

The “*Urbi et Orbi*”-Rule” Revisited

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This paper reassesses the evidence for a phonological rule that the author proposed in 1998 to account for the sequence *-rb-* in four Latin words and the Umbrian cognate of one of them: *urbs*, *orbis*/**urfeta**, *masturbāri*, and BERBER. Many of C. Michiel Driessen’s criticisms of this rule in *JIES* 29 (2001) are shown to be unfounded.

The Latin word *urbs* notoriously lacks clear cognates in other Indo-European languages, and it is very much to the credit of C. Michiel Driessen that in a paper published in this journal in 2001, “On the Etymology of Lat. *urbs*,” he presents a neat picture of the semantic development of this noun from *‘enclosed area for taking auspices’ to ‘city (notably Rome).’* This in turn allows him to compare the Umbrian hapax *uerfale* ‘*templum augurale (vel sim.)*’ and, further afield, such forms in Anatolian and Tocharian as Hitt. *warpa-* and Toch. A *warp*, both of which mean ‘enclosure.’ A link between *urbs* and *uerfale*, whose basic sense is clear from its context (*Tab.Ig.* VIa8; see now Rix 2002: 54), was already tentatively suggested by Gerhard Meiser, who would, however, also maintain one common view of the Umbrian, namely that it is connected with Lat. *uerbum* ‘word’ via a Proto-Indo-European preform **u(e)rd^h*-.¹ As Driessen notes, though, adducing the extra-Italic

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¹Meiser (1998: 64) writes, “*urbs* ‘Stadt’ (**urd^hi*- zu umbr. *uerfale* ‘abgegrenzter Bezirk’ < **urd^h-* ?).” Untermann (2000: 843f. s.v. *uerfale*)

forms that have the cluster *-rp-* means that if indeed all these words belong together—which certainly is very attractive semantically—then the root in question must rather be **u(e)rb^h-*.² Since the formal discrepancies among the preforms are not especially grave (Lat. *urbs* would reflect either **uorb^h-i-* or **urb^h-i-*; Umbr. *uerfale* would come from **uerb^h-eh₂-*; and Hitt. *warpa-* and Toch. A *warp* would derive from **uorb^h-o-*), Driessen's **uerb^h-* (whatever exactly its original sense may be and whether or not it contains a root extension³) compares favorably to all prior etymologies.⁴

One of these prior etymologies is my own. In a 1998 paper in *Harvard Studies in Classical Philology* titled “Testimonia ritici Italici: Male Genitalia, Solemn Declarations, and a New Latin Sound Law” (Katz 1998b), I proposed that *urbs* goes back to the same morphologically unusual feminine root noun

surveys the literature on the Umbrian word, suggesting that it may be a locative or ablative singular rather than (as is usually said) a nominative; to the references he cites, add now Rix (2000: 202f., with n. 12), who writes, “*Uerfale* non è derivato dalla parola che corrisponde al lat. *verbum*, come vuole la vulgata, ma da **werf(u)-* < **wert-t(u)-* ‘luogo di sosta’ (cfr. lat. *versari* ...)” (203 n. 12).

²For the connection between Hitt. *warpa-* and Toch. A *warp*, see in the first place Melchert (1984: 157). Driessen (2001: 64-66) supplies some textual and bibliographical details of the other (possibly) relevant forms in these branches, notably a host of Tocharian words with meanings like ‘garden’; he also points to HLuv. (*273) *warpi-* ‘temple precinct (???)’, but it is likely that the Luvian word means rather something like ‘skill’ and is therefore irrelevant (see especially Hawkins & Morpurgo Davies 1986: 76f., as well as now Hawkins 2000: Index s.v. *warpi-* [p. (2.)631]). Note also the possibility that the Lydian verb *warbtokid* means ‘enclose’ and is “based on a (virtual) **wVrP-to-*” (Melchert 1994: 371).

³Regardless of what **uerb^h-* in the first place means (‘enclose’? or does this in fact conceal an older sense ‘oversee, observe,’ as Driessen 2001: 66 tentatively suggests, referring to Toch. B *yärp-?*), it seems likely that it is a root extension (**uer-b^h-*) of a root **uer-*; compare Melchert (1984: 157). I note that M. Kümmel in Rix (2001: 684f. and 685f. s.v.) catalogues the entries 1. **uer-* ‘aufhalten, (ab)wehren’ (cf. Gk. *ἔρυσμαι*) and the somewhat less-obvious 3. **uer-* ‘beobachten, wahrnehmen’ (cf. Lat. *uerēri* ‘revere; fear,’ supposedly from **‘ängstlich beobachten’*).

⁴Driessen (2001: 60 and esp. 65f.) points out that already Lane (1938: 29 [reprinted in Arndt *et al.* 1967: 11f.]) made the passing suggestion that Toch. A *warp* might be related to *urbs*. Brachet (2004) now bolsters Driessen’s etymology with the idea—a fine one, to be sure—that Hitt. *warpa dai-* and Lat. *urbem condere*, both (*)‘délimeter un périmètre,’ go back to the same collocation, which he sets up as PIE **ur^h- d^heh₁-*; he comments usefully on a number of points of Proto-Indo-European and Latin morpho-phonology.

b^hrg^h*- ‘hill-fort’ presupposed by OIr. *brí*, gen. *breg* ‘hill’ and such Germanic forms as Germ. *Burg* ‘fortress’ (Katz 1998b: 203–208).⁵ This idea, which builds on an unpublished suggestion of the late Warren Cowgill that I first learned from Stanley Insler, depends crucially on a new sound law that involves the notoriously tricky voiced aspirates, a rule that I dubbed (perhaps unfortunately) the “‘Urbi et Orbi’-Rule”: PIE **-RG^h*- develops into Italic. **-rf-*, whence *-rb-* in Latin.⁶ In support of this law, I adduced three further Latin examples, as well as one from Umbrian: *orbis* ‘disk, globe’ and the related Umbrian hapax **urfeta (*Tab.Ig.* IIb23; Rix 2002: 51), which designates something that a sacrificer holds in his hand while pronouncing the dedication of a bull-calf to Jupiter Sancius⁷; *masturbāri* ‘masturbate’; and the obscure form BERBER, found a number of times in the *Carmen Arvale*, an infamous inscription from A.D. 218 with highly archaic linguistic features.

It was clear to me when I wrote the paper—as it should be clear to anyone who reads it—that the most problematic example of the sound law is *urbs* itself, which I dealt with first largely as an homage to Cowgill. The fact is that we would have expected **furb-* or **burb-*, and it is only with a certain difficulty that I could explain away the loss of the initial consonant (for my attempt, see Katz 1998b: 205f.). In this respect, at least, Driessen’s etymology, in which the initial *u-* comes “for free,” is obviously more attractive than both mine and what is perhaps the most commonly assumed of the traditional ideas (see, e.g., the discussion in Katz 1998b: 207 n. 64), namely that *urbs* goes back via (unattested) **hurbs* to **G^hor-d^h-i-* and is therefore almost exactly cognate with such words as OCS *gradŭ* ‘city’ and Eng. *yard* (< OE *geard* ‘enclosure’). All in all, I am happy to concede that Driessen’s etymology is at least as good as, and probably better than, Cowgill’s and mine, though the latter does have the attraction of linking the feminine “mixed” *i*-stem *urbs* to the structurally similarly odd feminine

⁵Note also Av. *bərəz-* ‘high; mountain (?)’ and perhaps, via a “Pelagian” (?) substratum, Gk. *πύργος* ‘(fortified) tower.’

⁶For an interesting and innovative overview of the development of the voiced aspirates in Italic, see now Stuart-Smith (2004).

⁷The Umbrian form **urfeta** is morphologically, but clearly not semantically, comparable to Lat. *orbita* ‘track made by a wheel, rut.’

root nouns in Germanic and Celtic.⁸

It should not need saying that even if Driessen is right about *urbs*, this does not do away with the “*Urbi et Orbi*-Rule”—only with the “*Urbi*.” But in what I assume is an attempt to score a sort of scholarly knockout, Driessen (2001: 52-60) mounts a lengthy—and, for his argument, entirely unnecessary—attack on the other etymologies that I put forth. Driessen is of course welcome to object to my derivations of *orbis*/**urfeta**, *masturbāri*, and BERBER (I, for one, certainly do not categorically rule out the possibility that they are wrong), but it is disconcerting that he does not report even one original idea about these words and gives virtually no new information (the exception is the claim, which goes back to M. Grošelj and A. J. Van Windekens, that *orbis* has a cognate in Tocharian; see immediately below); just as disconcerting, furthermore, is that his statements are in a number of places seemingly deliberately misleading. In what follows, I have the modest aim of reassessing as honestly as I can the plausibility of my three examples of the “*Urbi et Orbi*-Rule” aside from *urbs* and, in so doing, adding a number of observations of possible linguistic and cultural interest.

Let us begin with *orbis*. My claim about this word is that it comes directly from the Proto-Indo-European word for ‘testicle,’ **h₁(ó)rgʰ-i-* (a probable derivative of **h₁erǵʰ-* ‘mount (sexually), impregnate (*vel sim.*)’), which is reflected rather more obviously in Gk. ὄρχις and designations of this body part in numerous other branches.⁹ The idea that *orbis* and ὄρχις are

⁸On the origins of the Latin type, some examples of which certainly do go back to old root nouns, see, e.g., Sihler (1995: 318f.).

⁹The classic article on this noun and its relationship to the root seen in Hitt. *ark-* ‘mount (sexually, of animals)’ is Watkins (1975 [= 1994: (2.)520-535]), and see also Puhvel (1975 [= 1981: 290-292 + additional notes on p. 416] and also 1984: 142f. and 147f. s.v. [2.] *ark-* and *argatiya-*) and M. Kümmel in Rix (2001: 238f. s.v. **h₁erǵʰ-*); there is some evidence for *Gutturalwechsel*, so the root is perhaps better cited as **h₁erGʰ-*. Recent literature includes García Ramón (2000-2001: 431-436) and Carling (2004), the latter of whom, however, reconstructs ‘testicle’ as “**Horǵʰ-i-*” (96) and the root of, e.g., Gk. ὀρχέομαι ‘dance’ as **h₃erǵʰ-* (see p. 100); see also Polomé (1998), D. Q. Adams (1999: 94f. s.v. *-erkatse* as well as in Mallory & Adams 1997: 507f. s.v. “sexual organs and activities” [note also the references to various “**h₄*” (!)-initial forms listed in the Index on p. 667]), and Petit (2004: 1-4). Oettinger (2005)

exact cognates—which Cowgill considered as well, but never published (see Katz 1998b: 207)—is not at all to Driessen’s liking, and he dismisses it rather quickly, favoring instead the link, championed by Van Windekens, between *orbis* and Toch. AB *yerpe** ‘disk, orb’¹⁰ via a root **h₁erb^h*- whose meaning he does not specify.¹¹ Admittedly, the possible Tocharian cognate had escaped both my notice and that of Gert Klingenschmitt, whose 1980 derivation of *orbis* from **h₂(o)r-d^hh₁-i-* ‘felloe’ has received rather more attention, though not from Driessen.¹² But a (seemingly unique) connection between *orbis* and *yerpe*, while certainly possible, is not in fact morpho-phonologically straightforward since the former would have to go back to **h₁orb^h-i-* (or, possibly, **h₁oIrb^h-i-*, with shortening of the vowel by Osthoff’s Law) and the latter to **h₁ērb^h-o-*, with a lengthened grade that Driessen cannot account for especially satisfactorily¹³; in addition, the vagaries of Tocharian

now gives the original meaning of **h₁erG^h*- as ‘nach Art eines männlichen Leittiers herumlaufen, männlich-aggressiv umherlaufen’ and writes, quite correctly in my opinion, that its “Zugehörigkeit zum idg. Wort für ‘Hode’ ist möglich, wenn auch nicht sicher” (470).

