, as work such as Ohala 1993 has demonstrated. Morphological change has its own set of naturalness constraints based on assumptions about human cognitive faculties, as is evident in work such as Anttila, 1989 and Dressler et al. 1987. Finally, syntactic change has the benefit of a well-worked-out theory[2] that can provide the limits on possible syntactic changes, as the work of Lightfoot, e.g. Lightfoot 1979, 1991, among others, has shown.

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[1]This paper was conceived, researched, and drafted while the second author was at Ohio State, though she is now at the Muktabodha Indological Research Institute in Ganeshpur, India. A version of this paper was presented at the annual meeting of the Linguistic Society of America in Los Angeles, in January 1999. We would like to thank Richard Janda, Robert Rankin, Martha Ratliff, and Elizabeth Traugott for helpful comments on previous versions. All remaining errors are our own.

[2]Indeed, in the case of syntax, we might well say that there are *several* well-worked-out theories!

To some extent, what has made the task so tricky with regard to semantic change is that so much of what goes on with changes in the meaning of a word is tied to the socio-cultural setting for a language (cf. Fortson 1999). The classic example of English *bead* changing in meaning from 'prayer' to 'small round glass object' is a case in point, for it is only in the context of counting of prayers on rosaries that the reanalysis that led to this innovation in the *signifié* for the *signifiant bead* makes sense.

Even the recent attempts within what has come to be called "grammaticalization theory" to invest changes in the grammatical status of morphemes with a cognitive dimension that correlates with the typical changes from concrete to abstract meanings, from lexical to grammatical meanings, etc. would founder on examples such as *bead.*

As a result, much of traditional work on semantic change has used the methodology of giving primacy to matches in form, and letting semantic mismatches between putative cognate forms be handled by searching for parallels, on the assumption that what can happen (presumably) independently twice or more has a chance of being a natural development, a better chance really than any isolated unique events in this domain.[3]

Actually, the same methodology is used in investigations into change in other components, even though they have other ways of gauging naturalness, as noted above. That is to say, working towards understanding of change in *any* component requires some searching for parallels -- the more examples we find of *t* > *ts* > *s* before *i*, or of the elimination of allomorphy in paradigms, the safer we feel in believing such changes to be natural, and thus ones that a theory of change ought to be able to account for, and if it turns out that there is corroborating evidence in articulatory phonetics, or in X-bar theory, or whatever, so much the better.

In this paper, we present the results of an investigation, largely following this traditional methodology of looking for parallels to get a handle on the wide range of semantic extension, into the semantics of two Indo-European roots. Using such a methodology has proven very fruitful in opening up a particularly interesting line of inquiry into the semantic history of these two roots. Thus, to the extent that these findings have some value, they provide some justification for the utility of this method; it may be an imperfect methodology, but it can be useful. At the same time, though, the limitations of this methodology emerge from these studies.

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[3]Sihler (1995:163) offers a good example of such methodology. In talking about the Proto-Indo-European root for 'snow', as in English *snow*, Latin *nix*, etc., he says that the Vedic root "*snih*-, occurring in Skt. *o*-grade *o*-stem *sneha*- and a sizable family of derivatives, recontructs flawlessly to a root *sneyg^{w}h-. But the meanings — 'be sticky, viscid; feel affection for', *sneha*-, 'greasiness; love(!)' — are hard to reconcile with 'snow'. Nevertheless, given the quality of the formal fit, the connectoin would be likely however improbable the semantics; and besides there are actual In[do-]Ir[anian] attestations of the usual 'snow' sort in Av[estan] *snaēza*- v[er]b., Prák[rit] *sineha* n[oun]". We are grateful to Rich Janda for bringing this passage to our attention.

2. A CASE-STUDY: PROTO-INDO-EUROPEAN *(s)meuk-

The first part of our case-study is the root *(s)meuk- This root shows a broad semantic range across the whole family, taking in (so Pokorny 1959, Mayrhofer 1956) forms with meanings pertaining to SLIPPERINESS (Pokorny's meaning group A) and to RELEASE (Pokorny's group B) that are rather semantically divergent, e.g. Latin *mūcus* 'mucus', *ï-mungere* 'blow one's nose'; Sanskrit *muc-* 'release, loosen'; Lithuanian *maûkti* 'strip off, wipe'*mùkti* 'slip away, escape', Latvian *mukt* 'flee, disengage'; Tocharian A *muk-*, Tocharian B *mauk-* 'let go, give up, abandon'; Greek ἀπο-μύσσειν 'wipe the nose'. There are also forms with clear intial *s-* that apparently belong here, such as Greek σμύσσεται 'wipes the nose' and Old Church Slavonic *smykati s´* 'creep', and provide a basis for a reconstruction *smeuk- that goes along with the form *meuk- that other forms point to; we thus cite the root simply as *(s)meuk-.[4]

