§1.1. It may seem less than remarkable to many observers of the advancing civil rights movement in the United States that, in November of 2008, citizens of this country elected a black man to the office of President. Barack Obama is not personally descended from African slaves; still, his ascension to the highest elective US office, despite the lingering liability of his skin color, represents a true benchmark in a sordid history of abuse that is intimately related to the European pillage of the New World. The history of European enslavement of Africans for the purpose of forced labor in transatlantic colonies describes a cultural atrocity whose flames burned brightly in the American South, but, we might note, longest in Brazil, where, beginning in the 16th century, hard labor in sugar cane production and mining operations was transferred by the Portuguese from the deteriorating indigenous slave populations into the hands of imported Africans. Here as in other New World colonies, slavery well outlived its abolishment in Europe—in 1761 in Portugal, or with the Slave Trade Act effectively frozen in the British Empire in 1807 until its eventual prohibition in 1834.

§1.2. The US followed Britain in the abolition of the slave trade in the early 19th century, but retained legal

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1 The following is the revised version of a paper presented at the conference Origins of Early Writing Systems, held in Beijing, PRC, in October of 2007. Origins was funded by the CAENO Foundation, New York, and organized by the Department of Near Eastern Languages and Civilizations of Peking University. I am grateful to Henry Zemel, Yushu Gong and Yiyi Chen for their kind support before and during that meeting. Otherwise unpublished (proto-)cuneiform texts will be cited in the article according to persistent URL’s assigned the texts upon entry to the Cuneiform Digital Library Initiative, in the short form <http://cdli.ucla.edu/P005573>. Publication of the texts will thus not alter this pathway. Abbreviations of text publications follow <http://cdli.ucla.edu/wiki/doku.php/abbreviations_for_assyriology>.

2 12 February 1761, signed by ‘Minister of the Kingdom’ Sebastião José de Carvalho e Melo. Slavery was abolished in Brazil with adoption of the Lei Áurea (“Golden Law”) signed in 1888 by Princess Isabel. As elsewhere, a strong incentive to commit to this act of manumission was that slavery was simply not profitable compared to the depressed wages paid poor European immigrants whose labor resulted in no collateral costs—housing, clothing, rationing while sick or during off seasons—whatever. Cf. conveniently Schwartz 1996; Pang 1979; Conrad 1972. In an act of “national reconciliation,” many of Brazil’s slavery records were burnt following a 14 December 1890 order of the then Minister of Finance, Rui Barbosa.

3 The parliamentary “Act for the Abolition of the Slave Trade” prohibited slave trade in the British Empire, but not slavery, that would remain legal for another 27 years, in some parts of the kingdom longer. The act levied fines of £100 for each offence, that is, for each slave found to be in transport by British-owned ships. Ingenious captains did not simply transfer their flags to those of Spain, but, when cornered by the Royal Navy, were reported to have dumped their “cargo” at sea (P. S. Foner 1975: 120-122).

4 The law passed on 2 March 1807 in the US went into effect on 1 January 1808, but was rarely enforced (cf. Franklin and Moss 1994: 90-92). It has been conjectured that the prohibition of the slave trade by the UK, and then other European nations and the US, led to the institution of slave “breeding stations” in Virginia and elsewhere in the South. The breeding of slaves, however, was already attested in the late 18th century, due to the
ownership of slaves, in the Confederate states until Lincoln’s famous Emancipation Proclamations of 22 September 1862 and 1 January 1863, finally banning all forms of slavery with adoption of the 13th Amendment in December of 1865. Approximately four million black slaves were freed by July of 1865, but, as post-war federalism would play out, freed into the very uncertain future of Reconstruction that eventually failed them, and rewarded the insurrection of secessionist Southern states. By 1877, with the final withdrawal of federal troops in a kowtow by the US president, Hayes, to advocates of “states rights,” all Republican state governments were replaced by Democrats who instituted a system of segregation and poll taxing that effectively disenfranchised recently freed black men. This was, however, as the history of southern paramilitary organizations comprised of former Confederate soldiers demonstrated, not the most pressing existential distress of blacks in the post-war United States; still, poll taxes and other means of intimidating blacks, including the Jim Crow laws passed by the Democratic state legislatures, were an infection of the US body politic that held through the freedom marches of the 1960’s and beyond—the 24th Amendment, ratified in January of 1964, finally abolished poll taxes, and the Civil Rights Act was passed in July over the Senate filibuster led by Southern Democrats, one month before Obama’s third birthday. The best chronicler of the Southern experience with Reconstruction and the succeeding Confederate resurgence is William Faulkner, from whose Go Down, Moses this paper’s title is borrowed:

The Sam Fathers whom the boy knew was already sixty—a man not tall, squat rather, almost sedentary, flabby-looking though he actually was not, with hair like a horse’s mane which even at seventy showed no trace of white and a face which showed no age until he smiled, whose only visible trace of negro blood was a slight dullness of the hair and the fingernails, and something else which you did notice about the eyes, which you noticed because it was not always there, only in repose and not always there—something not in their shape nor pigment but in their expression, and the boy’s cousin McCaslin told him what that was: not the heritage of Ham, not the mark of servitude but of bondage; the knowledge that for a while that part of his blood had been the blood of slaves. “Like an old lion or a bear in a cage,” McCaslin said. “He was born in the cage and has been in it all his life; he knows nothing else. Then he smells something. It might be anything, any breeze blowing past anything and then into his nostrils. But there for a second was the hot sand or the cane-brake that he never even saw himself, might not even know it if he did see it and probably does know he couldn’t hold his own with it if he got back to it. But that’s not what he smells then. It was the cage he smelled. He hadn’t smelled the cage until that minute. Then the hot sand or the brake blew into his nostrils and blew away, and all he could smell was the cage. That’s what makes his eyes look like that.”

§1.3. Many questions still surround Fathers’ almost mystical role in this classic novel. The reader is, though, informed of where he got his name. He was described as part Chickasaw (his biological father), part African and part European (his quadroon mother), but his name derived from “Sam (Had-Two-)Fathers,” since his mother had been married off to a black slave before his birth. Such personal name etymologies (“anthroponomastics”) can form a vital part of social and linguistic research where source material is scarce. Genealogical research has always enjoyed a high degree of interest among informal learners in the United States, in particular of late among descendents of more recent European immigrants whose family records, though now much better searchable online, often end with the Ellis Island Online Database of New York passenger lists.

5 The 1860 census counted 3,953,760 slaves in the Union. At this time, the slave populations of Mississippi and South Carolina easily surpassed those of free men (434,696 vs. 354,699 and 402,541 vs. 301,271, respectively), though with Virginia in the lead throughout the 19th century in total numbers (1860: 490,887 slaves). Though an abbreviated report due to political turmoil, the 1860 cartographic representations of the Census bureau did serve Union commanders with vital information concerning the populations—white and black—they would expect to encounter, the location of transportation routes, and even the crops they could count on to feed invading troops. See the historical resources of the US Census Bureau at <http://www.census.gov/prod/www/abs/decennial/>.


7 <http://www.ellisislandrecords.org/>., Online genealogical resources are growing, with Ancestry.com (<http://www.ancestry.com/>), GenealogyBank (<http://www.genealogybank.com/>), and the Mormon site Family
With increasing digitization and networking of birth, marriage and death records from foreign organizations, including most importantly churches, we may expect in the near future to enjoy the capability of tracing, from our home computers, the lives of ancestors reaching back several centuries, and thus add dimensions to our family histories we had imagined long lost. Onomastic resources that might assist in charting the history of the African slaves imported into the Americas, however, are very meager indeed, and not likely to ever be recovered in substantial form. For another indignity imposed on slaves arriving in the harbors of the New World was the stripping of their names, and the assigning of new ones by their masters. Recent research conducted on ship rosters has shown us that transatlantic slaves’ names were not included, but rather just numbers, age, and gender of individuals, much as we might expect in the stock car transportation of cattle to market.8

§1.4. And in no less dehumanizing a fashion, slaves sold into the chattel possession of plantation owners of the South were renamed willy-nilly, with no reference to practice in their African homeland (as fragile as this practice may have already been in African communities, where names often changed following important events in the individuals’ lives). Many black Americans thus today carry the European names of or assigned by their ancestors’ owners, their plantation trades, or of any of a number of other associations from their past in the Americas, including new names chosen by emancipated slaves, but very rarely the names of their African past.9 Aside from the educational and social value a full