¹⁰The form in Tocharian A is generally agreed to be a borrowing from B: see in the first place Winter (1961: 272 [= 2005: (1.)37; also reprinted in Winter 1984: 67f.]).

¹¹The idea that *orbis* and *yerpe* are connected goes back to a note by Grošelj (1955), who is primarily interested in the Hesychian gloss ἀρφύττυον· ὁ δίσκος, ὑπὸ Λυδῶν (a7569 Latte), and receives a fuller treatment in Van Windekens (1971: 449f. [in the journal *Orbis!*] and 1976: 78 and 597 s.v. *yerpe*), who suggests that *yerpe* either contains an intensive prefix *y-* (very unhelpful) or reflects a preform with a long **ē* (clearly preferable, but still difficult; see immediately below in the text, with fn. 13); Van Windekens’s *ē*-grade preform is treated as basically correct by D. Q. Adams in Mallory & Adams (1997: 108 s.v. “circle”; but the initial laryngeal is specified as **h₃*), as well as in D. Q. Adams (1999: 506 s.v. *yerpe** [the quality of the laryngeal is left unspecified] and also 513 s.v. *yolme* [the laryngeal is given as **h₁*]). Driessen (2001: 53f.) tentatively follows Stokes (1894: 56) in further suggesting that (M)W *rhefr* ‘anus; rectum’ “might be root-related” (54); the reconstruction “**h₁rb^h-reh₂*” would seem, though, to resemble the preform of another body part, namely the rib (on RCS *reb^h* and its possible antecedent “*(*h₁*)rēb^h-reh₂?”, see Vine 2002: 337; Schrijver 1991: 52 and 71 considers it very doubtful that there is any connection between *reb^h* and *orbis*).

¹²See Klingenschmitt (1980: 214-218), followed recently by Oettinger (1997: 101f.) and Scarlata (1999: 266). My own objections to Klingenschmitt’s etymology are summarized in Katz (1998b: 202f. n. 50; I now grant, however, that there are clear instances of secondary *o*-grade in roots with inherent **a*).

¹³Driessen (2001: 53f., with nn. 17 and 18) suggests a number of possible, but by no means certain, ways of reconciling the forms, stressing two ideas. The

phonology mean that *yerpe* does not even need to go back to a root that looks much like **h₁erb^h*.¹⁴ Certainly, then, backing up the idea that there is a link between *orbis* and *yerpe* is more difficult than positing a perfect equation between *orbis* and ὄρχους—perfect, that is, if the “*Urbi et Orbi*”-Rule” is correct.

Driessen (2001: 55) voices three semantic objections to my etymology of *orbis*: (1) *orbis* “refers to circles and flat circular objects (hardly ever to spheres, balls)”; (2) it “never refers to testicles and has no sexual connotation whatsoever”; and (3) the putative development of a word for ‘testicle’ into a non-sexual word for something round is the reverse of what one so often finds (as in Eng. *balls* and Germ. *Eier* ‘eggs’). All three are obvious and serious, and of course I made them myself, without, however, also being able to supply particularly good answers (see, respectively, Katz 1998b: 202, with nn. 48 and 49, and 208; 208 n. 67; and 203, with n. 52). Still, the first objection is not very strong: for one thing, cross-linguistically, speakers seem frequently insensitive to the distinction between two- and three-dimensional objects (compare, e.g., the ambiguous English adjective *round*); and in any case, specifically in Latin, many early attestations of *orbis* refer to the earth and other heavenly bodies, and despite what children are routinely taught in American schools, Columbus was by no means the first person to think that the οἰκουμένη or *orbis terrarum* is round.¹⁵ Furthermore, while the second

one is that *orbis* and *yerpe* reflect an old root noun with $\bar{o} \sim \bar{e}$ ablaut—but neither word is actually a root noun; reconstructing *orbis* with lengthened grade is *ad hoc*; and Driessen’s suggestion that the \bar{e} -grade in *yerpe* comes from the locative by paradigmatic leveling is hardly assured. The other scenario is that *orbis* and *yerpe* are independent formations, the latter with unexplained *vṛddhi*—but this is not a strong assumption when one is trying to demonstrate an isogloss.

¹⁴The number of possible preforms of *yerpe* is rather large: the first consonant could just as well be **i* or (since the form in Tocharian A is a borrowing from B; see fn. 10 above) even **u* rather than a laryngeal, and the labial could come from **p* or **b* just as well as from **b^h*.

¹⁵The considerable scholarly dispute today over the ancients’ understanding of the shape of the earth is to some extent a reflection of the ancients’ own uncertainty. It is clear, however, that the Greeks typically thought of the earth as spherical; see Kahn (1994: 115-118) for a judicious summary (thanks to Christian Wildberg for pointing this reference out to me) and also Evans (1998: 47-53, with notes on 454). The best account of the evidence for the (ambiguous) meaning of *orbis (terrarum)* in Rome remains Vogt (1960: 151-171, esp. 152-154 [a version of the chapter in question, “*Orbis Romanus*,” was published as a separatum already in 1929]), who writes that *orbis* does seem in

objection might seem decisive, it is not, as we shall see. It is in fact the third objection that is, in my opinion, of the greatest interest and deserves further and wider study, for I confess that I do not know of any assured counterexamples to the (at least) very strong tendency for the semantic change in question to move in the one direction (and the general meaning of *orbis* must be secondary to the anatomical meaning of ὄρχις if the connection with the Hittite verb *ark-* is correct; see above, with fn. 9).¹⁶ That said, there is the (obsolete?) Northern Russian dialect term *ërga*, a remarkable name (‘Ball’ < PIE **h₁rgʰ-eh₂-*) for a sexually charged children’s game,¹⁷ and much depends also on the avocado since some scholars, but certainly not all, say that the Nahuatl noun *āhuacatl*, the

the first place to be a disk but that the Romans certainly borrowed the idea of the spherical earth from the Greeks and that it is “von größter Wichtigkeit, daß in der lateinischen Sprache zur Bezeichnung der Erde als Kugel kein neues Wort geschaffen und durchgesetzt worden ist. Vielmehr wird die Erdkugel, der Erdball, ebenso als orbis terrae oder terrarum bezeichnet wie die Erdscheibe” (152); compare also from two very different perspectives Hardie (1986: 367-369 and *passim*) and Randles (1994: 12-14 and *passim* [= 2000: [8-10]]). (We know nothing, of course, about what the Umbrians may have thought.)

¹⁶On the tendency for words for small round objects (e.g., fruits and nuts) to come to mean ‘testicle,’ see especially Wilkins (1996: 273 and 284); an amusing consequence of this is traced by Gold (2001 and 2002), namely that “Chicano Spanish now has no word meaning ‘egg’ that does not also mean ‘testicle’” (2001: 403). Vennemann (1998a: 33f. and *passim* [lightly revised version: Vennemann 2003: 620, with notes on 646f., and *passim*]) follows Wilkins, insisting even more strongly on the unidirectionality of the change; but surely his own claim that the word *apple* (as well as Russ. *jabloko*, etc.) is a borrowing from some instantiation of an Afro-Asiatic (“Hamito-Semitic”) form that Orel & Stolbova (1995: 2f.) reconstruct as **abol* ‘genitals’ (see also Vennemann 1998b: 132-134 [lightly revised version: Vennemann 2003: 466-468, with notes on 471f.])—an idea I do not necessarily endorse—would be improved if he did not have to resort to the assumption that there was a metaphorical shift in meaning from ‘apple’ to ‘genitals’ within Afro-Asiatic, with the original sense borrowed into Indo-European languages before disappearing with nary a trace in the source family (see Vennemann 1998a: 29-41, esp. 32-37 [~ Vennemann 2003: 617-625, with notes on 644-649, esp. 619-622, with notes on 646-648]). (It is also curious that Vennemann 1998a: 34 n. 56 [~ Vennemann 2003: 646f. n. 56] cites my analysis of *orbis*, etc. without disapproval.) The latest discussion of the Indo-European apple is Blažek (2004), who does not cite Vennemann but similarly suggests as a “hopeful candidate” for the word’s source “Semitic **?abul-* & **?ubal-* denoting various kinds of fruits and cultural trees or plants” (23).

¹⁷See Watkins (1975: 24f. [= 1994: (2.)533f.], with particular reference to R. Jakobson), as well as Lunt (1977) on PSlav. **jigr-* (> Russ. *igra* ‘game,’ etc.).

ultimate source of the English word, meant ‘testicle’ first and came to refer to a fruit only later.¹⁸ But to return to the second objection, while there are indeed no examples in Latin of *orbis* with the meaning ‘testicle,’ the plausibility of the connection with ὄρχις is rescued by my interpretation—on independent, non-linguistic grounds, N.B.—of the Umbrian phrase **urfeta manuve habetu** ‘hold **urfeta** in [your] hand’ as referring to the testicle(s) or scrotum of the consecrated calf (or—a bit less likely in my view [see Katz 1998b: 199f.]—of the officiant; see fn. 25 below).¹⁹

In the first half of “Testimonia ritus Italici,” on which Driessen does not comment, I discuss the etymology of the Latin word *testis* and its seemingly remarkable semantic development from ‘witness’ to ‘testicle’ (see Katz 1998b: 183–201). As I point out, there is considerable cross-cultural support for the practice of holding something in one’s hand as one

¹⁸In the spring of 2002, I set the students in Princeton’s Linguistics 210 “Introduction to Historical and Comparative Linguistics” the task of trying to find out what they could about the words *avocado* and *āhuacatl*, which Karttunen (1983: 7 s.v. *āhuaca-tl*) defines as ‘avocado; testicle.’ Josephine Dru ’02, Rebecca Kemp ’02, Rafil Kroll-Zaidi ’03, and Thomas Ventimiglia ’04 were particularly resourceful. The strongest declaration we (in the first place Ventimiglia) could find in a published book by a reputable scholar (though not a linguist) in favor of *āhuacatl* with the original meaning ‘testicle’ is Coe (1994: 28f.), who writes, “As a peculiar form of endorsement the avocado [in the Old World around the 17th and 18th centuries] was stripped of its perfectly good etymology in Nahuatl, the language of the Aztecs, where the word derives from *ahuacatl*, or testicle. The OED ignores this completely [*sic* this is not true, either in the first edition or the second] and claims that the word comes from ‘advocate,’ or lawyer. How lawyers could have become involved with the fruit of *Persea americana* is nowhere explained (one can only suggest that it is from the tendency of the legal profession to insinuate itself everywhere)”; see also, e.g., <<http://www.staff.hum.ku.dk/mjd/etcib/avocado.html>>, one of four posted “Etymologiae cibariorum” by the Old Norse scholar Matthew James Driscoll (University of Copenhagen). The latest—and certainly controversial—remarks on the morpho-phonological background of Nahuatl *a:wa-ka-tl* (as she writes it) are to be found in Dakin (2004: 10 and 12f., esp. 12, with n. 5); I am grateful to Karen Dakin for discussing the matter with me.