Moreover, the derivatives of *(s)meuk- in individual languages also show a broad semantic range; our particular focal point here is Sanskrit *muc-*,whose meanings appear to mostly fall on the RELEASE side of *(s)meuk-, though some of the Classical Sanskrit meanings admittedly may not obviously fit that characterization, a point taken up in greater detail later on. For Vedic Sanskrit, a basic meaning for *muc-* has been given variously as 'untie, unfasten, loosen' (Grassmann 1872, 'losmachen, losbinden') or 'strip off' (Mayrhofer 1956, 'abstreifen'), and Grassmann 1872 gives the meanings for the active voice of 'untie, loosen, unfasten, set free; release (streams); undo, dissolve; cause to disappear' and for the middle voice, 'disengage'. For Classical Sanskrit, Monier-Williams 1899, MacDonnell 1929, and Apte 1912 give a range of meanings covering 'loosen, set free, release, let go, let loose, deliver; relax (the throat); slacken (reins); let live, spare; leave, abandon, quit, give up; quit (the body), die; set apart; dismiss, send away; cast, throw, hurl, discharge; emit, drop, shed, let fall; utter, give forth; give away, grant, bestow; put on (middle voice); void (excrement); sacrifice; deceive, cheat'.

Sanskrit also offers the possibility of the addition of adverbial modifiers (so-called "preverbs") to roots, and with *muc-*, various preverbs allow the root to cover an even greater conceptual space, including some highly specialized senses. For Vedic, the sense of 'loosen' shows several instances with preverbs specialized to meanings of 'loosen (a mantle or garment) by motion' (e.g. RV 1.116.10: object *drapsám* 'garment', preverb *pra*) and the opposite 'put on (a garment)' (e.g. RV 4.53.2: object (again) *drapsám*, preverb *prati*). For Classical Sanskrit, combinations as in Vedic occur, as well as plus 'put on (garments, shoes)', with the preverb*upa-*, and 'take off (shoes)' with the preverbs *vi-ava-*.

There is relevant evidence bearing on the meaning of Sanskrit *muc-* from Iranian. As it happens, there are no verbal forms that survive in Iranian from Proto-Indo-Iranian *muč-, but some frozen, isolated derivatives occur, and interestingly, these show, as do forms in later Sanskrit, foot-related

[4]The presence versus absence of *s-* in these forms is of course a significant concern, one for which we offer no explanation, except to note that it seems to be part of the same well-known but poorly understood phenomenon, the so-called "*s*-mobile", that numerous other roots in Indo-European show.

specializations: Avestan (Old Iranian) *fra-muxti* 'taking off of footwear', *paiti-.muxta-* 'having shoes'; Pahlavi (Middle Iranian) *mōzak* 'boots', *mozag* 'shoe'; Modern Persian *moza* 'leather socks'. These forms, as the only testimony for this root on the Iranian side of the Indo-Iranian branch to which Sanskrit belongs, allow for the interesting hypothesis that the foot specialization may be of Proto-Indo-Iranian age, despite the lateness of its emergence in Sanskrit, but such an hypothesis does not really explain this specialization. Alternatively, these Iranian forms could be independent instances of the foot-specialization, and thus provide parallels to the development in later Sanskrit, about which more below.

3. SOME QUESTIONS

The facts in §2 raise several interesting questions. The first is a general one, namely whether all the various Indo-European meanings — the "slippery" ones as well as the "release" ones — are really to be related to a single root, and even if they can be combined (as suggested above), whether they should be combined or instead separated into two distinct but homophonous roots. Relevant here is the suggestion of Grassmann 1872 that two different "Grundbedeutungen", and thus possibly two distinct roots, are involved, based on the fact that Old Church Slavonic forms that seem to be related have meanings pertaining to 'moistness' (*moknàti* 'become moist', *moãiti* 'moisten', *mok-rъ* 'moist').

Two other questions pertain to some of the specialized senses discussed above. In particular, can the opposite meanings of Sanskrit *muc-* with garments, 'put on' as well as 'take off', be reconciled with one another? Also, is it possible to make sense of the specialization to foot-related meanings that some instances of *muc-* in Sanskrit show, and to determine their relation to the meanings of Iranian *(s)muã-*?