9 A helpful general overview of naming practices, as is to be anticipated highly dependent on the particular language and culture of the naming owners, is offered by Miller and Smith 1997 s.v. “Names,” see, further, the illuminating description of Jamaican slave onomastics in Burnard 2001. Thus, slaves imported to the US from Spanish or Portuguese speaking colonies in the Caribbean often retained (first, but seldom sur-)names drawn from those languages, where slaves from Jamaica or Barbados carried common English names. In many cases, owners drew names from ancient history or the Bible, evidently trying to keep individuals identifiable. See Berlin 2003: 73; he cites, pp. 57-58, Chesapeake plantation owner Robert Carter, writing to his overseer in 1727: “I name’d them here & by their names we can always know what sizes they are of & I am sure we repeated them so often to them that every one knew their names & would readily answer to them.” The correspondence and papers of “King” Carter dating from 1701-1732, including transcribed inventories of slaves, have been made available by the University of Virginia at <http://etext.lib.virginia.edu/users/berkeley/>. For instance, Falls Quarter, located in King George County, listed 24 slaves, among them “Negroes: Sam Foreman, Grace his Wife, Gowin a boy, about 7 years old, Tomboy, about 3, ditto; Bristo a Man, Beck his Wife, Robin, about 6 Ditto, Ben, about 3 Ditto,” etc., going on to record horses, hogs and cattle in precisely the same format, though without personal names. In similar fashion, Ball 1999: 98 describes the 18th century purchase of three slaves in Charleston, South Carolina, with succinct records: “1721 – Bought: Fatima, Hampshire, Plymouth.” While the motivation for naming one of them “Fatima” is open to discussion, the names of the second and third slaves in this record surely derived from favored place names of locales (county, city) near the native Devon of the buyer, Elias Ball. This is not the place for a full discussion of terminology employed by slave owners in the South to qualify their chattel work force according to labor capacity; but I mention in passing that we have ample description of the “hand” terms applied to African slaves. As F. L. Olmstead 1862: 246 has described this system, “The field-hands are all divided into four classes, according to their physical capacities. The children beginning as “quarter-hands,” advancing to “half-hands,” and then to “three-quarter hands,” and, finally, when mature, and able-bodied, healthy and strong, to “full hands.” As they decline in strength, from age, sickness, or other cause, they retrograde in the scale, and proportionately less la-

8 Curtin 1969 is the first attempt at a more systematic compilation of data documenting this trade from both East and West Africa via European ships to the Americas (“triangular trade”). Curtin concludes that the bulk of the trade went to the tropical Americas (from Brazil up through the Caribbean) and that relatively few slaves (ca. 5% of the total from Africa) entered North America. The ambitious Trans-Atlantic Slave Trade Database sponsored by Emory University and directed by David Eltis and Martin Halbert (<http://slavevoyages.org/>) combines ship manifests with historical annotation and the market accounts, often anecdotal, available to earlier historians, and will fill in many of the gaps noted by commentators on Curtin, including testing Curtin’s hypothesis that slaves in the US enjoyed a much higher rate of survival than did their counterparts to the south, given census numbers of the mid-20th century. African names of these slaves remain hard to come by. Only in the case of repatriation or legal challenge following the British Slave Trade Act of 1807 were slave cargoes recorded according to African names. These name rosters are the subject of further research by the Emory-led team and others (see <http://slavevoyages.org/tast/resources/slaves.faces> and Nwokeji & Eltis 2002).
reckoning of displaced Africans in the Americas would represent to the descendents of slaves, it is not difficult to imagine the geo-linguistic value such rosters would bring to research on the African diaspora.

§1.5. The destinies of slaves and the recording of slave names can be followed back much further in recorded history than many would suspect. While debates among historians concerning the role of slavery in classical Greece and Rome can grow uncomfortably heated (see conveniently the survey of research in McKeown 2007), more sober discussions of early state development in 3rd millennium Mesopotamia led, in particular, by scholars from the former Soviet Union and its Eastern European allies, helped to build a theoretical foundation for a longue durée analysis of this abuse and its effects on social progress.\(^\text{10}\)

I am honored, as a sign of my gratitude for his intellectual generosity and his genuine personal warmth, to dedicate my paper to a close colleague of those discussants, Vyacheslav Ivanov, whom I discovered at UCLA later than I would have wished, but to whom I have stuck like glue since. Slava celebrates his 80th birthday on the 21st of August of this year. While the two of us have had occasion to discuss Babylonian onomastics, I have never compiled for his consideration a list of designations of slaves from early Mesopotamian texts. I hope that the personal names offered here, while, at least to my understanding, not credibly to be connected to any known Babylonian lan-

10 Dandaev 1984: 30-35 and 67-80, offers a review of the history of philological and social-historical research of Babylonian slavery. The difficult terminology of slave trade and exploitation played a central role in debates conducted mostly in the 1930s and 1960s, debates as to the social status of dependent laborers known in 3rd millennium cuneiform texts as guruš (males) and geme₂ (females), and organized in labor troops under the strict control of state foremen. See Struve 1947 and 1969 (engl. translation of a 1949 article). In the 1960s, I. M. Diakonoff and I. J. Gelb opposed the more stringently ideological views of Struve in his application of Marxist formation theory to the particularly Mesopotamian variant of state and empire evolution (“Asiatic mode of production”), including his presumption that Ur III laborers were chattel slaves. In a series of articles, they proposed a more pluralistic model of late 3rd millennium social structure in Babylonia, with only slightly varying opinions about the status of the large numbers of laborers organized in Ur III labor gangs. See, for instance, Diakonoff 1969 and 1976; and Gelb 1965 (particularly pp. 238-241), 1967, 1971, 1972, 1973, 1979, 1982a. Further, Pecírková 1979; V. Afanasieva et al. 1968; Melekiůvili 1974; Komórczy 1978; Brentjes 1987, 175-180; and Westbrook 1995. Englund 1990: 63-68, basing his argument above all on accounting practice, comes down on the side of Diakonoff that there was little difference in practice between the state-organized system of labor (characterized by the terms guruš and geme₂) and household chattel slavery, in which male slaves were designated with the sign ARAD₂ (in lead lines of contracts of sale often sag nita₂, literally “male head”), female slaves with the same geme₂ (in contracts of sale often sag munus, “female head”). The chief difference would be that chattel slaves in 3rd millennium Mesopotamia were freely marketable, while laborers in state servitude were not. See more recently B. Studevent-Hickman 2006; Koslova 2008.
§2.1. It is understandable that earlier research on slavery in ancient Mesopotamia has concentrated on those periods best reflected in the inscriptive record. While most popular histories cite references to slaves and slave prices culled from the famous Babylonian law codes, certainly it is the documentation from legal contracts on the one hand, and from administrative accounts on the other, that offers the best evidence of the day-to-day existence of slave populations and their overlords. Historians are not entirely clear as to what constitutes chattel slave property, nor in many cases what the social, political or military environments were within, and beyond Babylonian borders that led to the enslavement of often large numbers of individuals. I would like to present here what little I have been able to gather from recent work on what appear to be personal names of slaves in proto-cuneiform documents dating to the Late Uruk period, ca. 3350-3000 BC, many of which derive from irregular excavations and are thus unprovenienced. Indeed, without the rich resources of the Norwegian Schøyen Collection made readily available for study by its owner, our current harvest of at minimum, 440 personal names, would be reduced to a statistically insignificant 38.11

11 Assyriologists have taken a lot of flak recently, above all from members of the archaeological community, for their determination to publish and discuss all ancient cuneiform texts, with no regard to their immediate provenience. Thus the American Schools of Oriental Research, and the German Archaeological Institute, are currently restricting the publication of inscriptions that derive from recent antiquities market activity. Despite these roadblocks in scholarly communication and very possibly worse, most will agree that it is incumbent upon researchers to seek and exploit all avenues of evidence relevant to their work, but to condition the information derived from sources of varying reliability (s. for instance Owen 2009: 125-142). Regardless of the irregular origin of many, indeed most cuneiform tablets in public and private collections, specialists are, based on a number of factors, well able to date, and even place in rough geographical locale, these unprovenienced documents, and are therefore able to judge their value in their own research. In the matter of the decipherment, or we should say the description and interpretation of proto-cuneiform, archival locus of text artifacts has in fact played no more than a passing role, insofar as the great bulk of texts derive from regular excavations of Uruk, and as these texts came exclusively from secondary, even tertiary ancient context. They had been discarded in antiquity and, together with the other detritus of administrative households, used to level depressions in underfloors, to fill mud-brick-faced walls, and so on. The private Schøyen cuneiform collection consists of a very substantial number of artifacts, with an over-representation of Old Babylonian and of Late Uruk period texts. The owner was fairly decided in his purchases in acquiring high-impact texts, with a representation of literary, epistolary and mathematical documents that far outweighs their percentage of a normal set of excavated texts. Four volumes of these texts have appeared as of August 2009 (Friberg 2007; Alster 2007; Dalley 2009; George 2009). Together with a small number of Ur III administrative texts published in Owen and Mayr 2007 (nos. 1514-1526), two Gilgamesh witnesses published in George 2003 (vol. 2, p. 7, MS 2652/5 and pp. 8-9, MS 3025) and various other texts published before they were purchased by Schøyen, these editions amount to over 700 published exemplars, a growing fraction of the full collection. The remainder, including my own volume of the Late Uruk collection, are being prepared for publication under the general editorial supervision of Andrew George of the University of London. There can be little doubt but that the historical and linguistic content of this collection rivals that of most national
§2.3. Successive publications of excavated text artifacts attesting to earlier and earlier phases of cuneiform led, in the mid-1920’s, to the most ancient examples of the writing system. Conventionally known as “proto-cuneiform,” the sign forms found on texts from Jemdet Nasr and Uruk invited comparison, both graphic and semantic, with characters found on later texts. Included with these earliest cuneiform signs was the sign combination SAL.KUR interpreted by Langdon, and following him all other Assyriologists who dealt with these texts, to represent the precursor of geme₂ and thus “female slaves.”