¹⁹I suggested in Katz (1998b: 201) that the word is grammatically ambiguous—a singular (**urfeta**<**m**>), a plural (**urfeta**<**f**>), or a (neuter) collective (**urfeta**)—but Helmut Rix (d. 3 December 2004) pointed out to me *per litteras* that the last would have been spelled ***urfetu** on this tablet. The old idea (noted in passing in Katz 1998b: 199 n. 38) that Umbr. **vatuva** means something like ‘testicles’ (compare, e.g., Vetter 1953: 172 and 443) would, if right, not prevent **urfeta** from having the same sense, or nearly so.

takes an oath (see Katz 1998b: 200 n. 42)²⁰ and in particular for the manipulation of human or animal genitalia during legally or religiously crucial pronouncements, what Knippschild (2002) calls “rechtssymbolische Akte.”²¹ Direct testimony for this I adduce from three contexts: the Hebrew Bible, in which one holds the testicles of the man to whom one swears (Abraham and his servant in *Genesis* 24, Jacob and Joseph in *Genesis* 47; see fnn. 24 and 25 below); Classical Athens, where a witness in a homicide trial stands on the testicles of three ritually slaughtered animals, boar, ram, and bull-calf (see, e.g., Dem. 23.67f. [*Contra Aristocratem*, delivered in 352 B.C.]); and modern Islamic Lorestan (Iran), where there is supposedly a practice still current of taking an oath with the words, ‘my hand on Mohammed’s penis.’ Some of these and further examples besides, including from India, are to be found (I have since learned, thanks to Rahul Peter Das) in the works of the Orientalist and sexologist Allen Edwardes (see notably Edwardes 1959: 65-68, 1966: 160f., 176, 196, 199f., and 289, and 1967: 59-61), who provides considerable and sometimes graphic detail of Hindu and Arabian pledges of honor from the 18th century and beyond in which men hold each other’s testicles or phallus.²² Half a world away, in medieval Wales,

²⁰The dual meaning of Skt. *amī-* ‘grasp; swear’ (cf. Gk *ᾄμνῶμι* ‘swear’) has been understood for some time to rest on this practice (see Hoffmann 1969 [= 1975: 288-305]; otherwise Szemerényi 1994: 92-97, with notes on 99, esp. 96). Hackstein (1995: 66) and especially Rix (1999b: 523f., with notes on 531), among others, have now connected via a root PIE **h₂emh₃-* also Lat. *amāre* ‘love,’ “ursprünglich *‘(die zum Freundesgruß dargebotene Hand [or other body part?!—]JTK) ergreifen (und festhalten)’” (Rix 1999b: 523); see also M. Kümmel in Rix (2001: 265f. s.v. **h₂emh₃-*, as well as 615 and 616f. s.vv. **teg-* ‘schwören’ and **teh₂g̃/g-* ‘berühren, fassen’) and Schumacher (2004: 631-634, esp. 632, as well as 648-652; compare fn. 23 below). For the idea that the root of Gk *ᾄμνῶμι* (and perhaps also Lat. *amāre*) is actually rather **h₁emh₃-*, see Nussbaum (2002: 190, with n. 38). D. Q. Adams in Mallory & Adams (1997: 330 s.v. “king”) speculates further on the shape of the root.

²¹See especially Chapters 1 and 3 of Knippschild (2002), which go through the evidence for handshaking and other “Berührungen” in the Greco-Roman and “oriental” world (but her brief section on “Die Genitalien berühren” [79f.] is unusually ill-informed: compare fnn. 24-26 below).

²²See in particular Edwardes (1959: 65-68 and also 1966: 160f.); it would be interesting to try to trace the spread of this practice and to determine whether it in fact rests squarely on an ancient tradition. I should add that Edwardes is not a scholar and does not always report things accurately (e.g., “The Greek word for ‘testament,’ *diathékē*, literally means ‘by the bag’ or swearing on the scrotum; hence the Latin *testamentum*: ‘testiculation’”

where oaths sworn on holy relics were extremely common (see Pryce 1993: 41-44 and *passim*), “a woman who persisted in accusing a man of having raped her after his initial denial was required to repeat the charge on oath while holding the relic in her right hand and the man’s penis in her left” (Pryce 1993: 42, with textual citations in n. 27).²³ Finally, from in between India and Britannia and from a much, much earlier time still—surely the most ancient piece of evidence we possess—comes an Old Babylonian letter from the city of Kisurra that includes the words, “Thus you (have said to me): ‘Let your envoy grasp my testicles and my penis, and then I will give (it) to you’” (Malul 1987: 491).²⁴

[Edwardes 1967: 60]!). According to Stanley Insler, George Frederick Gundelfinger, erstwhile instructor of mathematics at Yale (resigned 1913) and professional crank (he was, for example, convicted in 1939 of distributing obscene material through the U.S. Mails), suggested that Yale men greet each other by shaking each other’s testicles.

²³I am grateful to Stefan Schumacher for first pointing out to me this and other Anglo-Celtic oaths taken with things in hand and for making available to me in advance of publication the excellent entry “Ur-kelt. Perfekt **te-tok-/ *tik-* ‘hat angefasst’, teilweise suppletiv zu **tu-n-ge/o-* ‘schwören’” in his new dictionary of Celtic verbs (Schumacher 2004: 631-634); on pp. 632f. he refers to Katz (1998b) and notes, in addition to the oath after rape just cited, one other interesting Welsh oath (the man who swears that a certain animal belongs to him is to lay his left hand on the animal’s right ear and his right hand on a relic; see also Pryce 1993: 42), as well as the scene on the Bayeux Tapestry (which Lisi Oliver, too, brought to my attention) that portrays Harold Godwinson, with each hand on a relic, as he swears an oath of loyalty (which he soon breaks) to William of Normandy. Pryce (1993: 41) writes that the “practice of swearing judicial oaths on relics was common in early medieval societies” throughout Europe but emphasizes that it continued beyond the early period in Wales, as well as in Scotland and Ireland (where the “use of relics in oath-taking was so widespread ... that the noun *mind*, ‘relic, halidom’ developed the secondary meaning of ‘oath’” [41 n. 21, with reference to F. Kelly]; this of course mirrors, more or less, the semantic shift of Lat. *testis*, on which see immediately below in the text, with fn. 25).

²⁴In 1985, Meir Malul published a paper on the “oath by the thigh” in the Hebrew Bible, lucidly rehabilitating W. F. Albright’s suggestion that the crux *paḥad Yiṣḥāq* in *Gen.* 31:42 and 53 means ‘the thigh of Isaac’ and indirectly reflects the same custom seen in the oaths by *yārēk* in *Genesis* 24 and 47. In the brief follow-up article from 1987, he notes that Professor W. Mayer (Pontifical Biblical Institute), upon reading his paper, pointed out the existence of the Old Babylonian letter, which had been published by Burkhart Kienast in 1978 (see Kienast 1978: 156f. [#175], who compares *Gen.* 24:2 and speaks of an “offenbar aus nomadischem Milieu stammende[r] Ritus der Eidleistung” [157]). As for the context of the letter, Malul (1987: 492) notes that it is “extremely laconic, leaving most of the picture in darkness. This

Readers will perhaps be able to supply further parallels, but to return to Italy, even aside from the status of Umbr. **urfeta**, there are at least two very different pieces of evidence—indirect but, I believe, compelling—for a like custom in early Rome. First of all, the dual meaning of Lat. *testis*, as I argue at some length (see Katz 1998b: 183-201, as well as Katz 1998a: 61-63), arises out of a synecdoche between the witness himself and the body part with which he secures his testimony.²⁵ And in addition, the *Rhetorica ad Herennium* (3.33) describes how an orator, when arguing a certain capital case, should have a picture in his head of the defendant *testiculos arietinos tenentem* ‘holding a ram’s (rams’ ?) testicles,’

much[,] however, can be said: it appears that the sender had previously asked for something from the addressee, which the latter is willing to give on condition that an oath is taken by the sender’s envoy.” Knippschild (2002: 79 n. 363) cites Malul (1987) but then suggests—oddly—that swearing by the genitals is “[v]ermutlich ... eine für Israel spezifische Gebärde” (80).

