ŠAMAŠ, ŠAPAŠ, AND MURPHY'S LAW

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In an article published in CRRAI 47, M. Heltzer argued that the different roots for expressing the word "sun" in West Semitic languages (**šmš* and **špš*) were dialectal variants occurring in Amorite, Phoenician, and Hebrew.[1] In Ugaritic, only the root **špš* is found. What Heltzer unfortunately fails to point out, however, is that the [m] and the [p] in these roots are simply phonological variants that result from a natural characteristic of the human vocal apparatus.

This phenomenon occurs when a nasal (*m* or *n*) is in contact with a sibilant (groove fricative) or a resonant (*r* or *l*) and results from the timing of the redirection of the air flow from the nasal passage to the oral cavity. This redirection is accomplished by raising and lowering the soft palate (velum). The velum is raised to direct the airflow through the nasal passage to create the nasal consonant and lowered to allow the airflow through the oral cavity for the following consonant. During the nasal consonant, the oral speech apparatus is in a stop position (labial for *m*, dental-alveolar for *n*), even though the nasals are continuants because the air stream is directed through the nose. However, if the velum is lowered before the stop position is released, the result is a stop that is homorganic with the nasal (*p* or *b* with *m*, *t* or *d* with *n*).[2] The only way to avoid this stop sound is to lower the velum precisely at the same instant that the stop position is released or else to make sure there is no air flowing through the oral cavity (i.e., interrupt the airflow) when the stop is released. In normal speech, neither of these things happens and one gets a stop between the nasal and the following consonant. Avoiding it

1 M. Heltzer, "The West Semitic word for 'sun' (*šmš* and *špš*)," in S. Parpola and R. M. Whiting (eds.), *Sex and Gender in the Ancient Near East* (CRRAI, 47), (Helsinki 2002), 235–38.

2 This process is described in almost any handbook on either general or historical linguistics. For historical linguistics, see, e.g., A. Arlotto, *Introduction to Historical Linguistics* (New York 1972), 79.

requires a good deal of conscious effort, something that is not a part of normal speech.[3]

The stop so formed is called excrescent because it has no grammatical or historical justification, but is simply a matter of articulatory interaction. The addition of a consonant is also sometimes called epenthesis and the consonant formed thereby, an epenthetic consonant. In any case, this effect is entirely a function of the human vocal apparatus and the way speech sounds are made. In general, this process creates the following excrescent or epenthetic consonants:

ms > [mps]
ns > [nts]
ml > [mbl]
nl > [ndl]
mr > [mbr]
nr > [ndr]

Since this excrescent stop is a function of the human vocal apparatus, it is independent of the language being spoken. We can assume that the excrescent stop arises in normal speech whenever the appropriate sounds come together in any language spoken by anatomically modern human beings. Only if the phonotactics of the language do not permit these sounds to come together will it be avoided. The fact that many languages seem not to indicate its presence stems from the fact that the excrescent consonant is often not written in the standard orthography of the language.

In English, many instances are not recorded in writing. Thus, even though the spelling does not indicate it, pairs like *mince* and *mints* or *tense* and *tents* are usually pronounced the same way. In other instances the excrescent consonant has made its way over time into the orthography (e.g., OE *þunor* > NE *thunder*, OE *spinel* > NE *spindle*, OE *ganra* > NE *gander*).[4] Synchronic pairs like *humble* and *humility* or *tremble* and *tremulous* show that the excrescent consonant is only present when the consonant sounds come together in the word and does not occur when there is an intervening vowel.

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3 It can be avoided by speaking very slowly and carefully, but this is not characteristic of normal speech. In normal speech, gestures made with the lips, tongue, velum, vocal chords, etc. are completely unconscious. In most cases, as we think of what we want to say, the speech organs go automatically to the correct position for the next sound without any conscious effort on the speaker's part.

4 The first two examples here result not so much from the gradual invasion of the writing system by the excrescent consonants, but by historical changes in the English language (the collapse of the short vowel system) that allowed the two consonant sounds that were originally separated to fall together. For *gander*, there are already variant spellings in Old English with the <d> present.

Similarly, in Greek there are indications of excrescent consonants stretching back to prehistory: PIE **a-* 'not' + PIE **mṛt* 'dead, death' > Greek *ambrotos* 'immortal.' Likewise we find Greek *anēr* 'man,' genitive *andros* 'of a man.' In Greek, then, it can be seen that the excrescent consonants both were present (as is to be expected because of their nature) and were expressed in the writing of the language.