§2.4. As with so much of note in researching early Mesopotamian administration, the first systematic discussion of 4th millennium slave designations was published by the Russian scholar A. Vaiman. In a 1974 article, Vaiman reviewed the then available textual evidence and concluded, correctly, that SAL and KUR₂ (KUR₃d were graphic variants of this sign) in the archaic texts in fact represented female and male humans, respectively, and that these were recorded much as were the stock of herding accounts, including, in the case of Uruk IV period texts, the qualification of children with a special numerical sign that was otherwise employed to designate fractions of some whole unit. The next discus-

The earliest clear attestations of both ARAD₂ and GEME₂ are found in the ED I-II (ca. 2800 BC) text UET 2, 259 (with possibly contemporaneous OIP 104, no. 7 obv. i 1; a search for “IR₁₁” in CDLI will list instances of ARAD₂, of unclear meaning, in the proto-cuneiform texts). Though this text is beyond the scope of the current paper, it should be noted that it contains on its obverse lists of 23 male and then 12 female personal names, totaled in two cases on the reverse that are qualified with US.KUR and SAL.KUR, respectively. The clear break of the latter sign form from the highly standardized use of its individual components to represent female and male laborers, respectively, in the preceding Uruk phases is another indication of the disruption in proto-cuneiform brought on by the break between Uruk III/Jemdet Nasr and ED I.

Vaiman 1974a, in Russian; German translation available in Vaiman 1989. See also Vaiman 1981 (Russian) = Vaiman 1990 (German). The interpretation of the nu-

collections on earth. But even if it consisted entirely of mundane copies of long-known literary compositions, it seems to me the ethical imperative of specialists to fully document the texts’ content, and to communicate their findings to the scholarly community as well as to the general public. Those who are not prepared to utilize all sources in their research, including texts available to us through private collections, and certainly those who would presume to limit the access or use in scholarly communications of unprovenienced sources, as has begun to happen with submissions even to such politically neutral editorial boards as those that oversee the publication of papers on the history of mathematics, may want to reconsider the professional choices they have made in their lives.

12 Cf. the forms a-c in the palaeographical table compiled by Gelb 1982a: 98. Only the text WF 93 obv. ii 1 attests the sign in clear semantic relationship with the male counterparts guruš in the ED IIIa period. This ED IIIa period sign form was retained in Nippur into the Old Akkadian period (see, for instance, TMH 5, 28 i 7-8 and rev. i 2; 44 rev. ii 4; OŠP 1, 23 vii 5; 1, 139 ii; but also the conventional form of other Old Akkadian sites, with exceptions in Nippur [cp. OŠP 1, 41 obv. ii 1, and s. OŠP 1, 25, 26, 27; OŠP 2, 84 [onion archive] i 2), in Isin (BIN 8, 39 obv. ii 9 [and 66 obv. 8?]) and Adab (OIP 14, 56 obv. ii 7) through ED IIIb. The ED IIIb form cited here (figure 2) is a peculiarity of Girsu.

13 The earliest clear attestations of both ARAD₂ and GEME₂ are found in the ED I-II (ca. 2800 BC) text UET 2, 259 (with possibly contemporaneous OIP 104, no. 7 obv. i 1; a search for “IR₁₁” in CDLI will list instances of ARAD₂, of unclear meaning, in the proto-cuneiform texts). Though this text is beyond the scope of the current paper, it should be noted that it contains on its obverse lists of 23 male and then 12 female personal names, totaled in two cases on the reverse that are qualified with US.KUR and SAL.KUR, respectively. The clear break of the latter sign form from the highly standardized use of its individual components to represent female and male laborers, respectively, in the preceding Uruk phases is another indication of the disruption in proto-cuneiform brought on by the break between Uruk III/Jemdet Nasr and ED I.
sion of proto-cuneiform designations of archaic laborers was offered by Englund and Damerow in an edition of proto-Elamite texts from Tepe Yahya, followed by a re-interpretation of texts from the Langdon Jemdet Nasr publications by Englund/Grégoire, and by Nissen, Damerow and Englund in a catalogue prepared for an exhibition in Berlin’s Charlottenburg Palace in 1990. Englund provides an overview of previous research on this matter in a 1998 publication. As this research has shown, the accounting for apparent slaves in the Late Uruk period reflected the same degrading abuse of fellow humans as was the defining flaw of the American South, but it collateral resulted in lists of personal names, names that, in the tradition of Mesopotamia, should bear much linguistic, or at least orthographic information. With the infusion of large numbers of recently available proto-cuneiform texts, we have been able to add very substantially to the list of clear personal names ascribed to humans in the Late Uruk period, and can begin to investigate these names for elements that may support, or by their absence tend to hamper an identification of the language of our earliest cuneiform scribes.

§2.5. The discussion about the “Sumerian question,” that addresses the linguistic affiliation of these archaic scribes, continues, at least in my mind, and has taken a rough edge of late, the more so with publication of the 2003 Leiden Rencontre volume that made no credible advances in the now fairly stale list of “proofs” that Sumerian phoneticisms, or even number words, were a clear element in Late Uruk documents. The lines of sign analysis that have accompanied this research are fairly straightforward. In the first instance, a rebus use numerical sign N₈ as a sign qualifying young animals and children also goes back to the two works by Vaiman.

18 The RAI section organized by G. Whittaker in Leiden and published in van Soldt 2005 (Ethnicity in Ancient Mesopotamia; s. the Tuesday, July 2nd program, p. 452), was ostensibly devoted to the debate concerning phonetic glosses and other language clues in Late Uruk texts (thus not to be confused with the “Sumerian problem” debate that, at the turn of the 20th century, addressed the question of whether Sumerian represented a real language at all). Two papers, one by the organizer (van Soldt 2005: 409-429) and one by G. Steiner (van Soldt 2005: 340-355; Steiner’s statement p. 345 that “all words transmitted in a “Sumerian” context are, independent of their structure, to be understood as “Sumerian” until they have been unambiguously assigned another language” [translation mine], does place skeptics at a distinct disadvantage!) were informed, and informative. (An important third paper offered by J. C. Johnson [“Complex graphemes in the proto-cuneiform corpus and the problem of phonological reconstruction”] unfortunately did not make it to press in this volume, and will be published elsewhere.) However, the papers by G. Rubio (van Soldt 2005: 316-332) and C. Wilcke (van Soldt 2005: 430-445) remind us that contributions to conference volumes are often not subject to the scrutiny of peer review. To be clear, and since both authors expended some effort in responding to points I and others have made in the past concerning the all too marked willingness of Assyriologists to declare the question of the linguistic affiliation of Late Uruk scribes resolved in favor of Sumerian, I have always professed simple agnosticism in the matter and have attempted to keep a running tally of lines of evidence that may be cited on one side or the other. To satisfy Rubio’s uncommon sensibilities, I am happy to retract my modest spoof equating Sumerian culture with Early Dynastic plano-convex bricks (van Soldt 2005: 321-322 and 325; I have otherwise restricted mention of this matter to my classes, where I make clear to those who do not know their history of cuneiform studies that the butt of the half-jest is the long-deceased Stephen Langdon, who, in Langdon 1931: 595, remarked that plano-convex builders of the ED periods may have represented the “recru-"s of the indigenous [=pre-Indo-Sumerian] civilization” of Mesopotamia). Even a passing remark in Bauer, Englund, and Krebernik 1998: 81 n. 170 about qualifier-noun sequences in archaic lexical lists that seemed inconsonant with Sumerian led to an extended discussion by Rubio of ambivalent word order in a list, the pig list, that may be no lexical list at all—with no mention whatsoever of the pertinent compositions I was referring to, especially “Animals” (Englund and Nissen 1993: 89-93) and “Vessels” (Englund and Nissen 1993: 123-134) with a high level of consistency in the use of qualifier-noun sequences. Rubio states that I argue “the so-called “Pig List” constitutes the best example of this word order” (van Soldt 2005: 322), and directs the reader to n. 350 (about color qualifications in archaic lists) of my publication instead of n. 349, which is the only reference I make to a possibly qualifier-noun word order in Late Uruk texts, citing specifically textile entries of the “Vessels” list. But that comment was only offered as a footnote remark recommending a possibly rewarding
of discrete signs (for instance, the words for “arrow” and “life” are homophones in Sumerian, where as in the example below, if correct, the arrow pictogram is more likely to represent “life” than “arrow” or some other homophonic word). There are precious few proposed pairs in this vein of attack, although we would hope that, with improved access to all Late Uruk texts, interested scholars would perform more systematic searches.19

