The Smell of the Cage

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I would like here to review shortly what the project I direct in Los Angeles has done, and hopes to accomplish in the future to facilitate research on topics of interest to this conference, in particular dealing with proto-cuneiform texts; then to show a few highlights of a private collection of cuneiform tablets in Norway with a large new set of archaic texts; finally I would like to present what little I have been able to gather from some work on what I believe are personal names in these and other proto-cuneiform documents that, I believe, should be considered in the matter of decipherment of proto-cuneiform. "The smell of the cage" is a reference from William Faulkner's *Go Down, Moses*, to the contemplative character Sam Fathers who was born and bred a slave in the American south; and it was the accounting for apparent slaves in the Late Uruk period that reflected the same degrading abuse of fellow humans as was the defining flaw of the American South, but that resulted in long lists of personal names, names that, in the tradition of Mesopotamia, should carry much linguistic information.

The CDLI has its roots in a German research project, directed by Hans Nissen and dedicated to the edition of all archaic texts from Uruk in the south of Babylonia. In time, the scope of the project expanded to include web dissemination of descriptive text and of images of those tablets, then expanding to coverage of early cuneiform (4th and 3rd millennium), and now to digital capture and web dissemination of cuneiform generally. CDLI's catalogue consists of ca. 216,000 individual entries documented in 1.2 million lines of transcription and 84,000 archival images. Targeted collections were those of the Berlin Vorderasiatisches Museum and the St. Petersburg Hermitage, and now include collections in the United Kingdom, the US and in Syria.

Indeed, we are now hopeful that a cooperation with the British Museum will result in the initiation of digitization work within that collection of, I would guess, close to 200,000 cuneiform inscriptions, of which we have currently catalogued 34,000. Jacob Dahl, a research associate of the Berlin Max Planck Institute for the History of Science, made some few test scans of a variety of BM tablets that demonstrate the quality of images of 1st millennium cuneiform texts , and of the full resolution of 600 ppi that we set as a limit on our scans.

While the images of tablets tend to get more attention, certainly much more important for our research are the transliterations, which are currently archived in a very simple, so-called ASCII transliteration format; this format that would be fairly easily digested by any Assyriologist becomes much more powerful as a research tool when it is XML-parsed to the format in this slide. I can't get into this here, but did want to point to something we have been thinking about— about how we have failed in linking our transliterations to our images so that we can, for instance, automatically generate sign paleographies via cross-searching of catalogue and transliterations. Thus you might imagine that the local online user would search for this sign ud₅ (nanny goat) and request a chronologically and or geographically ordered list of visual attestations in digitally represented tablets.

Assyriologists have taken a lot of flack recently above all by members of the archaeological community for their determination to publish and discuss all ancient cuneiform inscriptions, with no regard to their immediate provenience. Thus the American Oriental Society, or the German Archaeological Institute, are currently restricting the publication of inscriptions that derive from recent antiquities market activity. Those colleagues would therefore not allow the following presentation to be made at one of their conferences, or published in one of their journals. The Schøyen cuneiform collection consists of nearly 4200 inscriptions, with an over-representation of Old Babylonian and of Late Uruk period texts. The owner was fairly decided in his purchases in acquiring highimpact texts, with a percentage of literary, epistolary and mathematical texts that far outweighs their percentage of a normal set of excavated texts. The first two editions of these texts have appeared this year.

Assyriologists will probably agree that the most important of the new Schøyen texts is this nearly complete copy of the Ur-Nammu law code from the Ur III period. The cylinder, to be published by Miguel Civil, is of critical importance in understanding the cultural history of early Mesopotamia, but contains a number of gems for administrative history as well, such as this section dealing with wages paid to various craftsmen—lower if performed during the cold period of the year.

Among the 130 lexical lists in the collection are 21 witnesses of Late Uruk period lists, including four with sections of the famous professions list know as Lu₂ A. The colophon on the reverse surface of all four texts suggests to me that the scribe first counted the cases on the obverse of his tablet; then inscribed his own name, and then the "name" of the list, in the case of Lu₂ A the name "NAM₂" which might be the pictographic representation of some sort of pedestal, referring to "office". The scribe was possibly named "SANGA GAR AMA" (meaning unknown).