On the other hand, there are languages, like Finnish, where the excrescent consonants are never expressed in writing. There are a number of reasons that contribute to this,[5] but my informants tell me that speakers of Finnish, because of the phonotactics of the Finnish language, simply do not "hear" the excrescent consonants (even though they are clearly audible). Since the excrescent consonants are not phonemic and since the clusters that they form do not otherwise occur in the language, psychologically, the excrescent consonants are simply "not there" and there is no compulsion to express them in writing. This is very much connected with the much discussed "psychological reality of the phoneme," which allows the speakers of some languages to consider two or more distinctly different sounds to be the same or two or more phonetically identical sounds to be different.

In any case, it can be seen that whether the excrescent consonants are expressed in writing or not is often based on psychological factors, and varies from language to language and may not even be consistent within a language. But we can still count on the fact that the human vocal apparatus will produce these excrescent consonants whether the speakers of a particular language "hear" them or not.

This brings us back to West Semitic and the variation between the apparently different roots **šmš* and **špš*. We will start with Amorite, because here the writing system (Mesopotamian cuneiform) makes it clear what is going on. The variation of *m* and *p* is most often found in the element *śamśī* 'my sun' in such names as *Śamśī-Ḥaddu*, 'My sun is Ḥaddu.' Thus we find (particularly at Mari) the writing of this element as *sa-am-si*, but in other areas (particularly Alalakh and Ugarit) the writing *sa-ap-si* or *ša-ap-ši*.[6] Since we now know that the sequence /mś/ will be realized as [mpś] simply by the natural functioning of the human speech apparatus, we can see that the writings *sa-am-si* and *sa-ap-si* do not

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5 Finnish has a relatively small consonant inventory. Of the six combinations of consonants that give rise to excrescent consonants listed above, only *ms* and *ns* occur in the language. There are no clusters of three consonants occurring in the language (apparent exceptions expressed in writing [e.g., <ntt>] involve the strong grade of a consonant that undergoes consonant gradation). For these reasons, speakers are psychologically conditioned by the phonotactics of the language not to "hear" the excrescent consonants.

6 For the attestation of the writings, see I. J. Gelb et al., *Computer-Aided Analysis of Amorite*, s.v.

represent */śamśī/* and */śapśī/* as dialectal variants of the language, but rather are two different ways of representing the phonetic sequence *[*śampśī*]. The syllabic nature of Mesopotamian cuneiform makes it impossible to represent a cluster of three contiguous consonants in writing. Hence scribes had to chose between writing the [m] sound or the [p] sound of the [mpś] cluster. Clearly some chose to write the etymological root consonant *m* while others chose to write the excrescent *p*. The consistency of the writings in certain areas indicates that a particular writing became a convention in some areas, but free variation may also have been possible. But however it may have been written, the existence of spellings with both *m* and *p* confirms that it was always pronounced **śampśī*, as is to be expected.

In Ugaritic, only the writing *špš* is found. Because of the complete lack of **šmš* writings, it is entirely possible that the root was reinterpreted in Ugaritic with the excrescent *p* replacing the etymological *m* as a root consonant. Among the numerous writings of *špš* in Ugaritic, there must be at least one that represents the construct or absolute state, which should be **šamaš*, because there is no excrescent *p* when the *m* and *š* are separated by a vowel, but must be *šapaš* because of the writing. Thus, in the absence of **šmš* writings, Ugaritic **špš* may represent a different root from common Semitic **šmš*, but if so, the new root developed from the old by means of phonological reanalysis.

In Hebrew and Phoenician, the writing *šmš* is overwhelmingly predominant. Heltzer points to one possible example of *špš* in Phoenician,[7] and suggests that the Biblical Hebrew *šebīsīm* (a *hapax legomenon*) exemplifies this root.[8] Otherwise, all writings in both languages are with *šmš*. Particularly instructive is the writing of the name of Samson, which, as Heltzer points out,[9] occurs 37 times in the book of Judges where it is always written *Šimšōn*. In the Septuagint translation, however, it is written Σαμψών = *Sampsōn*.[10] Since there is no reason to suppose that the speakers of Hebrew were not anatomically modern human beings, we can therefore confidently assume that the Hebrew pronunciation of written *Šimšōn* was **šimpšōn* as the Greek writing indicates. Heltzer also points to the Aramaic text of the book of Ezra where "*Šimšay* the scribe" is recorded four times,[11] which

7 *Loc. cit.*, 236. The context surrounding the writing is almost completely lost, and the inscription, being from a private collection, is unprovenienced.