review of sign sequence in pre-ED IIIb texts that has in my opinion too facilely been described as “unordered.” The apparently consistent order GAL-NOUN and NOUN-TUR in both scholastic and administrative archaic texts (for instance, Lu₂ A ii. 35-36 [Englund and Nissen 1993: 76], and Nissen, Damerow, and Englund 2004: 74 to nos. 6 and 11), quite aside from a number of other considerations about Uruk order of ideograms and numerical signs, might further interest those who are curious about such things. Such research as is demonstrated by Rubio in this volume is not rigorous, is in part misleading, and added nothing new to the debate. In his contribution to Ethnicity, Wilcke, on the other hand, appears to want to enter a discussion, in this case of numerical notations and number words (“das Sexagesimalsystem als sprachliches Phänomen,” roughly van Soldt 2005: 431-439), that he enlivens in a fashion that may be entertaining to some, but bothersome to others, and that in no way contributes to the question of Sumerian origins. We may leave aside the fact that he demonstrates limited command of the terminology of numeracy, to give a kind turn to some of his comments; and that he adds little to, and may rather subtract from, previous analyses of the numerical notations in the 3rd millennium texts he cites (to his unique reference of an n-final reading of 7(ge₂) in Ukg 4 vi 6 etc., we add the multiple instances of 2(ge₂)-am₃ from administrative Ur III texts, and we note such potential anomalies as 1(ge₂)u = ıntur or even šar₂u in MVN 13, 343 obv. 3). For instance, the ED IIIb royal inscription Ent 35 iv 4 (cited by Wilcke in van Soldt 2005: 436) is of unclear, possibly brick metrology, certainly followed by bitumen capacity (Ukg 7 ii’ 3-4; what is ge₂,d’ušu; and his interpretations of Ent 28-29 A ii 25 and iv 11 are conventional and certainly incorrect (p. 436, and including the Lagash II text Gudea Stat.B [p. 437, corrected in addendum, p. 444]) and best viewed as simple šar₂ gur = guru; on the one hand, as šar₂u gur = 40 guru on the other. He should, further, withdraw most of the comments dealing with early numerical sign paleography, for instance van Soldt 2005: 437, n. 23 and n. 25, that are either wrong or hackneyed; an article by an expert on the subject of sexagesimal notations, J. Friberg (Friberg 2005 with very substantial literature), should be substituted for his remarks, van Soldt 2005: 438-439, on ED IIIa–Old Akkadian mathematical texts. When in all of this the author gathers up a bundle of large 3rd millennium numerical notations, and assiduously assigns Sumerian readings to each, thus “proving” their Sumerian origins, we are left to wonder what lines of logic are being proposed. Such reasoning is, in the end, no more credible than is the now standard means of demonstrating phonetic glosses in proto-cuneiform by attaching Sumerian readings to elements in complex signs, derivatively assigning semantic meanings to the base sign, and then citing the semantic root to justify use of the gloss. The prime example of this practice is the ubiquitously cited ama < GA₂-AN (AN = am₃), for which no evidence whatsoever has been cited from texts that this complex sign refers to “mother,” Sumerian ama. We would most expect this use to show up in personal names, but the sign’s rare occurrences in the appendix below (IM 134762 i 2’: AMAa ZATU628, N₄, <http://cdli.ucla.edu/P005573> obv. ii 1.b9: AMA₃ AN EN₂; MSVO 1, 212 obv. i 4.b3:  ‘AMA₂ ERIM₃ MUŠEN MAŠ, ii 1.b: ‘AMA₂ MUŠEN MAŠ KI ZATU694, GI’ ) give no indication of meaning “mother,” nor is the sign AMA₃ the variant (AMA₃ = GIŠ-AN) that does appear to represent “mother” in the succeeding ED I and later periods (a search through CDLI files will demonstrate that these are independent syntactical entities, and not just orthographic variants, with a significant shift in context and frequency across the period from Uruk III to ED I-II; for the record, I note one potential instance of AMA₃ = “adult woman” in <http://cdli.ucla.edu/P387752> obv. 1.b1a; collation needed of a notation that appears to read 2(N₁₄) GI₃ AMA₃, “20 black AMAS”[?]). Instead of citing elsewhere in the paper various correct interpretations, or justifiable speculations by Friberg, Wilcke should rather defer to him entirely. It is difficult to locate anything in the rest that deserves our attention, perhaps excepting the fanciful notion that we might attach number words to Uruk V period clay tokens (van Soldt 2005: 439; the author, pp. 441-443, trumps all earlier speculation by transporting Akkadian glosses back to the Uruk IV period Lu₂ A list, and in a short excursion pp. 434-436 resolves, to his own satisfaction, a half century of theoretical discussions among historians of science on what constitutes abstract number in Mesopotamia). We must leave to Wilcke and M. Krebernick the determination of the ultimate source of Late Uruk GAL = 1gal referred to in our list below (under NUN.ME = abgal), for which see van Soldt 2005: 444, with n. 56 citing Krebernick in Gerber, Ehlich and Müller 2002: 64 n. 4 (and cp. Krebernick in Streck and Wening 2002: 1-2, n. 1; Krebernick 2007: 43 n. 19). In a startling sign of polygenesis, this identification even landed in Glassner 2000 (s. Englund 2005: 114).
Second, we might expect to discover the use of phonetic rather than semantic values of signs (see the instance of “šu,-pa” below). Third, and most often seen, specialists will attempt to isolate use of phonetic glosses attached to logograms in some way (best known are instances of such phonetic glosses inscribed within sign frames, but also simply near to the sign of reference). This strategy considers the possible combinations in complex graphemes to include semantic element + semantic element (uninteresting for language identification), semantic element + phonetic element (interesting but difficult to identify), or phonetic element + phonetic element (very interesting, and very difficult to identify). I list below a selection of the multivalency proposals made heretofore on Sumerian phonetic signs, together with possible instances of iteration common to Sumerian orthography, and the proposal of M. Powell that the uniquely sexagesimal structure of Sumerian number words offers proof that Sumerians invented proto-cuneiform, where sexagesimal notations are amply attested in the earliest texts. In this regard, we should note the examples of multivalent sign use cited from the other pristine writing systems, Egyptian (with its key example of proposed b3-st for the place name (per)-bastet, “(house of the goddess Bastet)”21, Chinese and Mayan. I have set off in bold those candidates for Sumerian in the archaic texts that appear strong, although of these only the very poorly attested šabu carries real conviction.

1) Multivalence?

<table>
<thead>
<tr>
<th>archaic sign(s)</th>
<th>proposed Sumerian interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN-E₂-TI</td>
<td>en-lil₂-ti, “Enlil (gives) life”</td>
</tr>
<tr>
<td>PA-NAM₂-RAD/ZA(A)</td>
<td>nam₂-su₁-pa, /nam-sipad/ (van Dijk 1989: 446)</td>
</tr>
<tr>
<td>DARA₂/PIRIG+MA</td>
<td>alima with MA = /ma/ (Green in Nissen and Green 1987 s.v.)</td>
</tr>
<tr>
<td>GA₂×AN</td>
<td>ama with AN = /am/ (Green, op.cit., and see above, n. 18)</td>
</tr>
<tr>
<td>GA₂×EN</td>
<td>men with EN = /en/ or /men/ (Green, op.cit.)</td>
</tr>
<tr>
<td>EN-ME-MU</td>
<td>endub, with /en/ of EN (Krebernik 2007: 43)</td>
</tr>
<tr>
<td>EN-ME-GI</td>
<td>engiz suggests /en/ of EN and /gi/ of GI (Krebernik 2007: 43)</td>
</tr>
<tr>
<td>E₂-BAHAR₂₃-NUNUZ</td>
<td>zilulu with NUNUZ = /za/ (Krebernik 2007: 43)</td>
</tr>
<tr>
<td>GIR₂-SU</td>
<td>gir₂-su (Krebernik 2007: 43)</td>
</tr>
<tr>
<td>ZI // SI₄</td>
<td>with both = /si/ (Englund 1994: 38, W 9123,a1)</td>
</tr>
<tr>
<td>PIRIG+NUNUZ</td>
<td>az(a) with NUNUZ = /za/ (Green, op.cit.)</td>
</tr>
<tr>
<td>URI₂-NA</td>
<td>nanna with NA = /nap/ (passim)</td>
</tr>
<tr>
<td>GI</td>
<td>gi (gi₄) “return” (Vaiman 1974b: 16)</td>
</tr>
<tr>
<td>NUN-ME</td>
<td>abgal among “gal-words” in the Lu₂ A list, with GAL = /gal/</td>
</tr>
</tbody>
</table>

---

20 See Bauer, Englund, and Krebernik 1998: 77 n. 158, with reference in particular to the reviews of Green and Nissen 1987 (the revised Uruk sign list) by M. Krebernik and P. Steinkeller. The most powerful example of this list would have been the first, en-lil₂-ti; it was, however, already shown in Englund 1988: 131-132 n. 9, to be fallacious.


22 Dreyer 1998: nos. 103-104.
ing derived from the lexical lists. Of course, we have
tions and signs or sign combinations of thematic mean-
leave the realm of numerical notations, object designa-
mats do not explicitly identify what is what once you
were replete with such designations, is that the text for-
that the accounts and perhaps sections of the lexical lists
clear instances of personal names, where we must expect
in a preliminary way. The major diffi culty in isolating
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ing derived from the lexical lists. Of course, we have

been unable to identify, nor should we expect to find,
any semantic glosses of personal names—aside from
the simple number sign representing “one unit,” these
were a millennium off. Frankly, one of the more dissat-
fying discussions that I had with Peter Damerow and
Hans Nissen in preparation of the Berlin Erlenmeyer
exhibition catalogue was in fact having to admit that
we could not state whether the sign combination “KU
SIM,” central though it was to understanding the archi-
val meaning of the core texts in this collection, referred
to a human, to a profession, or to a household. We
agreed to an individual “human” (brewery foreman),
but only as an expedient convention.