²⁵When I wrote my original paper, I had never seen this explanation of *testis* in print, though a couple of friends had told me vaguely that they thought they had heard it. I have still never seen a scholarly discussion—which I find very strange—but have over the years collected evidence that shows that the basic idea is indeed an accepted part of some people’s worldview. In *A Natural History of Love*, for example, Diane Ackerman writes, “A testament was a pledge, and it concealed the idea of castration. When a man swore something was true, giving *testimony*, he put his hands on his testicles. In effect, he was saying: *You can cut off my balls if I’m lying*. In time, law courts decided that asking a man to put his hands on the Bible might be more decorous” (Ackerman 1994: 48 n.); similar remarks are to be found in Paley (1999: 47) and Friedman (2001: 16f.). See also two letters to the editor in *Time* from 1999 (Tom Gill, May 31, p. [22] and Candace Weddle, June 28, p. 14): referring to *Gen.* 24:2f., Gill states, “When Roman men gave testimony, they held their testicles in their hand, for they regarded them as sacred. ... In the future when Hollywood makes a biblical or Roman epic, it might include a scene of a man testifying in the authentic manner ... a reel grabber” (second ellipsis in original); *pace* Gill and also Weddle (who calls swearing by the testicles a “Roman custom”), there is no direct evidence for this, and what we do have from ancient Italy (see above in the text on Umbr. **urfeta** and below on the *Rhetorica ad Herennium*) and elsewhere suggests that it is not one’s own testicles that are being touched (though Henderson 2004: 80 wonders whether Phaedrus 3.11, in which “Eunuchus” is in court but lacks his *testes*, is in view of the “strictly Latin pun ... perhaps ... a bona-fide Roman story, for a change” rather than a translation from Aesop; Champlin 2005 now mounts a stunning argument for Phaedrus’ true Roman-ness, with pp. 112 and 121 on this vignette). Anthony Corbeill’s review of Knippschild (2002) notes that “it is surprising ... that K[nippschild] does not cite as further support for this category [i.e., touching one’s own body while swearing] the alleged etymology of Latin *testis*” (Corbeill 2003).

where the peculiar specification of the *testiculi* (a mnemonic for the *criminis testes* ‘crime’s witnesses’) as *arietini* should perhaps be understood as a reference to the manipulation of actual rams’ testicles in (archaic ?) Roman courts (see Katz 1998b: 196f. n. 32; compare the use of a ram’s testicles in Athens, described above).²⁶ Given that PIE **h₁órǵʰ-i-* ‘testicle’ survives in its original meaning in most branches of Indo-European and that the root **h₁erǵʰ-* (see above, with fn. 9) is found with a sexual sense in every single branch except Italic (if we leave *orbis* and **urfeta** aside),²⁷ it seems plausible to

²⁶The usual view holds that the phrase *testiculi arietini* refers to a purse made of the scrotum of the ram: Blum (1969: 18, with prior literature cited in n. 72) provides the standard brief survey. Another sort of view takes account of the zodiac, in which Aries of course plays a part, and refers to the feats of memory of Metrodorus of Scepsis, who made use of the 12 signs of the zodiac and the 360 degrees of the circle (see especially Quint. 11.2.22). Most notably, in her classic book *The Art of Memory*, Frances A. Yates wonders whether the Auctor ad Herennium may have consulted the lost works of Metrodorus (see Yates 1966: 40) and suggests that “an order of astrological images ... may even give a clue to what has always struck me as an inexplicable feature of the memory image for remembering the lawsuit given in *Ad Herennium*—namely the testicles of the *ram*. If one has to remember that there were many witnesses in the case through sound resemblance of *testes* with testicles, why need these be the testicles of a ram? Could an explanation of this be that Aries is the first of the signs, and that the introduction of an allusion to a ram in the image to be put on the first place for remembering the lawsuit helped to emphasise the order of the place, that it was the first place?” (Yates 1966: 41); compare also the passage from Albertus Magnus that she quotes and discusses on pp. 68f. See also Den Boer (1986: 13f.; see also 11 n. 13), who explicitly rejects the idea of purses made of the nether parts of a ram and proposes that the text is referring to the storage of a certain piece of information about witnesses in “that section of the Zodiac which was reserved for *the ram* (Aries). Therefore *testiculos arietinos* is to be translated as ‘the testicles of Aries. In this way we can record ... the witnesses.’ *Arietinos* might exclude *testes* of other animals, as for example *testes Capricornei*, *leontini*, or *taurini*, which could have a different function in the mnemonics of the Zodiac” (13). The most recent discussion of the image is not particularly revealing: Müller (1996: 21f.), who nowhere cites Den Boer, suggests merely that the “Umstand, daß Auffallendes, Merkwürdiges, Sensationelles immer leichter zu behalten ist als Gewöhnliches ... mag im hiesigen Beispiel für die Merkwürdigkeit der *testiculi arietini* ursächlich sein” (21). The passage is strangely absent from Knippschild (2002), and Anthony Corbeill does not mention it either in his outstanding book on Roman gesture (Corbeill 2004; see esp. pp. 20-24 on “participatory gestures in Roman religious ritual” that involve the hands).

²⁷It is possible, though, that such Tocharian words as B *erkatse* (see Katz 1998b: 208, with n. 68, with reference to D. Q. Adams; see also now, e.g., D. Q. Adams 1999: 94f. s.v. *erkatte* and *-erkatse*) do not have a sexual connotation after all:

believe that, for some reason that may not be recoverable, the shift in meaning that I suggest occurred in Italic between **h₁órǵʰ-i-* and *orbis/urfeta* is what gave the impetus for *testis*—a word that might even owe its secondary *i*-stem declension (cf. Lat. *testāri* ‘call to witness, testify to’ instead of **testīri* and the Oscan hapaxes **trstus** [Cm 14; Rix 2002: 118] ‘*testes*’ and **tristaamentud** [Po 3; Rix 2002: 104] ‘*testamento*’) to contamination with the precursor of the old word *orbis* (see Katz 1998a: 62 n. 1 and 1998b: 209 n. 69)²⁸—to gain its secondary sense ‘testicle’ alongside the old meaning of ‘witness.’

Driessen (2001: 58) writes of my interpretation of **urfeta** that it is “conceivable but uncertain,” preferring to think of the object instead as some sort of metallic solar ring.²⁹ Tentatively following Altheim (1951: 103f.)—as Poultney (1959: 199) and some others do as well—he compares the Umbrian passage with two rock drawings in the Val Camonica that depict, respectively, a man who holds a ring in the air and a warrior with eight-spoked wheels by his side,³⁰ as well as the following passage in Livy (8.20.8) about some goings-on in Rome in 328 B.C. that concern Semo Sancus (or Sangus), a divinity associated with oaths (see, e.g., Radke 1987: 115-123): *aedes eius, quae essent in Palatio, diruendas, bona Semoni Sango censuerunt consecranda. Quodque aeris ex eis redactum est, ex eo aenei orbis facti positi in sacello Sanguis aduersus aedem Quirini* ‘They decided that his [sc. Vitruvius Vaccus’] house on the Palatine was to be razed and his goods consecrated to Semo Sancus. Whatever bronze (money) was realized from (the sale of) these things, from this bronze *orbis* were made (and) put

see Carling (2003: 89f. and 93 and 2004). Schuhmann (2002: 460f.) claims that the meaning ‘(passive) homosexual’ of ON *argr* “läßt sich ... nicht halten” and states that the etymology of PGmc. **arga-* is “unerklärt” (460).

²⁸A different and perfectly plausible account of the inflection of *testis* is to be found in Leukart (1977: 121f., with n. 11) and now also Gerschner (2002: 113).

²⁹Another common idea (which I rejected without proper discussion in Katz 1998b: 199) is that it is a “sacrificial cake”: see, e.g., Heurgon (1942: 58f.) and Franchi De Bellis (1981: 46f.). For an especially detailed, though perhaps not wholly reliable, discussion of the possibilities, see Pettazzoni (1949-1950).

³⁰For images of multiple three-spoked wheels in an Oscan inscription (Cp 25; text in Rix 2002: 99), see Heurgon (1942: pl. I/1) and Franchi De Bellis (1981: tav. 16a). Wheels are depicted commonly enough on early Italic coins: for three- or four-spoked wheels from Tuder and Iguvium, see Catalli (1995: 100, with tav. 312).

in the shrine of Sancus opposite the temple of Quirinus.³¹ (Driessen's attempt to bring in Etruscan as well may be misguided.³²) I grant that my passing comment on all this (see Katz 1998b: 199, with n. 39) was insufficient. Especially given the nature of ancient evidence, it is, however, unreasonable of Driessen (2001: 58) to object that "Katz did not adduce hard evidence for a meaning 'testicles'. ... His evidence is circumstantial, consisting of religious practices that involve testicles and that are similar (but different) in a number of non-Italic cultures." Of course it is possible that Altheim (and, then, secondarily Driessen) is correct to regard **urfeta** as some sort of ring, in which case the etymology that I have suggested for this word—and, crucially, my etymology also of Lat. *orbis*—becomes all but untenable; but I suggest that the depth and breadth of the evidence that I do bring to bear on the matter,

³¹Driessen (2001: 57) mistakenly gives the reference as Livy 8.20.6, and his own translation of the Latin on p. 58 is odd ("Whatever bronze money was from his possessions was shaped into disks ..."). Oakley (1998: 617 *ad loc.*) writes of *aenei orbes* that "there seems to be no precise parallel for this use of *orbis*, but L[ivy] seems to be referring to bronze dishes rather than balls. For the use of dishes in the context of a god connected with the sun, the *orbita* of the Iguvine Tables provides a parallel"; to my knowledge, however, there is no compelling reason to prefer the translation 'dishes' over 'balls.'

³²Driessen (2001: 58) notes that "[t]o Altheim's account one may add that a number of Etruscan coins display spoked wheels," continuing in a footnote, "Although relatively little is known about the Etruscan religion, it would be unlikely to assume [*sic*] that the Etruscans were unfamiliar with the cult of Sancus, since it seems that a large part of the population of Northern Etruria has some kind of Sabellic background. Compare further the inscription *selvans sanχuneta* 'Silvanus the **Sanχuna*-one' (Vs 4.8), where **Sanχuna* gives the impression of bearing some connection with Sancus" (58 n. 21). I lack the competence to judge this idea (which Driessen fails to state has given rise to a large body of secondary literature ever since this *cippus* from Bolsena—which reads in full, *selvans / sanχuneta / cvera* (Rix 1991: 100) 'Selvans Sanchuneta (ist eine?) Weihegabe' (thus Steinbauer 1999: 278)—was published by Giovanni Colonna in 1964 ["Rivista di epigrafia etrusca," *Studi Etruschi* 32: 161-163 + tav. XXXI]) but do note that Steinbauer (1999: 136f., 278, and 462), building on the ultimately inconclusive findings of de Simone (1984: 53 and *passim*), thinks that the meaning of *sanχuneta* is unknown and specifically casts doubt on a connection with Lat. *Sancus*: "[G]egen die etymologische Herleitung von etr. *sanχu-* aus lat. *Sancus* [können] mehrere Einwände vorgebracht werden Bei anderen Theonymen wird im Etruskischen stets der Nom. der Ausgangssprache reflektiert; auch der Ersatz von lat. /k/ durch etr. /χ/ ist nicht üblich" (Steinbauer 1999: 137 n. 1). For a more positive assessment of the relationship between *sanχu-* and *Sancus*, see Bentz (1992: 205, with some literature cited in nn. 221 and 222).

however “circumstantial” it may be, makes my view compare favorably to the traditional one.³³

This is perhaps the time for me to note how curious it is that, for all his objections, Driessen makes no comment about the one word that would seem to be by far the most vulnerable point in my argument for the “*Urbi et Orbi*”-Rule, or at least for its application outside Latin: the Oscan form **verehasiú(í)**, an epithet of Jove that occurs twice in the “Agnone Bronze” (Sa 1; Rix 2002: 82) and that looks as though it ought to go back to something like PIE **uerG^h-*. But if the word does go back to **uerG^h-*, why is it not, then, **verefasiú(í)* (cf. Umbr. **urfeta**, with an **-f-**)? It was Michael Weiss who first pointed the problem out to me (see Katz 1998b: 209, esp. n. 72), and I regret that I still have no wholly persuasive solution. Still, since Rix (1999a and 2000: 209-228 and *passim*) has now strengthened the case that Osc. **uerei(i)a-** ‘*res publica*’ goes back to a noun **uerġ-iā-* (i.e., **uerġ-iēh₂-* in Proto-Indo-European terms) that is based on the root **uerġ-* ‘enclose’ (cf., e.g., Gk. ἔρω ‘shut in/out’) rather than **uer(-)ġ^h-* ‘turn; twist (?)’ (for which see above all Nieto Ballester 1993) and since it is at least possible (despite the skepticism of Rix 1999a: 257 and *passim*; see also Rix 2000: 221) that one or more similar-looking terms known from ancient Italy (Oscan, Volscian, and also Sicel), like Osc. **verehasiú(í)**, are related to **uerei(i)a-** (note that one [genitive singular] instance of this word seems to be spelled **verehias** [Cp 32; Rix 2002: 100]), it may perhaps be that **verehasiú(í)** conceals something like **verehiasú(í)** and does not reflect the sequence **-rG^h-* or, then, have anything to say one way or the other about the “*Urbi et Orbi*”-Rule.³⁴

In sum, I believe *orbis* and **urfeta** to be a very good,

³³Untermann (2000: 805 s.v. **urfeta**), calling the meaning and etymology “unbekannt” and “ungesichert,” gives an overview of what has been said about the word (but he misses Katz 1998b).