8 *Ibid.*, 237.

9 *Ibid.*, 236.

10 In English, the name of the Biblical character is regularly written *Samson*; however, the very common family names *Sampson* and *Simpson* derived from it show that the excrescent *p* is present in the usual pronunciation of *Samson*.

11 Ezra 4:8, 9, 17, 23.

the Septuagint renders as Σαμψαι ὁ γραμματεύς ("Sampsai the scribe").[12] Heltzer admits that "possibly we have here a tradition of pronouncing the root *šmš* similar to *smps*,"[13] but then discounts this by pointing out that the Septuagint renders the *šemeš* of the toponym *bēyt šemeš* consistently as σαμυς. But this is – based on pairs like Greek *anēr/andros* and English *humble/humility* – precisely what is expected: the excrescent consonant is present only when the consonants that give rise to it are in contact and disappears when they are separated.

Clearly, then, the interchanges of <m> and <p> in writings of forms of the word for 'sun' in Amorite, Phoenician, and Hebrew as outlined by Heltzer[14] do not represent variant roots used in different dialects, but represent different strategies for representing the sequence [mpš] in writing.[15] In Amorite, the reason for this is clear. The syllabic cuneiform writing system does not permit the writing of three contiguous consonants. But what about Phoenician, Hebrew, and Aramaic? In discussing the issue with Simo Parpola, he commented that "they could have written <mpš> if they wanted to," to which I replied, "that depends on how you consider the writing system." And that brings me to the real point of this paper: how the West Semitic writing systems of the Late Bronze and Early Iron Ages should be viewed.

This is of course a topic that has been much discussed: whether the West Semitic scripts should be considered as syllabic or consonantal.[16] The syllabic nature of the scripts was championed strongly by I. J. Gelb[17] (although the idea did not originate with him), but most recent writers on the subject have favored

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12 *Loc. cit.*, 236. Also apposite to the present discussion, although not mentioned by Heltzer because it does not involve the root **šmš*, is the LXX rendering of Hebrew ʿOmrî as Ambri. The [b] in this word is exactly the same kind of excrescent consonant as is found in Sampsōn and Sampsai.

13 *Ibid.* Here, Heltzer is confusing the concept of *root* with words derived from a root. The Semitic root is an abstraction and as such is not pronounced; what is pronounced is words derived from roots.

14 The example provided by Heltzer for Biblical Hebrew, *šebīsīm*, is far from certain, but even if is not related, the LXX writings of <mps> in *Sampsōn* and *Sampsai* confirm the presence of the phonetic sequence [mpš] in Hebrew and OT Aramaic (unless, of course, the translators of the LXX never heard the text pronounced by native speakers but simply took their transcription from reading the text to themselves).

15 Ugaritic may have a different root. In any case, there is no interchange of written <m> and <p> attested in words from this root in Ugaritic.

16 There are two possibilities for a syllabic system: an indistinct syllabary, where a sign stands for a consonant plus any vowel, and a default vowel syllabary, where a sign stands for a consonant plus a default vowel (probably *a*). The general evidence would seem to favor the indistinct syllabary, but the default vowel system fits better with the evidence from the Devanagari and Ethiopic scripts. For purposes of discussion, I will assume here the indistinct syllabary.

17 *A Study of Writing*, 2nd edition (Chicago 1963); "New evidence for the syllabic character of West Semitic writing," *BiOr* 15 (1958), 1–7.

considering the scripts as consonantal. Unfortunately, this decision is often not based on the evidence, but on other factors. Characteristic of this approach are the remarks of M. O'Connor: "This [syllabic] proposal may be arguable on linguistic grounds ..., but it is counterintuitive ..., and has been misused as a way of privileging the distinctive role of Greek consciousness in a way that makes no linguistic or historical sense ...."[18] Here we are explicitly told that the objective linguistic evidence should be ignored and our decision should be based on a) intuition and b) political correctness.