§3.2. The same frustrations can be applied down the
line to any number of signs or sign combinations that
can, due to considerations of tablet format, or as part
of a procedure that eliminates from consideration other
spatially associated signs whose semantics are identifi-
able, be isolated. Since we cannot know how many vari-
ables are at play in these residual sign combinations, it
would be less than prudent to simply assign to them all
the role of personal names. There may be though other
strategies to increase the likelihood that we are look-
ing at names of specific persons. For instance, you can
imagine an automatic text parser that searches all in-
stances of sign combinations from the lexical lists “Pro-
fessions” (Lu2 A) and “Officials” from all sign strings
found in discrete tablet cases (corresponding to “lines”),
removes from the resulting list first these lexical nota-
tions, then eventual identifiable signs or sign combi-
nations (numerical notations, object designations and
so on) from the remainder, and writes a list of all still
remaining signs and sign combinations. Aside from
possible functional terms, including for instance verbal
forms, we would anticipate that these entries represent
the personal names of cited household officials. We
might also look for parallels in the text formats that iso-
late distinct personal names for us—for instance, some
designation of personnel inventories as was well known
in later periods, or, say, a format like later table accounts
with some global qualification followed by strings of
individual cases, each with signs or sign combinations
with no further qualifications.

§3.3. Isolating these names would help to satisfy
our curiosity about the conceptual organization of its
members that archaic household accountants imposed

23 Note the potential correspondence of the personal
names A ŠA TAK1 4a and A ŠA3 4a in the appendix
below (MS 3887 obv. i 4 // MS 3035 obv. i 1b27, MS
2436 obv. i 4b1 and MS 2431 obv. i 4b27; cp. MSVO 1, 212
obv. ii 8a, MS 2998 obv. ii 6, and IM 134954 rev.
ii 4b2).

24 J. C. Johnson and A. Johnson (private communication)
are investigating the sign clustering of selected ED IIIa
period UD GAL NUN texts with an eye to understanding
how scribes were overcoming the challenges they
faced in representing texts through syntactical rather
than formally text structural means as was the case in
the preceding ED I-II and Late Uruk periods. Their
working hypothesis is that a cognitive reading strategy
of harvesting sign clusters for interpretation, rather
than a strict linearization, is not only at work in early
cauneiform orthography, but is a more natural and effi cient
means of reading. The “saccade” refers to a rapid move-
ment of both eyes in the same direction, the natural way
that humans gather visual information; “saccade gen-
eration” to such movements in lexical processing. See
for instance Rayner 1998; Reichle et al. 1998; Engbert,
Longtin and Kliegl 2002.


26 Nissen, Damerow, and Englund 2004: 66-70.
on their books, but more importantly, since cultural continuity is regularly cited as one of the lynch pins of Sumero-Babylonian civilization, and since personal names as a conservative cultural trait should be discoverable in texts that code, or are coded by Sumerians, this prosopographic material from the Late Uruk texts could play a prominent role in discussions of archaic linguistics. For despite all the caveats offered by specialists in early cuneiform, it has, since my time as a student in Dietz Edzard’s seminars in Munich, reading 3rd millennium texts and examining, as was his wont, earliest sign etymologies, 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. And in the first instance, I would have expected language, or if you wish, culture-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,” or “lady of Inanna.”

§3.4. It turns out that the Late Uruk accounts of herds of animals led us to the sorts of texts that clearly included personal names.27 Records of such herds, first edited by M. Green,28 contained data much like that known to specialists working on texts from later periods, including numbers and designations of animals, of their ages and gender, as well as identification of their owners, herdsmen, and whereabouts, and the real or anticipated dairy and textile products associated with these animals. As is the case with other types of accounts, these texts detail conceptually important terminological categorizations, for instance qualifying x ewes (sign U₆) and y rams (UDUNITA) as x+y small cattle (UDU). Just as with small and large cattle, and, as we are seeing with a substantial recent influx of archaic herding accounts, with donkeys,29 pig herds were also differentiated according to animal age and use, in the case of cattle also according to gender. The text W 2394830 records the distribution of animals from a large herd of 95 pigs into two groups of adults associated with large household units in Uruk, and a third comprised of juvenile animals. The juveniles were qualified with a designation borrowed from time accounting me-
§3.5.1. During our work on the Uruk III period texts from Jemdet Nasr, Grégoire, Damerow and I noticed that a similar terminology and syntactically motivated text format were visible in accounts of what were, in totals of the texts, qualified as SAL KURₐ ERIMₐ and SAL KURₐ SAG×MA, that is, what we speculated to be “yoked” and “noosed” female and male slaves, following Vaiman’s interpretation of SAL and KURₐ.³²

With the series of three Jemdet Nasr texts MSVO 1, 212-214, we were able to demonstrate several things. First, that the numbers of individuals qualified as SAL or KURₐ in archaic texts were not large—at most 211+ recorded on the reverse of the account W 9827, doubtless representing the summation of smaller groups recorded on the obverse (see figure 3).³³ Second, we saw that the accounting procedure of text consolidation, so well attested for later periods of Mesopotamian history, was employed already by household bookkeepers at the dawn of writing, MSVO 1, 213 and 214, were in fact entered, sign for sign, into the larger account MSVO 1, 212. But then third and most significantly, we could see that the accounting format of these texts was very complex, but foresaw the division of individual records into sub-cases with formal differentiations. The first sub-case of one entry contained a numerical notation, an object designation (as we believe, “slave of quality x”), and one or more signs apparently referring to persons or offices. There followed one or more sub-cases, with one exception never with a numerical notation, containing signs that we interpreted to represent the personal names of the designated slaves. Where the initial numerical notation was 1, there were one or two such associated sub-cases; where 2, there were at least two.

§3.5.2. Thus the initial entries of MSVO 1, 212, are (reconstructions according to MSVO 1, 213 obv. i):

<table>
<thead>
<tr>
<th>Entry</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a</td>
<td>1N₁ 1N₁</td>
</tr>
<tr>
<td></td>
<td>SAL KURₐ</td>
</tr>
<tr>
<td></td>
<td>1Nₐ SAG×MA</td>
</tr>
<tr>
<td></td>
<td>ŠA E₂a</td>
</tr>
<tr>
<td></td>
<td>MUŠEN×2N₅⁷</td>
</tr>
<tr>
<td>1b₁</td>
<td>ZATU75₁s</td>
</tr>
<tr>
<td></td>
<td>ERIMₐ</td>
</tr>
<tr>
<td>1b₂</td>
<td>[...] X</td>
</tr>
<tr>
<td>2a</td>
<td>[1N₁] SAL KURₐ</td>
</tr>
<tr>
<td></td>
<td>SAG×MA ŠA</td>
</tr>
<tr>
<td></td>
<td>[...]</td>
</tr>
<tr>
<td>2b₁</td>
<td>DUR₃ 3N₅⁷</td>
</tr>
<tr>
<td></td>
<td>ZATU75₁s</td>
</tr>
<tr>
<td>2b₂</td>
<td>[AB₃ TUR₃ N₃] KUₙ₄</td>
</tr>
<tr>
<td>3a</td>
<td>1N₁ KURₐ E₂a</td>
</tr>
<tr>
<td></td>
<td>ŠA ŠA</td>
</tr>
<tr>
<td></td>
<td>MUŠEN×2N₅⁷</td>
</tr>
<tr>
<td>3b₁</td>
<td>SI MA² EN₁</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>3b₂</td>
<td>[GI₅ KU₁ BAR]</td>
</tr>
<tr>
<td>4a</td>
<td>1N₁ KURₐ</td>
</tr>
<tr>
<td></td>
<td>MUŠEN×2N₅⁷</td>
</tr>
<tr>
<td></td>
<td>[E₂a ŠA]</td>
</tr>
<tr>
<td>4b₁</td>
<td>1N₁₄ UDU⁻¹</td>
</tr>
<tr>
<td>4b₂</td>
<td>1N₁ KIŠ KURₐ</td>
</tr>
<tr>
<td>4b₃</td>
<td>AMA⁻¹ ERIMₐ</td>
</tr>
<tr>
<td></td>
<td>MUŠEN MAS</td>
</tr>
<tr>
<td>5a</td>
<td>[1N₁ SAG×MA GESHTÜ₅] MUŠEN×2N₅⁷</td>
</tr>
<tr>
<td>5b₁</td>
<td>[GI SA E₂a AMA₅]</td>
</tr>
<tr>
<td>5b₂</td>
<td>[TAK₄ NI] SAG ERIM₅</td>
</tr>
<tr>
<td></td>
<td>[MUŠ₃a UR₂ DUR₅]</td>
</tr>
</tbody>
</table>

and the summation of all entries on the reverse:

<table>
<thead>
<tr>
<th>Entry</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1N₁₄ 7N₁ SAL KURₐ SAG×MA</td>
</tr>
<tr>
<td>2</td>
<td>1N₁₄ SAL KURₐ ERIMₐ X [...]</td>
</tr>
<tr>
<td>3</td>
<td>[2N₁₄] 7N₁ SAL KURₐ UR₂</td>
</tr>
<tr>
<td></td>
<td>UB PA₅ SAG×MA</td>
</tr>
<tr>
<td></td>
<td>SANGA₅ EN₁</td>
</tr>
<tr>
<td></td>
<td>N₅</td>
</tr>
</tbody>
</table>

§3.5.3. Unfortunately, the complexity of the individual entries in this account makes it very difficult to understand the syntactical relationships among those entities represented by individual sub-cases, and the text would furthermore appear to contradict, with its combination in initial sub-cases of SAL, KURₐ and 1N₁, our belief that SAL denotes a single female, and KURₐ a single male. I have no convincing explanation for this seeming contradiction. Similar accounts from Uruk with less complex accounting format, however, do help to fill out this picture with terminology more reflective of that known from herding accounts. Where herding texts recorded domesticated animals according to

³¹ This is a provisional interpretation of numerical signs from the derived system S where it is employed to qualify herded animals, and possibly humans. See Green and Nissen 1987: p. 131.