To test this interpretation, we may have a look at the remainder of the lexical texts in the Schøyen collection. Another example with the same presumed scribal name is among those texts, but of a different list, that called "Vessels"

containing representations of different types of clay pots with different sorts of contents (fats, fish oil, etc.). Unfortunately, the sign I would hope to find here, that of the first sign in the list NI_a, is broken from this example. Another Schøyen test though does contain what we might guess is a trace of this sign NI_a, and a search of the Uruk lexical lists would seem to confirm a couple things for us. First, that one Uruk text with the Vessels list and that with the colophon identifying it as "NI_a" belong together. This is not that electrifying given the nature of catalogues kept in later Babylonian tradition, but this second example from Uruk to the lower right, surely also a colophon from a lexical list, contains the same presumed scribal name as our Schøyen texts and suggests an intimate connection between them. Since there are a number of different sign combinations in this spot in other lexical texts, this cannot be a general designation of lists; rather, it is as I think, the name of the author of these inscriptions and therefore might be rather strong evidence that the Schøyen archaic collection actually derives from Uruk and not as we have speculated from the area of Umma to the north of Uruk.

Another lexical text in the Schøyen collection (MS 3173) gives us additional information about the tradition of geographical names in the Late Uruk period, tying together the lists called Geography 1 and 2 in our publication of those Uruk texts but increasing the preserved section of that list by a factor of five. Indeed, if we propose a mock-up reconstruction of the full tablet, we see that its original size would have been some four times larger than the otherwise largest preserved list from Uruk, that of a witness of the Lu₂ A list. It may have had close to 500 lines in the original.

Two further texts from the Schøyen collection illustrate the unique nature of much of the archaic material. I understand that Henry Zemmel is interested in the early use of the sexagesimal system in Babylonia, as have we in the Berlin project been, so I did not want to keep him waiting to see the unfortunately broken account MS 2862/09 using that numerical system. One sign in the the text's summation is a fairly clear indication that our reconstruction of the full Late Uruk system is missing at least one member, this one representing "216,000" units of some product counted discretely (later szargal).

The next text MS 4558 would appear to have the same sign, but in this case used in the surface measurement system. In this case, the sign would represent a surface area of nearly 400 km², or more than fifteen times the size of the heretofore largest notation of field area in the Uruk corpus.

All of these data are lost to discussions of archaic Mesopotamia when the unprovenienced Schøyen collection is banned from academic use. But I would like to make one more point before I get to what I find most fascinating in this collection. Of course one of the major topics of this conference is the early history of cuneiform, and experts have proposed in various publications what I think is a fairly accepted view of the chronology of the precursors of cuneiform. The key link to the long history of tokens, amply discussed by Schmandt-Besserat and others, and the proto-cuneiform texts of Uruk IV and III, are the widespread bullae that contained tokens of various forms.

Like others, Peter Damerow and I have given voice to our dismay that the evidence contained within these clay balls often remains shrouded by the refusal of museum curators to simply break them open to expose the numbers and forms of tokens within. We count nearly 140 such balls in collections world-wide; of these, the token contents of only a half dozen have been available for study. Some few more have been put through cat scans in medical centers in Heidelberg and Paris, with limited results.

When Martin Schøyen acquired a dozen of these artifacts, he very wisely had them sawed open and the contents removed for study. CDLI's pages contain what resulted from this violence, including examples of the so-called "silver token" that played a prominent role in Schmandt-Besserat's belief that her complex tokens were the precursors of non-numerical signs in the archaic texts.

Now finally to the point of my paper. The discussion about the "Sumerian question" continues, at least in my mind, and has taken a rough edge of late, the more so with publication of contributions to a Leiden Rencontre that, particularly with contributions by Rubio and Wilcke, added wild speculation to the fairly stale list of "proofs" that Sumerian phoneticisms were a clear element in Late Uruk documents. I list below, and will post this list to the CDLI Wiki pages, the multivalency proposals made heretofore on Sumerian phonetic signs, with an overview of the type of usage we might expect. In this regard, we should note the examples of multivalent sign use cited from the other pristine writing systems, Egyptian (with its primadonna example here of proposed b3-st for the place name (per)-bastet, "(house) of the goddess Bastet"), Chinese and Mayan. I have set off in bold those candidates for Sumerian in the archaic texts that we should not consider uninteresting, although of these only the very poorly attested šabu carries any real conviction.