"Counterintuitive" is, of course, not an argument, but rather a prejudice – in this case an alphabeto-centric one – confirming that the idea runs counter to a particular mindset. But even if the indistinct syllabary is "counterintuitive," which is questionable,[19] that still does not mean that it does not exist. Many things are counterintuitive. It is counterintuitive that the earth is round, not flat, just as it is counterintuitive that the earth moves around the sun rather than the earth being stationary at the center of the universe. Both of these "counterintuitive" notions took a great deal of evidence to overcome the original "intuitive" explanations.

Those who do consider the linguistic evidence and decide in favor of a consonantal script usually justify this decision by claiming that the consonantal script is the simpler solution, thus invoking Occam's Razor. But Occam's Razor does not claim that the simplest solution is to be preferred, but rather the simplest solution *that accounts for all the evidence* is to be preferred. And Occam's Razor certainly does not claim that if you can get a simpler solution by ignoring some of the evidence then that is what you should do.

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18 In the discussion of Epigraphic Semitic Scripts in P. T. Daniels and W. Bright (eds.), *The World's Writing Systems* (New York 1985), p. 88 (... indicates deleted references).

19 The "counterintuitive" label was also applied to the indistinct syllabary by Peter T. Daniels in his communication "Fundamentals of Grammatology," *JAOS* 110 (1990) 727–731. But his own comments in *The World's Writing Systems* seem to belie this. Daniels supports the importance of the syllable in script genesis on p. 585 where he says: "Accounts of unsophisticated grammatogeny reveal the characteristics of an independently invented script. Most striking is that the result of the process is always a *syllabary* [Daniels' emphasis] emerging from a logography, never an alphabet .... This phenomenon seems to originate in the way people use and process speech: various psycholinguistic and phonetic observations and experiments indicate that it is syllables and not any shorter stretches of speech (i.e. 'segments,' the result of phonological analysis and roughly equivalent to letters of the alphabet) that people can consciously hear – unless they have learned to read in an alphabetic script." Daniels does not seem to have made the connection between these comments and his claim that the indistinct syllabary is "counterintuitive." If it is indeed the syllable that is the shortest perceptible unit of speech, then it would seem that it is the consonantal script that is "counterintuitive." If Daniels' observations on unsophisticated grammatogeny are correct, then an indistinct syllabary is only "counterintuitive" if one is already familiar with an alphabetic script. It would be useful to have the opinion of someone who learned to read and write with a syllabary rather than an alphabet as to whether an indistinct syllabary is "counterintuitive" or not.

The difficulty that hinders a decision is that from the point of view of entropy, there is no difference between the two systems. With either an indistinct syllabary or a consonantal script, all vowel information must be supplied by the reader. From the outside, both systems look exactly the same! So it is quite possible to describe the scripts from either point of view, and the only true measure of which way the system actually worked is how the users of the system viewed it – as consonants plus any vowel or as consonants alone.[20] Unfortunately, since the users of the script left no treatises on its nature, this insight is not available to us. We can only judge from the way the system is used and what its restrictions are.

Coming back to the remark "they could have written <mpš> if they wanted to," if the script is consonantal, this is certainly true. If the users of the script are not constrained by syllabic considerations, then they could write any sequence of consonants that there are signs for in the system.[21] So if "they could have," the next question becomes "why didn't they?" It could be argued that they did not write the [p] sound because it was not phonemic, and writing the [m] sound was sufficient to identify the word. This may be an obvious solution from the point of view of modern linguistic science, but the idea that the users of the script recorded solely phonemes while disregarding phonetics, seems like a rather linguistically sophisticated concept for the Late Bronze / Early Iron Age. And if this were the case, why is there variation between written <m> and <p>? Again, it could be argued that both /m/ and /p/ were equally phonemic and the variant writings represent different graphic solutions to representing the [mpš] cluster. This still comes back to the idea that the users of the script only wrote phonemes, but in this case there was some confusion about, or indifference to, what the phoneme was. And if there was confusion or indifference over whether the [m] or the [p] should be written, one still has to ask "why didn't they just write <mpš>?"

If one considers the script to be an indistinct syllabary, the answer to this question is obvious: they did not write it for the same reason that the users of Mesopotamian cuneiform did not write it – they couldn't. The syllabic nature of the script thwarted the attempt to write three contiguous consonants.