³⁴It has to be admitted, however, that there are considerable obstacles to assuming a real and significant form **verehiasú(í)**, beginning with the fact that—if Rix is right about **uerei(i)a-**, etc.—the hapax **verehias**, with the sequence **-hi-**, is still only an “umgekehrte[] Schreibung” (Rix 1999a: 256) or a “scrittura ipercorretta” (Rix 2000: 219), not a direct reflection of (syncopated) **-ġ(i)ġ-*. For a defense of **verehasiú(í)** as derived from a root of the shape **uerġ^h-*, see Janda (1998: 613f. as well as 2000: 62); compare also Untermann (2000: 840f. s.v. **verehasiú(í)**) and the quick summary of Stuart-Smith (2004: 83, with n. 95).

though not assured, example of the “*Urbi et Orbi*”-Rule.”³⁵

Another putative example of the “*Urbi et Orbi*”-Rule” is the famously troublesome word BERBER, found in a thrice-repeated refrain in the *Carmen Arvale* (*CIL* VI 2104, a32-38; see also already *CIL* I² 2): SATVR FV, FERE MARS, LIMEN SALI, STA BERBER ‘Be sated, fierce Mars! Leap the threshold! Stand BERBER!’³⁶ In my view, BERBER goes back to something like **d^her(-)ǵ^h-ro-s* (with an extension of the root **d^her-* seen in, e.g., Lat. *firmus* ‘strong, steadfast’) and is therefore almost exactly cognate with the Avestan word for ‘firm, solid,’ *dərəzra-* (< **d^hǵ(-)ǵ^h-ró-*): STA BERBER thus means ‘Stay put!, Stand still!, Stop!’ (or, in present-day Italian, “Sta fermo!”).³⁷ It is hard to find fault with this on semantic grounds, and even Driessen (2001: 58) writes that “Katz’ interpretation is by far the best there is.”³⁸ He has, however,

³⁵Watkins (2000: 24 s.v. *ergh-*) cautiously accepts it, writing that “perhaps Latin *orbis* ... and *orbita*” are related to ὄρχι. I note that in a paper to appear in *Historische Sprachforschung* (Weiss 2006), Michael Weiss proposes a new etymology of *orbis*, connecting it to a root **h₃erb^h-* ‘turn’; I am grateful to Weiss for supplying me with a draft of his paper soon after he first delivered it at a conference in 2004.

³⁶The inscription is manifestly replete with errors—the result, almost surely, of having been transcribed in A.D. 218 from an already ill-written priestly book whose highly archaic liturgy, probably composed at least three-quarters of a millennium earlier, was largely hocus-pocus even to the Arval Brethren who were intoning it. Especially since the three occurrences of this refrain are all written differently, it would be counterproductive for me to provide here a “proper” epigraphic transcription, for which anyway see now Scheid (1998: 293-302 [#100], esp. 295f. + figs. 146-148, esp. 147). The spaces, commas, and in some cases even letters are thus mine, but I largely follow the opinion of most scholars on the *carmen*’s readings, word-divisions, and sense units.

³⁷On **d^herǵ^h-* (which he writes as a unitary root), see Janda (1996b: 82f. and *passim*), who invokes it in the course of providing what is in my view (*pace*, e.g., Bader 2002: 26f. n. 22) a convincing etymology for Gk. *ταρχῖω* ‘bury’ (Janda 2000: 91-93 and *passim* places the idea in a larger context). See also now Kümmel (2000: 236, with n. 330).

³⁸In Katz (1998b: 215, with n. 90) I comment briefly on other recent and peculiar analyses of BERBER (and the *carmen* as a whole), including speculations from a few years earlier by P. Considine. Since then I have come across some other views: for example, Morano (1987: 643f. and *passim*) thinks that BERBER should be read as ‘BARBAR and taken as the vocative of *barbarus* ‘(fiercely) foreign’ (she prints and translates the refrain as *Safor fi, fere Mars, lenis satis sta, barbar* ‘Conviértete en protector de los campos, fiero marte, sé

two objections. The first (which, as he notes, I pointed out myself in Katz 1998b: 216 n. 96) is that adjectives in **-ro-* typically have zero-grade in the root (as in *darazra-*), not *e*-grade. This is true, but there are, of course, exceptions—Gk. *δηρός* and Arm. *erkar*, exact cognates that mean ‘long’ and derive from **d_{ueh}-ro-*, are the best known, but there are others (e.g., Gk. *νεβρός* ‘fawn’ from **neg^u-ro-* [with the same root as Eng. *naked*], *vide* Janda 1996a)—and these have been receiving increasing attention in recent years and are the subject of an important 2002 study by Brent Vine.³⁹ Still, in view of Vine’s demonstration that most examples of **-ro-* with *e*-grade in the root are at some level substantival rather than (like, presumably, BERBER) “normal” adjectives, I am increasingly attracted to the idea (see Katz 1998b: 216 nn. 94 and esp. 96) that sometime before the *Carmen Arvale* was finally committed to stone in the early third century A.D. an original adjective **BORBER* or **BURBER*, from expected **d^hγ(-)g^h-ró-*, was altered to BERBER, both because repeated sequences are typical of “magical” chants the world over (compare Piva 1993: 80-82; see fn. 38) and specifically on account of analogy with the reduplicated divine name MARMAR, found a number of times in the hymn, including at the end of another apparently quasi-Saturnian clausula that is also repeated three times (NEVELVERVE, MARMAR).

Driessen’s second objection has to do with the initial B in BERBER rather than the putatively expected **F-*. He makes much of a possible second sound law that I discuss in the original paper, which I call the “*barba*’-Rule” and which he,

benévolo con los sembrados, indómito’ [!]) and Piva (1993: 70f. and esp. 80-82 and *passim*) thinks that BERBER and MARMAR (see immediately below in the text) are specifically magical words, using them as crucial support for his interesting, but in my eyes unconvincing, idea that Heliogabalus himself edited what would otherwise have been a reasonably clear *Carmen Arvale* in such a way, “daß das Volk mit einem unverständlichen, ‘heiligen’ Text zum Staunen (und damit in seinen Bann) gebracht werden konnte” (84). Radke (1995) responds to Piva, largely rehearsing arguments from his previous publications on the subject (he briefly considers BERBER on p. 144). Kruschwitz (2002: 219) writes that the meaning of BERBER (“oder ist *ber ber* zu lesen?”) is “desperat.”

³⁹Note also the curious forms in **-ero-*, the most famous of which likewise have *e*-grade in the root: Gk. *ἐλεύθερος* = Lat. *liber* (< **h₁leud^h-ero-*) ‘free’ and Gk. *ἑσπερος* = Lat. *vesper* (< **ues(-)p-ero-*) ‘evening’ (on the latter, see Janda 2000: 200-211 and Katz 2000).

who does not believe it, refers to as the “assimilation rule”: at some stage of pre-Latin, **f ... rb* undergoes assimilation and becomes Lat. **b ... rb*.⁴⁰ There are, I have argued, two pieces of evidence for this rule and no probative counterexamples: *barba* ‘beard,’ which is universally agreed to go back to a proximate preform **farba*, and BERBER. In addition, I suggested (see Katz 1998b: 206) that it might help explain the loss of the initial consonant in *urbs* (as from **b^hrġ^h-*) to say that **burb-*, which would have developed from **furb-* by this rule, underwent dissimilation of like (rather than merely similar) sounds.

In response to Driessen’s comments, I would like to stress the following eight points, some of which are so obvious that they should hardly need to be stated (four of them, given in brackets, refer to *urbs* and are thus of less interest if the Cowgill—Katz etymology is incorrect):

[—(1) While I believe the assumption of the “*barba*’-Rule” could help account for the unexplained loss of the initial consonant of *urbs*, the derivation of this word from **b^hrġ^h-* does not in fact hinge on it.]

[—(2) As with the “*Urbi et Orbi*’-Rule,” even if the etymology of *urbs* is wrong, this does not mean that the “*barba*’-Rule” cannot be right.]

—(3 and most important) Driessen is welcome to doubt that Lat. *barba* goes back to a proximate preform **farba*, but since it is clearly directly comparable to Germanic, Baltic, and Slavic words for ‘beard’ (e.g., *beard* itself, as well as Latv. *bārda* and OCS *brada*) that do reflect **b^hard^h-eh₂* (which would indeed yield **farba* in Latin prior to any assimilation), it is very hard to see why he does so.⁴¹

—(4) Given that *barba* is, then, a real example of

⁴⁰It is perhaps of some theoretical interest that an intermediate sound—the *r* between the assimilating sound and the cause of the assimilation—can have this sort of effect (see my remarks in Katz forthcoming); there is no evidence for the simple rule **f ... b > b ... b* in Latin (despite the cautious remark of Kümmel 2004: 106 n. 3 on the—in any case very late—appearance in Latin of the word for ‘beaver,’ normally *fiber*, as *beber*, *bebr-* [> Fr. *bièvre*, etc.], *beber* is almost certainly a Gallicism; see, e.g., Lambert 2003: 191 and Delamarre 2003: 69f. s.v. *bebros*). Stuart-Smith (2004: 41) wrongly suggests that my derivation “assume[s] the progression ... **f ... br- > *b ... br-*.”

⁴¹Driessen (2001: 59) writes that the Latin form is “probably of non-Indo-European origin and since there is little Italic evidence for the initial *Pt. *f-* [n. 22 here mentions It. *farfecchie* ‘moustache’], one may wonder whether *barba* ever began with **f-*.”

assimilation, assuming exactly the same change in BERBER is perfectly reasonable.