EN-E2-TI = en-lil₂-ti, "Enlil gives life" (Langdon, Falkenstein, etc.) PA-NAM2-RAD/ZA(A) = nam₂-sux-pa, /nam-sipa(d)/ (vDijk OrNS 58, 446) DARA4/PIRIG+MA = alima with MA - /ma/ (Green, ATU 2) PIRIG+NUNUZ = /az/ with NUNUZ = /za/ (Green, op.cit.) GA2 x AN = /ama/ with AN = /am/ (Green, op.cit.) GA2 x EN = /men/ with EN = /en/ or /men/ (Green, op.cit.) EN-ME-MU = endub suggests /en/ (K 2007: 43: "Wortbestandteil bzw. Lautindikator") EN-ME-GI = engiz suggests /en/ and /gi/ (Krebernik 2007: 43) E2-BAHAR2b-NUNUZ = /zilulu/ with NUNUZ = /za/ (K 2007: 43) GIR2-SU = /gir-su/ (K 2007: 43) ZI = SI4 with both = /si/ (Englund to W 9123,a1) SZU+SZU, GI+GI Sumerian iteration? Sexagesimal system is Sumerian? URI3-NA = /nanna/ with NA = /na/ GI = Sumerian /gi/ (gi4) "return" (Vaiman) NUN-ME = /abgal/ among "gal-words" in the Lu list, with GAL = /gal/ (Krebernik/Wilcke) SZA3-BU = /sza-bu/, //ED LAK50/sza-bu-nun, OAkk sza-ab-bu-nu-um (K 2007: 43)

Candidates for phoneticism:

Rebus use of discrete signs (word for "arrow" and "life" same in Sumerian) Use of phonetic rather than semantic value of signs (su_x-pa) Use of phonetic glosses of logograms (aza^{za})

I have been thinking about the apparent use of the SLED sign KAL to represent workmen (opposed to SAL) in the text MSVO 1,1, with which Jerry Cooper has confronted me, and, as we shall see, of the sign AL to represent apparent adult humans, consonant with later Sumerian AL = mah₂. We should imagine a language in both cases with homonym pairs SLED = WORKMAN and HOE = ADULT.

To this discussion I would like to add some material that we have often cited but never gathered systematically, and that I have in the past couple months only gathered in a preliminary way. This is the prosopogaphical material from the Late Uruk texts, since cultural continuity is regularly cited as one of the lynchpins of Sumero-Babylonian civilization, and thus personal names as an extremely conservative cultural trait should be discoverable in texts that code Sumerians. When I began my job in Berlin, I was not particularly attracted to the archaic texts, since, aside from many numerical notations and the oft-discussed lexical lists, the texts seemed to contain a jumble of incomprehensible pictographic signs with little semblance to the 3rd millennium cuneiform texts I had been reading at Edzard's Assyriological seminar in Munich. It seemed to me curious that if these should be texts written by Sumerians, we did not immediately recognize a substantial number of forms that could at least plausibly be interpreted to represent elements of the Sumerian language—quite aside from the seemingly missing references to the Sumerian pantheon. In the first instance, I would have expected language-specific patterns to show up in personal names. Still, neither the list Lu₂ A, nor the so-called list of officials, gave any clear indication of sign patterns that would comport with later, often predicative formulations in personal names such as "servant of Enlil", "he is my lord", "lady of Dumuzi", something like that. How, then, might we isolate what must have been many instances of human names in the administrative record?

It turns out that the accounts of herds of animals led us to the sorts of texts that clearly included such names. I present here one such account from Uruk of a herd of 95 pigs. Just as with small and large cattle, and as we are seeing with a large recent influx of archaic accounts dealing with donkeys, pig herds were differentiated according to animal age and use, in the case of cattle also gender.

Gregoire, Damerow and I then noticed during our work on the Uruk III period texts from Jemdet Nasr that a similar accounting phenomenon was visible in accounts of what were called SAL KUR ERIM and SAL KUR SAGxMA, that is, "yoked" and "noosed" female and male slaves (as Vaiman had demonstrated).

Similar accounts from Uruk began to fill out this picture with designations of slaves that reminded me of practices applied to domesticated animals, namely, with designations of age and gender, including terms well-known to

Sumerologists such as SAL and KUR (female and male [slave]), TUR (presumed pictogram of female breasts, representing young children) and AL (picture of a type of hoe) to represent "adult" (with later Sumerian reading mah₂).

The most compelling accounting practice that emerged from this analysis was the clear practice of qualifying numerical notations and general slave designations with cases of signs and sign combinations that corresponded exactly to the always sexagesimal notation. In one text copied by Philippe Talon, the first notation of 17 AL corresponds to 17 sub-cases, each with one or more signs. This only makes sense to me if we interpret the sub-cases to contain the personal names of the individuals summarized in the left-most case. You can test this against many texts available for view through our website.