³² Above, n. 14. The justification of MA = “noose” in SAG×MA was based on the associated yoke pictogram ERIMₐ, on the combination of this sign with animal head signs (and thus in those instances not to be understood as a phonetic gloss), and on a consideration of the pictographic referent of MA. This sign, later peš₃, is interpreted to reflect the “string of fruit” that Gelb 1982b convincingly explained, and thus “tied-back cord” generally—in our case, tied round the neck of the slaves, thus qualifying them in some way other than the pictographic ERIMₐ, “yoke.”


³⁴ And this exception, MSVO 1, 212 obv. i 4b₁-2 = MSVO 1, 213 obv. i 4b₁-2, recorded ten sheep and one male donkey, KIŠ KURₐ probably purchased together with the recorded slave AMA₅ MUŠEN MAS.
species, gender and age of breeding significance—we expect also qualifying the males as to whether and when they had been castrated—the archaic accounts of groups of humans added new levels of qualification, with clearer differentiation of the terms SAL and KURₐ, and with designations of slaves that contained greater terminological texture.

§3.6.1 The two Uruk texts in figure 4 are good examples of this accounting procedure. Each has in the left column a total, eight individuals in both texts, corresponding to numerical entries to the right. Clearly enough, the first text ³⁵ lists 1 + 1 + 2 + 2 + 1 + 1 for a total of 8, while the second has (4+1=) 5 + (1+2=) 3 = 8. The latter text demonstrates that SAL and KURₐ qualify different objects, probably female and male slaves, that are themselves in the accounting terminology further divided into apparent age qualifications. Thus, in the former text we have, viewed syntactically, the qualifications AL, ENₐ TUR, 1N₅₇×U₄ TUR, BULUG₃, U₂₅ A and ŠU₃ in the second text, SAL, KURₐ and ŠA₃₃ TUR. Several of these designations are terms well known to Sumerologists. TUR (a presumed pictogram of human breasts) representing young children (Sumerian dumu), 1N₅₇×U₄ representing “one year,”³⁶ and AL (picture of a type of hoe) representing “adult” (with later Sumerian reading ma₂, this sign usually qualifies sexually mature domestic animals, but is also possibly an element of two personal names in the ED IIIa period, and is even a qualifier of the capacity unit gur [WF 76 rev. x 3]). Finally, ŠU will be associated by some with later šu(-gi₄), “old one,” found in many herding accounts and laborer inventories.

³⁵ Note that “LUGAL” in W 20274,2 obv. i prob. 3b1 probably refers to a one-year-old child, and thus is not likely to represent anything like “king” of later tradition. The sign combination LU₂ GAL is attested 10 times in Uruk texts [from a total of 36,448 lines], never in a context of any social consequence, based on the value of commodities registered in proximate tablet cases, and 55 times in ED I-II texts [from a total of 4004 lines] in personal names of a form that is largely consonant with later usage. These figures would reflect a level of usage of “LUGAL” in the ED I-II period about 50 times that of Uruk IV-III, of course given these numbers to be understood with a grain of salt.

§3.6.2. The most compelling accounting practice that emerged from the analysis of these two proto-cuneiform accounts from Uruk was the clear practice of associating numerical notations and general slave designations with sub-cases of signs and sign combinations that corresponded exactly to the numerical notations. Thus, in the first text of figure 4, 1 AL (1a) is followed by one sub-case with non-numerical signs; 2 1N₅₇×U₄ TUR (3a) by two sub-cases, each with non-numerical signs. The case with 4 SAL in the second text (i 1b1a) is followed by four sub-cases, each, again, with non-numerical signs. It appears reasonable to conclude that
these sub-cases contain personal names associated with individuals recorded in numerical sub-totals to their left (leaving aside a discussion of the true orientation of the proto-cuneiform texts), and that signs or sign combinations associated with these sub-totals qualified the named individuals in very much the same way as herding and dairy accountants recorded gender and age-specific sub-goups of agricultural units.

§4.1. This format was then the “tracer” to locate further instances of the same phenomenon, which differs from accounting formats of herding accounts chiefly in the inclusion of these non-numerical sub-cases. Due in part to the poor state of preservation of most Uruk texts, only about a dozen comparable accounts have been isolated among the more than 5000 tablets and tablet fragments unearthed there in regular excavations, and some few others from other sites. These numbers have been significantly increased with nearly 40 new reference texts that form part of the Norwegian Schøyen collection. One of these artifacts, first observed in Brussels by Philippe Talon, who recognized its significance and kindly posted to me his carefully done copy and transliteration before it entered the Oslo collection with the manuscript no. MS 3035 (figures 5-6), is of particular note.

§4.2. The large account exhibits the same correspondence between cases with numerical notations and associated sub-cases with non-numerical notations that we have seen in smaller texts above. For instance, the section in the lower left of the tablet’s obverse surface (figure 5) contains a numerical notation representing the initial notation (sexagesimal “12” qualifying a notation that may be interpreted to mean “three-year-old children”) and the number of sub-cases to the right with ideograms that in all likelihood represent personal names. Name the occurrence of the same names in sub-cases 2 and 7 (as well as 1b7 of the same column), and the possibility that sub-case 10 is to be interpreted as (KURx, ZA=x) “ZAGINx” = “Lapis,” “Blue(-eyed one)."

Figure 5: The section in the lower left of the obverse of the Schøyen text MS 3035 (figure 6) demonstrates the numerical relationship between the initial notation (sexagesimal “12” qualifying a notation that may be interpreted to mean “three-year-old children”) and the number of sub-cases to the right with ideograms that in all likelihood represent personal names. Note the occurrence of the same names in sub-cases 2 and 7 (as well as 1b7 of the same column), and the possibility that sub-case 10 is to be interpreted as (KURx, ZA=x) “ZAGINx” = “Lapis,” “Blue(-eyed one)."

37 Vaiman 1974a: 140 (=Vaiman 1989: 123), to no. 20, drew attention to the likelihood that ATU 1, 92 (=ATU 5, pl. 81, W 9655,t) with its notation obv. 1: 3N₁ 2N₈, referred to three adult slaves and two slave children, parallel to the use of N₈ (N₁ rotated 90° clockwise) to designate young animals (cp. ATU 5, pl. 66, W 9579,ai, pl. 92, W 9656,ba, and pl. 109, W 9656,fx).
38 Aside from MSVO 1, 212-214, see, for instance, ATU 6, pl. 64, W 15772,p; pl. 65, W 15772,z; pl. 74, W 15860,a4; ATU 7, pl. 86, W 22104,3; BagM 22, 60, W 23972,2; W 17729,bp+bx, W 20593,11, <http://cdli.ucla.edu/P006390> and <http://cdli.ucla.edu/P006426> (unpub.); MSVO 1, 217-222; MSVO 4, 58; CUSAS 1, 36 and 174. We might wonder, further, whether the archaic “tags” discussed in Bauer, Englund, and Krebernik 1998: 57-60, as well as a large number of recent additions to CDLI (nos. P387483-P387593, P387698-P387725), recorded names of persons.
39 Above, fn. 11.
40 See <http://cdli.ucla.edu/P006268>. A second, wholly parallel text has not reemerged since it went through Belgium, but was copied by Talon and posted to CDLI under <http://cdli.ucla.edu/P005573>. A third, though poorly preserved parallel text is MS 2863/18 <http://cdli.ucla.edu/P006184+>. We may note that many of these texts give clear indication of gender distinctions in names, for instance the young girls named SAL SAL and TUR₃a BALA₄ vs. young boys named EN₄ GAL₅.
“12” in the sexagesimal system, qualified by $3N_{57} \times U_{4}$ TUR, probably “three-year-old children.” Exactly 12 sub-cases follow, each with one or more signs representing as many personal names of the individuals summarized in the left-most case.

§4.3. The account at a higher structural level employs procedures that are well known from the grain accounting office of Jemdet Nasr.41 The double dividing line down the middle of the text indicates that it is the compilation of two still quite significant accounts, each beginning with the most valuable objects (here AL, presumably adult slaves) and continuing through numbers of less valuable items. The first sub-account appears to be globally qualified by the sign $2N_{57}$ MUNa1, the second $1N_{57}$ MUNa1. This MUNa1 is likely to represent some sort of accounting (rationing?) period, possibly connected to the sign combination PAPa SUa discussed below, note 43.