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20 There seems to be general agreement that the West Semitic script was derived by the reduction of an open syllabary (probably based on an Egyptian or Aegean model). How the script was considered by its users depends on the basis of the reduction. If it guiding principle was "it doesn't matter what vowel the sign has," then it is an indistinct syllabary. If the principle was "vowels? – we don't need no stinking vowels," then it is a consonantal script.

21 They could even have written double (geminated) consonants by simply writing the consonantal sign twice. One really has to wonder why they never hit upon this obvious solution to this problem (or, indeed, why it was a problem at all if the script was always strictly consonantal).

It can be seen, then, that there are two possible answers to "why didn't they just write <mpš>?" and that these answers depend on how one considers the West Semitic scripts:

(1) They couldn't (syllabic script).

(2) They could have, but they just didn't want to (consonantal script).

As with other attempts to determine the nature of the West Semitic scripts, we are once again left with two equally plausible alternatives. But in this case, alternative (1) has the advantage of being falsifiable. All that is necessary is to find a writing <šmpš> for the word 'sun' in any early West Semitic script and (1) is falsified; in contrast, alternative (2) has no test for falsification that could be found in the script itself. Therefore, from a scientific point of view, alternative (1) should be the default hypothesis since it is directly falsifiable.

Although there is no writing in a West Semitic script that would falsify alternative (2), it may still be possible to falsify it because it rests on a psychological foundation. And this is where Murphy's Law comes in. In my dictionary Murphy's Law is defined as "an observation: anything that can go wrong will go wrong,"[22] but this is only one formulation. In avionics, it is frequently expressed as "if an aircraft part can be installed incorrectly, someone will install it that way." This is closer to what I intend to invoke here, because Murphy's Law does not mean that everything that can go wrong will always go wrong, but rather if something *can* go wrong, eventually it *will* go wrong. So, first to generalize Murphy's Law for avionics: if something can be screwed up, someone is going to screw it up; then to specialize it for users of the West Semitic scripts: if it is possible to write <šmpš>, someone is going to write <šmpš> when he hears [šampš]. This last part is important in invoking Murphy's Law, because, of course, it is possible to write lots of nonsensical things, but we can't expect them to appear in writing on the basis of Murphy's Law, because they never would have been heard in the normal speaking of the language. On the other hand, we know that the [p] in [šampš] was heard because of the variant writings with <m> and <p> and because of the Greek translations (transcriptions) in the Septuagint.[23]

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22 Merriam-Webster's Collegiate Dictionary, 10th edition (Springfield, MA: Merriam-Webster, Inc. 2000), s.v.

23 Quite obviously, the existence of variant writings with <m> and <p> is crucial to an appeal to Murphy's Law. Otherwise, it could be claimed that the speakers of West Semitic languages, like the speakers of Finnish, psychologically do not "hear" the excrescent consonants and therefore there is no compulsion to express them in writing. The variant writings with <m> and <p> make it clear that the excrescent consonants were heard and that there was concern with expressing them in writing.

The LXX transcriptions are less compelling because we know that the Greeks, whose language is more tolerant of consonantal clusters than the Semitic, and who were hence more

The thesis is that if the reason for not writing <šmpš> was purely psychological but the writing itself was allowed by the system, then, since this is a sound sequence that was heard regularly in the language, Murphy's Law guarantees that some psychologically challenged person would have written <šmpš>. Someone would either a) not know that he was not supposed to write <mpš> when he heard [mpš], or b) not care. If the writing <mpš> for such a commonly heard sequence as [mpš] (or one of the other excrescent consonants that the Septuagint translation [transcription] of ʿOmrî as Ambri assures us were present in the language) was possible, then it would have appeared in writing, even if unintentionally or contrary to the rules of orthography. Very simply, if something can be screwed up, then someone is going to screw it up.

Since there are no writings <šmpš> known, if Murphy's Law provides a test for falsification of alternative (2), then alternative (2) is already falsified. The matter still is not closed, however. A writing <šmpš> may turn up in the next early West Semitic inscription excavated. This would both falsify alternative (1) and validate Murphy's Law. As we all know, however, Murphy's Law needs no validation. It is really nothing more than a statement about probability: if something can happen, eventually it will happen. It is just a question of how long it takes. But until a writing <šmpš> does turn up, the scientifically valid default position should be that such a writing is not possible in the West Semitic scripts.

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psychologically open to "hearing" clusters of three consonants, were certainly able to hear the excrescent consonants and had no hesitation about expressing them in writing.