—(5) Conversely, even if my etymology of BERBER should turn out to be wrong, this would not imply that the standard etymology of *barba* is likewise wrong (or, for that matter, that the Cowgill—Katz etymology of *urbs* is).

—(6) The claim in Driessen (2001: 59) that “a single form does not suffice to assign the assimilation the status of a rule (it may just as well be sporadic as dissimilation very often is)” is sophistry: a rule is a rule if there are no counterexamples—and there are none. Note that there are generally assumed Latin or Italic sound laws that have only one or a very small handful of examples, such as the “*fundo*’-Rule” (which Driessen himself mentions on pp. 59f. as though he were the one who had discovered it!) and the “*pius*’-Gesetz.”⁴²

[—(7) The statement in Driessen (2001: 59) that the “*barba*’-Rule” “actually weakens [the Cowgill—Katz] etymology of *urbs*, because it renders [the old connection with **G^hor-d^h-i*] unproblematic” is manifestly illogical.]

[—(8) Finally, Driessen’s comment is strange that the Cowgill—Katz etymology of *urbs* from **burb-* should make one wonder why *barba* and BERBER did not become **arba* and *ERBER (see Driessen 2001: 60): I did not claim that the **b-* was lost regularly but rather suggested (see Katz 1998b: 206, with n. 63) that the dissimilation in *urbs* might have been facilitated by the word’s appearance in such “phonological phrases” as unpunctuated ENVRBID (*CIL* I² 5; early Marsian-Latin for *in urbe* ‘in the city’), a context in which neither *barba* nor BERBER would be expected.]

In sum, I believe BERBER to be an excellent example of both the “*Urbi et Orbi*”-Rule” and, for that matter, the “*barba*’-Rule.”

⁴²The verb *fundō* (and its paradigm [e.g., *fūdī*] as well as the related noun *fūtis* ‘water-vessel’ [Varro, *Ling.* 5.119]) has generally been taken as the only example (see, e.g., Sihler 1995: 158) of the rule whereby PIE **G^h-* before **-ū-* becomes Lat. *f-* (and not **h-*, as in Fal. **huti**[c]**ilom** ‘little water-vessel (?)’ in the highly archaic “Ceres Inscription” [Giacomelli 1963: 41-44 (#1)]), but Puhvel (1998 [= 2002: 257-259] and elsewhere) has recently proposed that a second possible example is *furor* ‘rage,’ which he derives from **ǵ^hur-* and relates to Hitt. *kurur-* ‘hostility; enemy.’ For *pius* (later *pīus*) ‘faithful’ and a few other Latin words that show *i* rather than **ū*, see, e.g., Meiser (1998: 86), as well as the controversial revisionary remarks of Vine (2001: 121, with reference to I.-J. Adiego Lajara) and Schrijver (2003: 77).

This brings me to the final putative instance of the “*Urbi et Orbi*”-Rule,” *masturbārī*,⁴³ which is found in literary Latin only in Martial (9.41.7 and 11.104.13; note also the agent noun *masturbātor* in 14.203.2).⁴⁴ Following an insight by Calvert Watkins, I suggest that *masturbārī* is a denominative verb based on an old word for ‘marrow,’ **mostyǵ^h-*, that has not itself survived in Italic but is found in Skt. *mastṛhan-* and Av. *mastərəyan-*, both of which mean ‘brain’ (see Katz 1998b: 210-213).⁴⁵ Driessen does not believe that this is correct and puts forth five objections. Let us take these (almost) in order.

Driessen (2001: 55f.) opens with some peculiar and incoherent remarks on the quality of the voiced aspirate reflected in the *-γ-* in Avestan and the *-h-* in Sanskrit:

The pair Av. *γ*/Skr. *h* can reflect neither PIE **ǵ^h* nor PIE **g^h/g^{wh}*. PIE **ǵ^h* yielded Av. *z*/Skr. *h*; PIE **g^h/g^{wh}* yielded Av. *j*/Skr. *h* before front vowels and Av. *γ*/Skr. *gh* before back vowels. Thus, the pair Av. *γ*/Skr. *h* can be reconciled only if one assumes a paradigmatic alternation of front and back vowels, e.g. nom. sg. **me/ostyǵ^(w)-ō(n)*, versus oblique **me/ostyǵ^(w)-en-*. Av. *mastərəyan-* ‘brain, skull’, [Skr.] *mastṛhān-* [sic]⁴⁶ ‘brain’ have no cognates outside Indo-Iranian. Since Av. *γ*/Skr. *h* can reflect both **g^{wh}* and **g^h*, the Indo-Iranian forms cannot be used as support for the *urbi et orbi*-rule.

Peculiar, in that (1) Driessen can hardly object to the obvious fact that *mastṛhan-* and *mastərəyan-* are cognate; and (2) assuming a standard pattern of ablaut (as I did tacitly) means

⁴³The *TLL* s.v. *masturbor* suggests that the first vowel may be long (“**-ā-?*”); I doubt that this is correct and assume in what follows that it is not.

⁴⁴The best discussion of *masturbārī* and other onanistic verbs in Latin is J. N. Adams (1982: 208-211, 226, and 256); for a general literary and cultural survey of “Masturbation in der Antike,” see Krenkel (1979). The recent rise in commentaries on Martial means that the following works should also be consulted: Henriksen (1998: 196-200, esp. 199, *ad Mart.* 9.41), Kay (1985: 280, *ad Mart.* 11.104.13), and Leary (1996: 271, *ad Mart.* 14.203.1-2).

⁴⁵See Watkins (1995: 535) for the basic idea, but with incorrect phonology (Watkins’s idea is noted, with seeming approval, by Dunkel 1997: 418 and Schlerath 2000: 46). For details of the Sanskrit word, see Eichner-Kühn (1976: 23-25, with notes on 32-34, including a personal communication of G. Klingenschmitt on the wider meaning of its Avestan cognate [pp. 33f. n. 14]).

⁴⁶Driessen consistently gives the Sanskrit form as “*mastṛhān-*,” but there does not seem to be any positive support for the accentuation.

that, for all Driessen’s rhetorical flourishes, there is not the slightest phonological difficulty with connecting them. And incoherent, in that (3) my point in the original paper is precisely that there is an extra-Indo-Iranian cognate in Latin; (4) there are in any case a whole number of words throughout Indo-European that bear some sort of (non-exact) relationship to *mastyhan-* and *mastərəṣan-* (e.g., Eng. *marrow* [< OE *mearg*] and Toch. A *māsśunt* ‘marrow’; see, e.g., Watkins 1995: 525-536, esp. 535f.); and (5) saying that the pair Av. $\gamma \sim$ Skt. *h* could go back to one sound other than my favored $*g^h$, namely $*g^{uh}$, does not in any way impugn the idea, preferable because of Lat. *masturb-*, that it here *does* actually go back to $*g^h$.

Driessen (2001: 56) continues—this is his second objection—with a remark about the vowel in the first syllable of *masturbāri*, stating that there is no evidence for the development of PIE $*mo-$ into Lat. *ma-* in a closed syllable, only in an open one, as, for example, in *mare* ‘sea’ for expected $*more$:

The *a* of *masturbor* is problematic. Katz believes that it reflects PIE $*o$, but for the position after $*m$ there are only reliable cases of *a* from PIE $*o$ in open syllables (cf. Lat. *mare* ‘sea’ < $*mori-$ (OIr. *muir* ‘sea’, Oss. *mal* ‘stagnant water’), *maritus* ‘husband’ < $*morei-to-$ (MoW *morwyn* ‘maiden’ < $*morei-neh_2-$). This does not apply to *masturbor*, where one finds *a* in a closed syllable.

But as Driessen is well aware, the explanation of such words as *mare* is not in fact obvious: he is here following the view of his former Leiden colleague Peter Schrijver (whom he does not specifically credit, though Schrijver is thanked in a general way for his help) that initial $*mo-$ (as well as $*uo-$ and perhaps $*lo-$) in specifically open syllables regularly surfaces as *ma-* (and *ua-* and *la-*) in Latin (see Schrijver 1991: 454-476); in Katz (1998b: 213 n. 85), I state that I find Schrijver’s proposal unconvincing.⁴⁷ I am particularly troubled by his idea that *monēre* ‘remind; warn’ is a replacement of $*manēre$ (though *perhaps* the existence of another verb *manēre* ‘stay, remain’—which Schrijver 1991: 457f. derives from $*mon-$, an idea that is itself far from certain⁴⁸—could have led to such a situation)

⁴⁷Schrijver’s basic idea has now been taken over by Meiser (1998: 84f.).

⁴⁸The morpho-phonological details of *manēre* (why *-a-*?) are a longstanding problem: Th. Zehnder in Rix (2001: 437 s.v. 2. $*men-$) derives it from $*m_n-$,

and find even harder to imagine that *uouēre* ‘vow, pledge’ has replaced a phonologically regular **uauēre* (Schrijver 1991: 472 himself seems to find this pretty hard to swallow, though he makes a valiant effort). In addition, it should be noted that Schrijver (1991: 458f. and 474f.) does discuss two possible examples of *ma-* from **mo-* in closed syllables: *marcēre* ‘be withered’ and *margō*, gen. *marginis* ‘border,’ both with *-rK*.⁴⁹ If indeed these two words at some point began with **mo-*, then—on the assumption that we are in fact dealing with some sort of sound law, as Schrijver claims—I know of no decent counterevidence to the claim that **most-*, too, becomes *mast-* (or, more broadly, that **mosC-* becomes *masC-*).⁵⁰ All in all, though, I prefer to regard words like *mare* and *masturbāri* as examples of an observable tendency whose conditions we do not yet understand. Whatever the case may be, the appearance of *masturb-* rather than **mosturb-*, especially in a word that seems anyway a good candidate for taboo deformation, can be called at best a very weak objection to the Watkins—Katz etymology.

I shall skip over Driessen’s next two points for the moment and turn to his last one, which concerns his belief

whereas Sihler (1995: 98; see also 128) follows what is probably the usual line, namely that the *-a-* is somehow analogical.

⁴⁹For another view of the root vowel in these two Latin words of the form *marK*, see Rix (1996: 160f.).