Finally, a question having to do with a specialized meaning but similar to the general question of how many *(s)meuk-'s there are arises with the meaning 'cheat' found for *muc-* in later Sanskrit. In particular, is the 'cheat' meaning from the same root as the 'release' meanings, or is this *muc-* instead an alteration of a different root *mac-*, as Monier-Williams 1899 suggests?

4. TOWARDS SOME ANSWERS — SOME PARALLELS

For some of these issues, a tentative answer can be arrived at simply by attempting to provide a rationale for the developments in question. For instance, with regard to the general question of whether the basic meanings of derivatives of *(s)meuk-, the SLIPPERY and the RELEASE meanings, can be joined into a single meaning, reasoning alone suggests a formulation that covers both apparent senses of *(s)meuk- in a unified way: 'set something into a (relatively) frictionless motion; cause a change of state or position through a medium with minimal resistance'.

Similarly, to deal with the issue of opposite meanings, the 'put/take on/off' meanings can be attributed to the contribution of the preverb modifiers, and make sense in combination with various preverbs. For instance, *vi-muc-*, meaning 'take off' has the preverb *vi-*, whose usual meaning involves dispersal away from or division; on the other hand, *prati-muc-* 'put on' has the preverb

prati-, whose usual meaning involves direction towards. This account is in keeping with the above suggestion of a basic sense for PIE *(s)meuk-, and thus presumably for Sanskrit *muc*- originally at first, having to do with unimpeded motion, that is, more a matter of the manner of motion than the direction or intensity or the like — the preverbs then modify this basic sense by giving a directionality, 'motion onto' vs. 'motion off of'.

Even so, being able to come up with rationalizations such as these is not the same as showing that meanings of these sorts can be instantiated in natural language; thus an empirical basis is needed for any answers to any of these questions. Indeed, such a basis can be found by the traditional methodology of looking for parallels for each of the semantic developments that give cause for the questions in §3, and importantly, there are several rather direct parallels, some of them quite striking.

In particular, with regard to the semantic specialization to foot-related meanings, once the meanings of 'put on/take off garments' are available, a specialization to a particular type of apparel, namely apparel for the feet, is not unthinkable a priori, and moreover it has parallels, both within Indo-European and outside of Indo-European. Within Indo-European, the root *eu- 'put on' (Pokorny 1959:346) is the basis for the semantically general Armenian *aganim* 'put on clothing' and Latin *(ind)-uō* 'put on (a garment)' as well as two foot-specific forms, Avestan *aoθra* 'shoes' and Lithuanian *aûti* 'to put on shoes'. If the original meaning is the broad one that Pokorny suggests, then the Avestan and Lithuanian forms show a specialization in meaning similar to the Indo-Iranian ones with *(s)meuk-. It is true, though, that Beekes (1995:36) gives the specialized sense of 'put on footwear' as the Proto-Indo-European meaning of *eu-; if he is right, then the general sense found in Armenian *aganim* and Latin *(ind)-uō* would be the innovation — a broadening — and not the specialization seen in the Avestan and Lithuanian forms. Still, in that case, though there would no longer be a direct parallel, these forms taken together would still constitute a family of words in which both footwear-specific meanings and general dressing meanings coexist, suggesting a naturalness to connections between such meanings.

Moreover, there is a parallel outside of Indo-European, suggesting a naturalness to the posited specializations with *(s)meuk-. In Turkish, the verb *çekmek* means 'to draw, pull, tug; put on (clothing)' and it has a derivative *çekme* which means 'trousers' but also, significantly for the case in question here, 'boots'. The basic sense of the derivative is apparel that one draws on oneself, and that meaning apparently has been specialized to a type of foot-apparel, as with *(s)meuk- in Indo-Iranian. This example, by the way, raises the possibility of a Central Asian semantic extension of PUT ON —> PUT ON SHOES that may have diffused from Iranian into Turkic, or vice-versa, though it could very well just represent an independent extension in each of these groups.

5. A VERY STRIKING PARALLEL: ENGLISH *slip* (PIE *(s)lei-b-)

The search for similar semantic changes yields a strikingly uncanny and thorough-going parallel for the extensions of meaning seen with *(s)meuk-

and Sanskrit *muc-* . In particular, the English verb *slip* (from PIE *(s)lei-b-[5]) and its derivatives offer parallels to every potentially problematic aspect of the semantics of *muc-* and PIE *(s)meuk- and thus provide a basis for further answers to the questions raised above in §3.