A second text first seen by Talon and now in the Schøyen collection confirms the format and terminology of the previous account. With this and a number of other accounts, we can propose a list of terms that designate slaves in the Late Uruk period:

general terms	SAG		
	SAGxMA (note correspondence to ALIMA etc.)		
	ERIM ("yoke")		
	$PAP_{a}SU_{a}(?)$		
adults	AL		
	male	KUR _a	
	female	SAL	
youths?	EN_a TUR		
in third year	U ₄ x3(N ₅₇)		
in second year	U ₄ x2(N ₅₇)		
in first year	$U_4 x 1 (N_{57})$		

This slave-accounting format is widespread in the archaic texts, ranging from tablets from Uruk (Uruk IV with Vaiman's identification of slave children counted with numerical signs rotated 90 degrees to the right), from Jemdet Nasr, and in one instance (only) from an unprovenienced site (tablet now in the Cornell collection just edited by Salvatore Monaco). We may add to these texts the archaic tags known from Jemdet Nasr and Uruk (IV, looking very much like the Abydos tags) as a reminder that these too might contain personal names, as is a practice known from later period).

But the most striking set of slave name texts is from the Schøyen collection, of which I there are approximately 40 exemplars. Tagging these clear instances of personal names results in a list of ca. 450 individual entries.

We may look at these personal names in a number of ways. The intrepid decipherer will first just count and rank signs, always aware that the sample may be skewed. Persons named after the EN, possibly the ruler of archaic communities or even of regions, should not surprise us, and this may be the correspondence to lugal in later Early Dynastic personal names. For comparison, I have listed to the right the high-frequency signs in the archaic texts generally (excluding lexical list attestations).

Signs attested in archaic personal names:

ENa	91
BUa	43
3(N57)	40
PAPa	33
AN	31
SZU	31
E2a	24
DU	21

SZUBUR	21
MUSZEN	19
A	17
HI	17
SAL	17
GI	16
KASZc	16
SAG	14
SI	14
U2b	14
GIR3c	12
ZATU659	12

The most frequent signs in the proto-cuneiform texts generally are (excluding lexical lists):

ENa	1470
AN	811
GALa	783
SAL	683
GI	679
BA	662
PAPa	623
SANGAa	545
NUNa	519
SZU	505
E2a	463

But it might be more instructive to consider the signs and sign combinations that are most often represented in our list of names:

ZATU659 10

PAPa	7
SZUBUR	7
BUa GI	6
DIMa	5
ENa PAPa	4
ENa U2b DU	4
EZENb ENa	4
NIa GIR3c	4
SZU SZU	4
3(N57) SAL	3
E2~a DAH	3
EN~a IGISZxSZU2al	3
KASKAL SZUBUR	3
UB Zla	3

Comparing this list with one of the most common personal names or name elements in the Early Dynastic and Ur III periods, we see quite grave differences. First is, where are the divine name elements in our archaic personal names? In this list, there is not one instance of a name that might plausibly be interpreted to include a Sumerian divine element, whereas such names outnumber all other examples in both ED IIIb and Ur III texts. Then also, the common elements ur, amar, a (seed) are unknown in the archaic texts, and those instances of EN (colored blue) that we might consider archaic correspondences to later lugal contain other elements that make no sense if interpreted to be Sumerian. Finally, the Sumerian names of women from later periods find no counterparts in the archaic texts.

I have stated elsewhere that this search for personal names among slaves might be skewed since we might suspect the chattel slaves were above all taken from foreign populations. But frankly, it would surprise me if the Uruk overlords did not rename their foreign slaves with terms comprehensible to the local population. As check of the names of chattel slaves sold in the Ur III period demonstrates that some are clearly of foreign origin, or are Akkadian, but that the majority are plausible Sumerian names.

I put these data up to underscore the lingering problems in determining the linguistic affiliation of the earliest Babylonian scribes. The list of presumed slave names is by no means definitive, but I think a good indication of problems inherent in the archaic Sumerian postulate. These names do represent an important beginning in our efforts to lemmatize *all* proto-cuneiform transliterations with an eye toward isolating the signs that we do understand, and toward more broadly defining what the sign combinations represent that do not correspond to common entries in our lexical lists.