⁵⁰There are no genuine Latin words in **most-* (Plautus’ *Mostellāria* and occasional *n*-less examples of *mōnstrāre* ‘point out, show’ and the like clearly do not count) or, for that matter, **mosC-* (where *C* = a stop or another *s*) in general (the proper names *Moschī*, *Moschicus*, and *Moschus* are of no real consequence, being obviously foreign, and neither is the peculiar, but morphologically transparent, hapax diminutive of *mōs* ‘established custom,’ *moscillus** [Paul. Fest. p. 159M]). As for *mast-*, the only words aside from *masturb-* that are attested early enough to appear in the *OLD* are all loans (*mastic(h)ē* ‘gum, resin, mastic,’ *mastīgīa* ‘rascal,’ and *mastos* [the name of an unknown plant in Plin. *HN* 26.163] from Greek; *ma(n)strūca* ‘sheepskin coat’ and *mastrūcātus* ‘dressed in sheepskins’ from, seemingly, Sardinian), and there are no interesting other words in *masC-* (including *mass-*) aside from Petronius’ *mascarpīō** (134.5), on which see fn. 53 (*Ma(r)spiter* ‘Father Mars’ is obviously irrelevant, as probably is *ma(r)spedis* [Festus p. 161M]; *maspetum* ‘the leaf of the silphium plant’ [Plin. *HN* 19.42] and *massa* ‘mass’ and its derivatives are Greek loanwords; *massaris* ‘a kind of African grape’ is a loan from, presumably, some African language; proper names like *Massicus*, *Massagetae* are likewise foreign; and this leaves *masculus* ‘male, manly’ and its derivatives, which are transparently based on *mās*). (It is possible that some words in this footnote have a long first vowel, *mōs-* or *mās-*.)

that *masturbārī* is a semantically analyzable compound. In his opinion, the word “may be an Italic or even Latin creation” (Driessen 2001: 57), one that he analyzes, following Judith P. Hallett, as a transparent compound of *mās* and *turbāre/i* ‘agitate,’ with the first element having the otherwise unattested sense ‘penis’ rather than ‘male.’⁵¹ I agree with Driessen that the objection that *mās* does not ever seem to mean ‘penis’ is not decisive (see above all D. Q. Adams 1985, whom Driessen does not cite), though this semantic fact can hardly be said to help his preference for a newly constructed compound. But I am especially sympathetic to the remarks of J. N. Adams (1982: 211) that the verb “could not have been a recent formation when Martial used it; otherwise its structure would have been transparent” and that “[i]t may have been an obsolescent verb which Martial resuscitated.”⁵² While Adams’s objections to Hallett are a bit too strongly worded, he is certainly right to stress that no traditional account of the etymology of *masturbārī* is wholly satisfying. An old and synchronically unanalyzable formation, such as Watkins and I suggest, is thus attractive—provided that the semantics is defensible.⁵³

So would it make sense for the (typically deponent) verb *masturbārī* to mean literally “to marrow (out)”? Driessen thinks not, putting forth two more objections on the grounds of meaning. First, Driessen (2001: 56, with n. 19) disputes the Watkins—Katz etymology on the grounds of semantics-*cum*-morpho-phonology:

Katz attempts to link ‘brain’ and ‘masturbation’ by means of PIE **mosg^h*, which refers to both marrow and brain. Katz (after Watkins 1995:335f.) relates *masturbor*, Av. *mastōryan-* and Ved. *mastṛhān-* [sic] to PIE **mosg^h*. *Masturbor* would be a

⁵¹ See Hallett (1976); for further literature, see Katz (1998b: 210, with n. 75).

⁵² See also J. N. Adams (1982: 226). Note that the word is absent from Pompeian graffiti: see D. Q. Adams (1985: 241) and Henriksen (1998: 199, *ad* Mart. 9.41.7).

⁵³ The Petronian hapax action noun *mascarpīō* (see fn. 50) remains something of a puzzle, though Hallett (1976) argues plausibly that it means ‘striking/injuring someone else’s penis.’ Hallett is surely right to say that *mascarpīō* is a more recent formation than *masturb-* (much more recent in my view), and I agree with her that the latter “may have prompted the ‘folk etymologizers’ who partitioned the word into *mas* and *turbari* to believe that *mas* signified *membrum virile* and utilize it as such in concocting *mascarpīō*” (Hallett 1976: 305).

denominative verb that derives from *masturb-*, a term for sperm [*sic*]. Sperm would have been perceived as marrow coming from the brain. To this one may object that identification of **me/ostytg^(w)-* [*sic*] with PIE **mosg^h-* is phonologically impossible (unless one assumes tabooistic distortions). Clearly, **me/ostytg^(w)-* [*sic*] is to be analysed as *me/ost-* + *yg^(w)-* in view of Ved. *mast-* in *mast-iṣka-* ‘brains’, *mást-aka-* ‘skull’ and Skr. *mast-ulū[ni]ga-* ‘brains’, which lack the *yg^(w)-* part. Ved. *mast-*, which might be related to ToA *māśśunt* ‘marrow’ < **mest-*[,] has a very limited distribution. One can narrow down the distribution of *mast-* even more, if one connects ToA *māśśunt* ‘marrow’ < **m^hāsts^h-* < **mesd-* with Ved. *mēdas* ‘fat, marrow, lymph’ < **mesd-es-*. [n. 19: ToB *mrestīwe* is problematic in view of its *-r-* and unpalatalised *st-* cluster and need not be related to either Ved. *mast-* or even ToA *māśśunt*.] Ved. *mast-* is either confined to Indo-Iranian and Tocharian or to Indo-Iranian alone. I prefer the second option and regard *mast-* as a substratum form confined to Indo-Iranian, while **mosg^h-* with its wide attestation (Celtic, Germanic, Balto-Slavic and Indo-Iranian) is clearly Proto-Indo-European.

Driessen maintains that the idea of semen (not “sperm,” a word I have never used in this context) as marrow that comes from the brain is “phonologically impossible” but himself provides a way out in his immediately following parenthetical remark: “(unless one assumes tabooistic distortions).” In this particular semantic sphere there certainly is wide scope for taboo deformation (compare above on the first vowel of *masturbāri*), a phenomenon that every historical linguist invokes on occasion and one on which many a treatise has been written. In any case, however exactly the forms that Driessen mentions (and many, many others) all arise—I admit that I do not wish here to try to specify the complicated details (but see Watkins 1995: 535f.)—it seems to me hardly controversial or needing of special demonstration that at least two words (perhaps originally related, perhaps not) have crossed, namely **most-* (*vel sim.*), meaning in the first place perhaps ‘brain,’ and **mosg^h(-r(t))-* (*vel sim.*), meaning in the first place perhaps ‘marrow.’⁵⁴

⁵⁴One of the anonymous referees suggests that the attested words for ‘brain’ and ‘marrow’ throughout Indo-European may be reconciled under a single paradigm, an old *r/i*-heteroclite. He or she proposes that a root **mos-* of unspecified meaning might have been associated with the alternating suffixes

Finally, then, we come to the semantic pith, namely whether it is in fact reasonable to lump together ‘brain,’ ‘marrow,’ and ‘semen.’ Driessen (2001: 56f.) makes it clear that he does not find it reasonable at all:

Semantically, a link between ‘brain’ and ‘masturbation’, although conceivable, is far from straightforward. Further, there seems to be a semantic difference in Indo-Iranian between **me/ostyg^(w)-* and *mosg^h-*. Ved. *mājjan-* [*sic. recte majján-*] < **mosg^h-en-* refers to marrow, while Ved. *māstrhán-* [*sic*] refers to brains (Alexander Lubotsky p.c.). This semantic difference seems to apply to Iranian as well. Compare Khot. *māijsā* [*sic. recte mājsā*] *māstai āške* Z 20.54 “marrow, brains, tears” (Bailey ...), where Khot. *māijsā* [*sic*] ‘marrow’ and Khot. *māstai* ‘brains, head’ seem to exclude each other semantically.

But Driessen is simply wrong: not only is the semantic link *not* “far from straightforward,” it is *entirely* straightforward, which means that his semantic objection to the Watkins—Katz etymology of *masturbārī* is by some measure even less cogent than his weak morpho-phonological ones. The question is not whether a given language (Sanskrit or Khotanese or English, say) *can* differentiate between ‘brain’ and ‘marrow’ (and ‘semen’)—in Katz (1998b: 213 n. 84) I, too, point out that *majján-* means ‘marrow’ and *māstrhan-* ‘brain’—but whether it *must*. In fact, the intimate and integral cultural nexus of ‘brain,’ ‘marrow,’ and ‘semen’ is extraordinarily widespread—it is found in culture after culture all over the world and by no means in Indo-European territory—and it is only to be expected under such circumstances that there would be linguistic manifestations of this.⁵⁵ The evidence is abundant,

**-r-g-* ~ **-i-u-* and that “an insertion *-t-* developed between the final *-s-* of the root and the original suffixes *-r-/-y-* of the heteroclitic nominal base.” Even aside from the evident phonological problem that an unaspirated **g* cannot explain Skt. *māstrhan-*, this is morphologically extremely difficult: there are no known *r/i*-heteroclitics and the alternation **g* ~ **u* is non-canonical, to say the least. The referee adds that *masturbārī* “does not fit into the picture suggested by this reconstruction”; I do not believe in the picture, but in principle it could fit if the preform **mos(-t)-r-g^h-* (with an aspirated velar) were deemed reasonable.

⁵⁵See, e.g., Bernabé (1982: 302-304 and *passim*), who stresses something that Heinrich von Staden first pointed out to me, namely that ἐγκέφαλος ‘brain, lit. “in-head (κεφαλή)”’ is “quizá originariamente un adjetivo usado con μυελός

and I give here only a taste, on top of what I have already said on the subject.

In the Indo-European world, the anatomical picture of semen as deriving from cerebral matter that flows down from the head through the spine as marrow (the so-called encephalo-myelogenic theory) is best known from Greece, where it is found in the first place in the writings of the early 5th-century natural philosopher Alcmaeon of Croton (DK no. 24 A 13), most famously in Plato (*Ti.* 73b1-74a7 and 91a4-b7, as well as 86c3-5), and also in Aristotle, the Hippocratic corpus, and the works of many other Greek (and, secondarily, Roman) philosophers-*cum*-scientists.⁵⁶ Native, rather than Greek-derived, evidence for the same basic idea in Rome is to be found in the etymology of *masturbāri*, of course; a synchronic, though less direct, piece of evidence comes from the interpretation Katharina Volk and I have recently advanced of

para especificarla como ‘medula de la cabeza’ y luego sustantivado al usarse el adjetivo solo” (306); see also D. Q. Adams in Mallory and Adams (1997: 79f. and 370 s.v. “brain” and “marrow”). Wilkins (1996: 284) claims that cross-linguistic evidence shows that the semantic shift between ‘brain’ and ‘bone marrow’ is bidirectional (see also pp. 273 and 297).