First, just like PIE *(s)meuk-, English *slip* has both 'slippery' and 'release' meanings e.g. (from the *Oxford English Dictionary*) it can mean on the one hand 'slide or glide especially on a smooth surface' and on the other hand also 'elude or evade, escape from, get loose from (e.g. a collar or halter)'.[6]

Second, just like Sanskrit *muc-*, English *slip*, when used with different adverbials with a garment or the like as the object, has opposite meanings, in the verb-particle pairs *slip on* vs. *slip off*.[7]

Third, just like Sanskrit *muc-* and Iranian *muc̆-, English *slip* shows, via a derivative, foot-related semantics, in the form *slipper*. This connection holds whether *slipper* is derived as 'something you slip your foot into' or instead as 'something you can slip around (= slide or move freely) in', for the exact derivation is not unambiguously clear.[8]

Finally, just like Sanskrit *muc-*, English *slip* even has a 'cheat' sense, in the meanings 'to insert or introduce gently or surreptitiously'; 'palm a card; cheat in cards in this manner'; relevant also here are the slang phrases *to* ***slip*** *(something) over (on) (someone), to* ***slip*** *a fast one over by (someone)*

These facts about *slip* and the remarkable similarities it shows semantically with Sanskrit *muc-* and PIE *(s)meuk- allow for some further answers to the questions raised in §3. In particular, regarding the question again of the opposite meanings, *slip* provides an additional parallel, and regarding the question again of the foot-specialization, *slip* once again provides an additional parallel. From the standpoint of the traditional methodology for exploring and explaining semantic change, the more parallels that are found the stronger the case.

Regarding the question of whether the two main senses of *(s)meuk- should be separated, *slip* shows that the same combination of basic meanings recurs in an entirely different root, so the meanings alone are not reason enough to think (as Grassmann suggested) that there must be two roots intertwined in *(s)meuk-.

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[5]Some forms and apparent derivatives of *slip* may be the result of borowings from Middle Low German or Middle Dutch, while others are inherited from Old English. In any case, all the relevant forms here reflect a development out of a PIE *(s)lei-b-.

[6]As for "slippery' meanings, there is also the *slip* meaning 'slime, paste', especially that used in making pottery. Etymologically, however, this noun seems to derive from a PIE *sleub(h)-, and thus of a different origin from the verb *slip*. Still, in terms of how words with a formative *slip-* cluster semantically in Modern English from a purely synchronic standpoint, the noun *slip* forms an interesting and suggestive combination with the verb.

[7]There is also the English verb pair *don* and *doff*, where the same verb, originally *do*, together with different directional adverbials (i.e. *do on* and *do off*), has yielded two verbs with opposite meanings pertaining to dressing.

[8]There is also the adjective *slipshod*, originally meaning, presumably, something like "having shoes that slip around" but now simply 'sloppy; careless', which embodies a connection between *slip* and shoes. We thank Bob Rankin for bringing this to our attention.

Finally, regarding what to make of the 'cheat' meaning of *muc-*, *slip* shows that separating *muc-* 'cheat' from other *muc-*'s need not be done if this decision is based solely on the disparity in meaning (which apparently was Monier-Williams' basis).

The extent of the parallel between *slip* and *muc-* is especially striking, for the agreement covers virtually all aspects of the words' meanings. This makes the particular conjunction of meanings seen in these words seem all the more natural, for it is not just one isolated piece of the semantic picture but a whole nexus of meanings.

6. CONCLUSION

By way of conclusion, a comment on methodology is in order: as noted in §1, searching for parallels is a part of all attempts at gaining a handle on naturalness for any component of language, and, as here, it can be a productive strategy in comparative semantics that can lead to interesting results, even if it is necessarily carried out in a seemingly ad hoc, case-by-case basis, and does not lead in itself to a general theory of semantic change. Still, as a method, it also has its limits, for even though there is a parallel, it seems that the 'cheat' meanings of *slip* are tied up in part to the culture-specific context of playing cards, and so may not be so directly a parallel to this sense of Sanskrit *muc-* as one would like.

That is, slipping while one is walking or moving in an unimpeded manner is likely to be part of the universal repertoire of human activities, so parallels in those domains might well be candidates for naturalness in semantic development, but card-playing per se, while widespread, is not a necessary part of human existence, and so semantic changes that are linked to that context are more likely not to be repeatable, or if so, are more likely to be accidental rather than evidence of something "natural".

This case-study, then, does not really vindicate the methodology, but it does show that the search for parallels in semantic developments can be a productive way of proceeding, in at least some circumstances.

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