§5.1. Using this, and the 50 other accounts registering numbers of humans in this way, we may compile a list of general qualifications for what we interpret to be archaic slaves:

### general terms
- KUR (male)
- SAL (female)
- SAG (head, human)42
- SAG×MA (noosed head)
- ERIMa (yoked one)
- PAPa SUa

### adults
- AL (of working age (“hoer”?)

### youths
- $EN_{n}$ TUR (four years old and older up to AL?)
- KUR, TUR (boy, younger than $EN_{n}$ TUR?)
- KUR, ŠA₃a₁ (boy, very young?)
- SAL TUR (girl, younger than $EN_{n}$ TUR?)
- SAL ŠA₃a₁ (girl, very young?)
- ŠA₃a₁ TUR = KUR/SAL ŠA₃

- $3N_{57} \times U_{4}$ (TUR) three-year-old (or: child in 3rd year)
- $2N_{57} \times U_{4}$ (TUR) two-year-old (or: child in 2nd year)
- $1N_{57} \times U_{4}$ (TUR) one-year-old (or: child in 1st year)

§5.2. These then are the higher-level qualifications of persons in proto-cuneiform accounts, quite possibly chattel slaves, or humans in some form of servitude to Late Uruk households. While I must admit to some doubt about the interpretation of the complex signs including “$U_{4}$” (“day,” but a general anchor for time metrology notations in this period), it may be relevant to mention the analyses by I. Gelb, H. Waetzoldt and others that children of state-dependent laborers will have been assigned full work loads by the age of six or shortly thereafter. If our designation $EN_{n}$ TUR encompasses a period of several years, AL might indeed qualify workers of an age that would appear young to us, but certainly not to many sweatshop owners around the world, and certainly not to the industrialized West prior to such legislation as the British Factory Act of 1833 aimed at curbing abusive child labor in British textile manufacturing. According to this at the time heralded advance in labor rights, children aged nine to thirteen could not be forced to work more than nine hours a day. Nevertheless, why did archaic accountants so exactly record the ages of children from their first through their third years? This system of dating bears an uncanny resemblance to herding accounts of large cattle and of pigs of later periods, or even of the initial lines of the so-called archaic Pig List.44 The age designations of domestic animals employed in those accounts are explicit tools known to any dairy or pig farmer; they track age to know when to wean the young, to judge weight gain, and to prepare sexually mature animals for breeding, or to train oxen for the plough. It is difficult to recognize a comparable need in accounting for young children, aside possibly from the intent of accountants to retain strict control of juveniles as they grew to working age. As slave laborers, after all, they would have represented a substantial chattel asset to ancient households.

AK₃, $U_{4}$ NIMa and SU TUR in <http://cdli.ucla.edu/P387752>, obv. ll. 3.b1-2 and 4.b1-3.

41 See Englund 2001, especially pp. 26-27 to MSVO 1, 95-96.

42 See the SAG inventory MS 2437, comprising columns of lines, each with one sub-case containing a numerical notation and sign combinations representing presumable personal names, followed by a second sub-case with only counted SAL. The text, including particularly the summation rev. col. iii, is unclear to me.

43 The total of the account MS 3035 (figs. 5-6 and cf. <http://cdli.ucla.edu/P005573> and MS 2863/18, bottom of second column) contains this sign combination where we might expect a general designation of the humans recorded in the text; MS 2498 would tend to support the notion that PAPa SUa qualifies slaves in some general way, with the first cases containing numerical notations qualified with PAPa SUa in parallel to AL on our larger accounts. Cp. in particular MS 2439.

Figure 6: MS 3035, a complex account in the Schøyen collection, contains notations representing numbers of apparent slaves qualified according to age, though not (visibly) gender.
Transliteration of MS 3035:

<table>
<thead>
<tr>
<th>obverse i</th>
<th>reverse i</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a</td>
<td>1a</td>
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<tr>
<td>1b1</td>
<td>1b7</td>
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<td>1b2</td>
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<td>1b3</td>
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<td>1b31</td>
<td>1b32</td>
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</table>

$\S 5.3$. Doubtless, tagging all proto-cuneiform accounts that contain the format for personal names described above will result in a list that is, for a number of reasons, by no means complete. In the first place, H. J. Nissen and his research collaborators have stated again and again that we must understand the nature of the texts taken from Uruk excavations. To make historical, occasionally just aesthetic points, often the best preserved of those accounts are cited and put in illustrative graphics or on book jackets, but these are the tablets that survived more than 5000 years of deposition in Uruk, after having been rudely gathered and tipped, as detritus of a burgeoning administration, into construction projects of the ancients. Most artifacts could not survive such ill treatment intact. $^{45}$ Thus the very fragmentary nature of the great majority of our texts gives fair warning that we are missing much of the original deposits, certainly most of the original text material, and that those exemplars we do have are so incomplete as to make a measured judgment of their contents very difficult. In the second place, the state of decipherment of proto-cuneiform approached a natural barrier with publication, in $\textit{ATU} 2$ (1987), $^{46}$ of the results of research conducted by H. J. Nissen and M. Green on the interpretation of non-numerical signs in the proto-cuneiform texts, and of research conducted by P. Damerow, R. K. Englund and J. Friberg on the numerical signs and sign systems. Advances in the understanding of Late Uruk texts from Mesopotamia have, since that publication, been modest. $^{47}$ Particularly the interpretation of much of the source material that is not directly associated with numerical notations, with counted or measured objects, or with signs or sign combinations found attested in the thematically ordered archaic lexical lists whose un-

$^{45}$ The attractive state of preservation of many archaic collections gathered from the antiquities markets notwithstanding, since these tablets are what remained after a rigorous sifting process that selected “preserved” and left behind “fragmentary” at the site of plunder, and this sifting continues through the markets down to endbuyer. Though now exposed to the elements, we may hope that future regular excavations will gather in the many thousands of fragments of texts that must well litter the edges of illegal excavations of post-Kuwait war Iraq.

$^{46}$ Green and Nissen 1987.

$^{47}$ Research conducted above by the Oxford Sumerologist J. L. Dahl on the approximately contemporaneous, proto-Elamite accounts from ancient Iran has led to substantive gains in accessing that related writing system. See Dahl 2005a, 2005b and nd.
interrupted history of transmission resulted in sign-for-sign copies well into the 3rd millennium, and even into the Old Babylonian period, remains highly problematic. These remaining sets of signs will include personal names.48

§5.4. Nevertheless, the limited method of sign and sign string isolation used here has resulted in a list of ca. 450 discrete entries (see the appendix below), each with fair probability representing the given name of an individual. We may look at these personal names in a number of ways. The resolute decipherer will first just count and rank signs, always aware that the sample may be skewed, given that so much now derives from one private collection of inscriptions of unknown provenience. Persons whose names included the sign ENa, 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. This sign is attested more than twice as often as the runner-up signs BUa (unclear meaning; pictographically “snake,” but its only contextually derived denotation points toward field surveying) and 3N57 (in some and possibly most instances an abstracted form of the sign KURa, “male slave” or perhaps after all also “mountain,” “foreign land”).

§5.5. For comparison, it may be helpful to list the number of attestations of highest frequency signs used in all discovered personal names (left), and the most frequent signs in the proto-cuneiform texts generally (right; excluding lexical list attestations):

<table>
<thead>
<tr>
<th>Sign</th>
<th>Times Attested</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENa</td>
<td>1470</td>
</tr>
<tr>
<td>BUa</td>
<td>811</td>
</tr>
<tr>
<td>GALa</td>
<td>783</td>
</tr>
<tr>
<td>SALa</td>
<td>683</td>
</tr>
<tr>
<td>GIa</td>
<td>679</td>
</tr>
<tr>
<td>BAa</td>
<td>662</td>
</tr>
<tr>
<td>PAPa</td>
<td>623</td>
</tr>
<tr>
<td>SANGAa</td>
<td>545</td>
</tr>
<tr>
<td>NUNa</td>
<td>519</td>
</tr>
<tr>
<td>ŠU</td>
<td>505</td>
</tr>
<tr>
<td>E2a</td>
<td>463</td>
</tr>
<tr>
<td>HI</td>
<td>17</td>
</tr>
<tr>
<td>SAL</td>
<td>17</td>
</tr>
<tr>
<td>KAŠc</td>
<td>16</td>
</tr>
<tr>
<td>SAG</td>
<td>14</td>
</tr>
<tr>
<td>SI</td>
<td>14</td>
</tr>
<tr>
<td>U2b</td>
<td>14</td>
</tr>
<tr>
<td>GIR3c</td>
<td>12</td>
</tr>
<tr>
<td>ZATU659</td>
<td>12</td>
</tr>
</tbody>
</table>

§5.6. Although I cannot make out a meaningful pattern in these numbers, at least we now have a basis for comparing the frequency of signs used in personal names versus those used in the texts as a whole; such frequency tables can serve, for instance, to test in Babylonian texts the hypothesis of Meriggi, Vallat and Dahl that proto-Elamite scribes developed a syllabary used exclusively to record proper nouns.49 It might here be more instructive to consider the signs and sign combinations that are most often found in our list as those representing true names of individuals, and to compare these entries with the most frequently attested names in the texts from the “historical” ED IIIb (ca. 2400-2350 BC) and the Ur III (ca. 2050-2000 BC) periods.50

Late Uruk, ca. 3200 BC

<table>
<thead>
<tr>
<th>Name</th>
<th>Times Attested</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZATU659</td>
<td>10</td>
</tr>
<tr>
<td>PAPa</td>
<td>7</td>
</tr>
<tr>
<td>ŠUBUR</td>
<td>7</td>
</tr>
</tbody>
</table>

Still, public access to proto-cuneiform texts has moved to an entirely new level since the establishment of the Cuneiform Digital Library Initiative (<http://cdli.ucla.edu/>), dedicated to the digital capture and dissemination of all cuneiform sources, but in its initial phases focusing on corpora of the 4th and 3rd millennia. No phase of cuneiform is so well documented online currently as is the Late Uruk period, including image and text representations of nearly all available text artifacts, both edited and unedited. Thus, digital facsimiles of nearly all proto-cuneiform texts are available for free use by all networked researchers, and are being profitably exploited by specialists in their work and publications; one successful recent example is the edition of the Cornell proto-cuneiform collection (Monaco 2007). Further, the field may expect in the next years to avail itself of a federated and persistent website that will facilitate wholesale downloads of data packages and accompanying open source software to better interpret locally the descriptions of early cuneiform texts posted by Assyriologists, by linguists and scholars from other related fields, and by informal learners alike. We may therefore be confident that in the near future the resources for study of onomastics in the archaic texts will steadily improve.