⁵⁶See above all the irrepressible Onians (1954: 108-122, 124f., 149-152, 205f., and *passim*), as well as Lloyd-Jones (1978: 50-52 [reprinted, with one bibliographical addition, in Lloyd-Jones 1990: 323-325]), Lonie (1981: 101-103), West (1990: 174, with n. 3), and Rosenmeyer (1999); see also Longo (1997). It is common to read in the secondary literature that blood somehow fits into this schema, but while the connection between blood and marrow or semen is indeed cross-culturally common (there is ample evidence from India, for example, on which see above all Doniger O’Flaherty 1980: 33-39; for some nice comments about Rome, see now Corbeil 1996: 115f., with references), it must be stressed that the haematogenic theory of semen is, in many societies, including Greece, in competition with the encephalo-myelogenic theory, not reconcilable with it (a much-cited article that exhibits confusion between the two is Héritier-Augé 1989); the indispensable account is Erna Lesky’s 1950/1951 monograph *Die Zeugungs- und Vererbungslehren der Antike und ihr Nachwirken* (section A on “Die encephalo-myelogene Samenlehre” [pp. 9-30]; section E on “Die hämatogene Samenlehre” [pp. 120-193]). Interestingly, Jonathan L. Tilly and his colleagues at Massachusetts General Hospital have recently and controversially reported (see Johnson *et al.* 2005) that germ cells in women’s marrow may supply their ovaries with new eggs, via the blood stream; as Nicholas Wade reports in the *New York Times* (“Study Links Stem Cells in Marrow to Fertility,” July 28, 2005, p. A16), “The new theory, if true, would reinforce the view of the bone marrow as the ultimate repository of the body’s regenerative powers. ... Dr. Tilly ... is [now] exploring whether a similar system may exist in men to replenish the sperm-making stem cells of the testes.”

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a couple of medico-magical lines in Vergil (see Katz & Volk 2006 on *Ecl.* 8.80f.). Indian practices that point to a similar conception are well known,⁵⁷ and there is also plenty of evidence for the pathway from head to penis via the spine in Old and Middle Iranian texts (notably in chapter 30.17 of the Middle Persian *Wizīdagihā ī Zādspram*; see Gignoux & Tafazzoli 1993: 100f. and 264f., as well as Gignoux 2001: 35), a picture that Daryae (2002) has now neatly discussed and about which he concludes, correctly in my view, that it is inherited from Proto-Indo-European times rather than reflecting influence from Greece or India during or after the Sasanian period.⁵⁸ In addition, the idea that brain matter, marrow, and semen were at some level the same already in Proto-Indo-European times finds indirect but compelling support from comparative mythology, specifically the link between Hesiod’s masturbating phallic “octopus” (*Op.* 524) and the way the Irish hero Finn gains (mental) wisdom by not just sucking his thumb, but actually biting down through it to the marrow.⁵⁹

⁵⁷Doniger O’Flaherty (1980: 15-61 and *passim* [see Index s.v. “semen” (p. 378)]) has the best account of semen in Vedic and Classical Indian thought. She remarks on the connection between semen and the head in numerous other works as well, and the following comment deserves particular notice: “[T]he head, rather than the body, is where semen is stored, according to a belief prominent in Hinduism, as well as in Jewish cabala, medieval Christian alchemy, and elsewhere; and women as well as men have sexual seed that is stored in the head. Ezra Pound once argued that ‘the brain itself [was] more than likely—only a sort of great clot of genital fluid held in suspense or reserve.’ (This connection also underlies the Freudian concept of upward displacement from the genitals to the head.)” (Doniger 1999: 227; footnotes omitted).

⁵⁸Bruce Lincoln has in many publications discussed the status of semen in the thought of ancient Iranians and other Indo-European peoples: see especially Lincoln (1988a: 360f. and *passim* [lightly revised version: 1991: 219-227, esp. 222, with notes on 226f.] and 1988b: 138f. and *passim* [lightly revised version: 1991: 209-218, esp. 212f., with notes on 217]). Daryae (2002), who builds on Lincoln’s work, is particularly interested in establishing the background of the “contemporary belief (modern Iran) that the loss of semen leads to the weakening of the eyesight and even blindness” (103); it might be fruitful to compare his data (and the material in Dundes 1980: 120-124 [reprinted in, e.g., Dundes 1992: 285-289], to which he also refers) with the material I adduce in Katz (2005) for the connection between sex and blindness.

⁵⁹My sentence is deliberately somewhat enigmatic, as befits the subject. See Watkins (1978 [= 1994: (2.)588-592]), a very short and very clever paper (note also Watkins 1995: 531, with n. 9) that has generated an enormous body of further secondary literature. Opie & Opie (1997: 232f.) mention the following English nursery rhyme, which I doubt is as innocent as it sounds at

Also outside the Indo-European world there is plenty of good linguistic evidence—including, as I shall show elsewhere, already in third-millennium B.C. Egypt⁶⁰— that points to the concept of a direct conduit for a precious, liquid, life-supporting “vital force” from brain to genitalia: this evidence is found in languages and cultures as widely separated as Chinese (as first pointed out to me by my former colleague at the Institute for Advanced Study, Hugh Shapiro⁶¹) and Chickasaw (where *lopi*’ means both ‘brain’ and ‘marrow’; see Katz 1998b:

first hearing: *Hannah Bantry, in the pantry, / Gnawing at a mutton bone; / How she gnawed it, / How she clawed it, / When she found herself alone.* For general remarks about the relationship between mind (Lat. *mēns*) and penis (*mentula*, whose linguistic connection to *mēns* is, however, by no means assured), see the brief remarks in Katz (1998b: 211 n. 79; possible derivations of Russ. *mude* ‘testicles’ [*<* pre-PSlav. **mand-*] are now surveyed by Cooper 2000, to whose references add Orel 1996): a fine Hittite example is the idiomatic phrase *ZI-anza parā watkut* ‘his mind leaped forward,’ the description of the god Kumarbi’s erection in the Hurrian-derived “Song of Ullikummi” (see Hoffner 1998: 57, with 77 n. 18, for the standard translation); in the course of elucidating an epigram of Martial (1.94), Jocelyn (1981: 282-284) summarizes the Greek and Roman evidence for a connection (for females as well as males) between speech and sex (“sexual abstinence was necessary for a good vocal performance” [283]).

⁶⁰I first presented the evidence for this in a paper delivered to the American Oriental Society in April 2003, “An Old Egyptian Visual Pun.” That the idea was current in Egypt two millennia later (around the time of Alcmaeon) is well known, and I mention this fact in passing in Katz (1998b: 212 n. 80, with reference to a paper by J. Gwyn Griffiths).

⁶¹See Shapiro (1998) for a wonderful and bibliographically extremely detailed account of “spermatorrhea” and the traditional understanding of anatomy in China. Shapiro has a great deal to say about the sexual role of the kidneys in Chinese medicine; he also neatly shows how influence from the West has given the brain greater prominence, with the result that there is now an idea that retained semen (compare the Hindu ideal of *brahmacarya*) *ascends* (N.B.; contrast Lloyd-Jones 1978: 50-52 [*~* Lloyd-Jones 1990: 323-325] and West 1990: 174 on Greece, as well as the apparatus of West’s 1990 Teubner edition of Aeschylus *ad Ag.* 77) from the kidneys through the spine to the brain (see Shapiro 1998: 569, with notes on 591f., plus fig. 8 [p. 570]; compare Gulik 2003: 46f. and also Dundes 1980: 122f. [*~* Dundes 1992: 287f.]). (It is interesting to note that the Latin hapax *nefrundinēs*, which Festus p. 277M says is an old word for ‘kidneys’ [cf. Gk. *νεφροί*], seems to have almost exact cognates in nearby Italic languages, where, however, the meaning is ‘testicles’: see Paul. Fest. p. 163M on Lanuvian *nebrundinēs* and Praenestene *nefrōnēs*; on these words, see now Stuart-Smith 2004: 45, with references. Twinned testicles and twinned kidneys are paired in Petr. 35.3, [*imposuerat*] *super geminos testiculos ac rienes* ‘[he placed] testicles and kidneys over [the picture of] Gemini [on the platter].’)

211 n. 76).⁶² Of course none of this is surprising if there is anything to what the anthropologist Weston La Barre says in a remarkable—fascinating, though in parts clearly crazy—little book from 1984 that I overlooked when writing Katz (1998b): La Barre seeks to demonstrate, with a wealth of examples, that the relationship of brain, marrow, and semen is so pervasive in human society that we are all, in effect, hard-wired to believe in and react to it. It is thus clear that Driessen’s semantic objection to the Watkins—Katz etymology of *masturbāri* is entirely without basis.⁶³

In sum, I believe *masturbāri* to be a nearly certain example of the “Urbi et Orbi”-Rule.”

In conclusion, then, even aside from *urbs*, for which Driessen has indeed provided what is probably the best etymological proposal in the literature, the “Urbi et Orbi”-Rule still finds support in as many as three Latin words and the Umbrian cognate of one of them. The derivations of these forms range, as I have tried to show, from plausible (*orbis/urfeta*) to very likely (BERBER) to nearly certain

⁶²Vladimir E. Orel and Olga V. Stolbova write in the “Introduction” to their etymological dictionary of the Afro-Asiatic languages, “We ... feel free to reconstruct **tibin*- ‘brain, marrow’ on the basis of Eg *tbn* ‘marrow’ (med) and CCh **tihin*- ‘brain’ since in a number of languages the same word is used for ‘brain’ and ‘marrow’, cf. Russ *mozg* and NPers *mayz*” (Orel & Stolbova 1994: xxvii; see also 502).

⁶³Unfortunately, the distinguished cultural historian Thomas W. Laqueur ignores recent work on the word’s derivation in his remarkable book *Solitary Sex: A Cultural History of Masturbation*; see Laqueur (2003: 96 and 99, with 443 n. 23), where he writes that “all etymologies proposed over the years are fanciful” (99). It was of course the Swiss physician Samuel Auguste André David Tissot’s celebrated mid-18th-century work on onanism that opened up discussion of the topic and introduced the Western world to its alleged dangers, and Laqueur (2003) notes that Tissot “begins his genealogy at the beginning, with a case of Hippocrates’s that illustrated the dangers of excessive venereal pleasure. The patient suffered from *tabes dorsalis* [i.e., ἡ νόσος φθίσις]—literally, ‘consumption of the back,’ a wasting away of the spine, from whose marrow semen derives In the nineteenth century, thanks to the worldwide success of *Onanism*, [the] cluster of symptoms and signs would indeed point to *tabes dorsalis* as a disease of masturbation” (86; for references ancient and modern, see 440 n. 7, to which add most recently Craik 1998: 50f., 60f., 62f., 64f., 137-143 [esp. 140f.], 159f., 166f., 241, and above all 170-172 [esp. 171, with n. 100]).

(*masturbāri*).⁶⁴ While I am unable to add further examples of the law (Lat. *arbor* still needs an etymology) and while Osc. **verehasiú(í)** is evidently troubling, I remain convinced of the basic correctness of my original proposal and hope in any case to have raised a number of points of interest that go beyond the relatively narrow question of these words' linguistic sources.

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⁶⁴Stuart-Smith (2004: 41, 44, 106, and 217 n. 17) reports the "Urbi et Orbi-Rule" without committing herself to its correctness; curiously, while she discusses the examples *urbs*, *orbis*/**urfeta**, and BERBER, she never mentions *masturbāri*.

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