50 The numbers of ED IIIb and Ur III names are to be understood as very preliminary, and more relative than absolute; they are based on a count of attestations in the transliterations available to CDLI (and downloadable at <http://cdli.ucla.edu/downloads.html>). Our files contain ca. 8500 names in the Ur III period.
§5.7. Comparing the list of proto-cuneiform personal names with those of the most common personal names or name elements in the Early Dynastic and Ur III periods, we see quite substantial differences. First is, our archaic personal names contain no obvious theophoric elements. Indeed, 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 nearly unknown in the archaic texts, and those instances of ENₐ (in bold) 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.

§6.1. I have stated elsewhere⁵¹ that this search for personal names among slaves might be skewed in another telling way. We might suspect that as in later periods, and as the designations SAG+MA and ERIMₐ, as well as seeming prisoner scenes on many Late Uruk seals might tend to support, the chattel slaves were above all taken from foreign populations, their names thus in some non-Babylonian language. But frankly, it would surprise me if the Uruk overlords did not rename their foreign slaves with terms comprehensible to the local population, much as did the buyers of African slaves shipped to the Americas, since it is difficult to imagine that those engaged in the exchange and exploitation of humans, of whole families judged as little better than local livestock, would have made an effort to retain their native names. I can offer only indirect evidence that this may have been true. Contracts of the sale of chattel slaves in the Ur III period followed a standard format that included the name of sold persons in the form “one (slave type), PN his/her name, his/her price n shekels of silver ... .”

§6.2. A quick search of available documents, restricting myself for the present to only those contracts and related court records that included the phrase “PN mu-ni-im,” “PN is his/her name,”⁵² demonstrates that some of these names are clearly of foreign origin, or are


⁵² Searching for instances of PN₁ ARAD₂ PN₂ (“PN₁, male slave of PN₂”), PN₁ sag nita₂ PN₂ (“male ‘head’ of”), PN₁ sag munus (“female ‘head’ of”) and PN₁ dumu nita₂/munus PN₂ (“male/female child of”) in our files results in a list of more than 300 occurrences, indicating the range of numbers we might expect in a full set of chattel slave names. My perusal of the names of PN₁'s indicated no deviation from the general pattern observed in our list of mu-ni-im names, although the
Akkadian, but that the majority carried a plausible Sumerian pedigree.

In Nippur:

sag nita  nam-dumu mu-ni-im
ur-lugal mu-ni-im
lugal-ur₂-ra-ni mu-ni-im
ad-da₂ [...] mu-ni-im
lu₂₂-en-lil₂₂-la₂ mu-ni-im
šar-ru-a mu-ni-im
nu-hi-dingir mu-ni-im
lu₂₂-suen mu-ni-im

guruš  i-din₂-da-gan mu-ni-im
   dumu a-bi-ša-ru-um
   (guruš redemption text)
sag munus  maš-da₂-gu-la mu-ni-im
en-ni₂-la-az mu-ni-im
ni-za-ti-a mu-ni-im
a-za-za mu-ni-im
nin-mu-ba zi-ge mu-ni-im
geme₂₂-e₂-zi-da mu-ni-im

In Ur:

sag nita₂  šu-gu-bu-um mu-ni-im
en-um₂₂-šiškur mu-ni-im
₄nin-gir₂-su-ka₁₂-sa₄ mu-ni-im
dingir-ma-lik mu-ni-im
sag munus  ta-re-ša-am₃ mu-ni-im
i₃-ši₂₂-bad₃-re mu-ni-im

In Wilayah₂:

sag nita₂  [PU₃.ŠA]-ba-ia₃ mu-ni-im
sag munus  na-an-na-a mu-ni-im
a-ga-ti-ma mu-ni-im
eš₁₈-dar-um-mi mu-ni-im

In Umma:

sag nita  a-ba-in-da-an-e₃ mu-ni-im
dumu nita₂  a-ba-a-in-da-an-e₃ mu-ni-im
sag munus  ᵇba₂₂-b₃₂₂-s₄₃₂₂-s₄₃₂₂ mu-ni-im
nin-mu-ušur (LAL₂-TUG₂₂)-mu
   mu-ni-im

§6.3. Isolating personal names in the proto-cuneiform texts represents an important beginning in our efforts to lemmatize all proto-cuneiform transliterations with an eye toward identifying the signs that we do understand, or that we believe we understand, and toward more broadly defining what the sign combinations represent that do not correspond to common entries in our lexical lists. I put these data up to underscore the lingering problems in determining the linguistic affiliation of the earliest Babylonian scribes. It may be debated whether the rough translation “male slave” and “female slave” are correct renderings of the proto-cuneiform signs SAL and KUR₂, but I think the unbiased observer will not reasonably doubt that most, perhaps all of the sign combinations discussed above in selection, and listed in the appendix below, do in fact represent personal names. They are directly, or by association categorized by Late Uruk scribes using terminology that ultimately points to SAL and KUR₂; they are found in a distinct text format that removes them from the realm of simple object designations; and they do not correspond to entries in the thematic lexical lists.

§6.4. 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. Even under the assumption that the personal names in our texts were those of prisoners of war, or of slaves imported into Babylonian bondage from regions surrounding Mesopotamia, and thus were not of the “Uruk core,” sharing the language and culture of their overseers, it remains difficult to understand the absence of, among other linguistic clues, theophoric elements, Sumerian or otherwise. This reminds us of the fact that we have found no lexical god lists of the pantheistic form well attested in the ED IIIa period—it is in fact difficult to point to any clear evidence of anthropomorphic deities in the Late Uruk period at all, once the presumed depiction of Inanna on the Uruk Vase is put in doubt—and that such theophoric elements have not been identified in any other sign combinations that would be credible candidates for personal names. That would leave us with the common elements for males, lu₂, lugal, nin, ur, and ARAD₂, and for females nin, geme₂ and ama—all exceedingly rare, or missing here. If we exchange SAL for geme₂, and KUR₂ or ₃N₂₇ or, for skeptics, even SUBUR for, say, ur, then the corresponding names in our list are not more reflective of expected early Sumerian forms. How much more agreeable this discussion would be if Langdon, now eighty years ago, had been right and not just en-lil₂₂-ti, but other names in this vein had been uncovered in the proto-cuneiform archives!
Appendix. List of personal names in “slave” accounts
(signs of individual names have been force-sorted without regard to potential language-revealing sequences; an annotated archaic name glossary will appear in due time in the pages of the CDLI)

A AL MUNa1 TE
A ENa
A KI NEa [..]
A NAR
A NEa I N57
A NUNUZa1
A SAG
A’ SANGA2 [..]
A ŠA TAK4a
A ŠA3a TAK4a
A TAK4a
A U2b
A 3 N57
ABa ENa U2b
ABa EZENb X [..]
ABa KAKa2
ABa KU6a
ABa 5 N57
ABb GU4 ENa
ABb SANGAa
ADa AN SI
ADa X
ADa E2b SAL
ADa GI HI
AKa ENa GALa
AMa AN ENa
AMa AN MA
AMa ERIMa MUŠEN
MAŠ
AMa GI KI MUŠEN MAŠ
ZATUN694a
AMa ZATU628a N4
AMAR ENa ŠU
AN AN GAR
MUŠENx2N57 N24a
AN DU ZATU735a
AN DUB NIN
AN DURa ENa HI 1 N58
AN E2a MEa2 [..]
AN ENa
AN ENa DU
AN ENa MUŠa2
AN ENa SAG
AN ENa UMUN2
AN ENa [..]
AN EŠDA
AN GIŠ ZATU773a
A AL MUNa1 TE
A ENa
A KI NEa [..]
A NAR
A NEa I N57
A NUNUZa1
A SAG
A’ SANGA2 [..]
A ŠA TAK4a
A ŠA3a TAK4a
A TAK4a
A U2b
A 3 N57
ABa ENa U2b
ABa EZENb X [..]
ABa KAKa2
ABa KU6a
ABa 5 N57
ABb GU4 ENa
ABb SANGAa
ADa AN SI
ADa X
ADa E2b SAL
ADa GI HI
AKa ENa GALa
AMa AN ENa
AMa AN MA
AMa ERIMa MUŠEN
MAŠ
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