Sumerian Compounds

1. INTRODUCTION

Sumerian compounds comprise a special category within the Sumerian lexicon. They consist of a noun-verb pair, whose definition is not what is expected based on the individual meaning of the two terms. For example, *ki—aŋ*2, meaning “to love,” consists of a noun *ki* = “ground,” and a verb *aŋ2* = “to measure.” Clearly, “to love” is a meaning quite separate from either of the individual components. This lack of semantic transparency and non-combinatorial meaning have made compounds in Sumerian a topic of great interest to scholars.

This category is essential in Sumerian because of its frequent usage as well as the types of verbal action that are expressed by them. For example, many sensational actions involving ‘seeing’ and ‘looking’ are expressed in Sumerian as compounds with the nominal component *igi* (Karahashi 2004:98). In bilingual lexical lists, these are always translated with a one-word Akkadian counterpart, and many languages do not utilize a periphrastic formulation for sensational actions. In English as well, our verbs of visual sensation tend to be a single lexical item, e.g. *see, look, gaze*, although occasionally expressions which spread out the wording do occur, like *keep an eye out (for)*.

Compound verbs in Sumerian have received a lot of treatment in academic literature. Often, the discussion focuses on the nature of these compounds as they fit within a linguistic framework. While the method of analysis has its benefits, it also has downsides. One major issue is the idiosyncratic nature of languages, such that even if broad categories can explain certain linguistic phenomenon, they manifest themselves differently in different languages. In the case of Sumerian compounds, any categorization of them will not fully explain how they are utilized in Sumerian, and we are still met with the problem of determining their function within context.

Another important issue is the lack of concordance within linguistic terminology. This can result from specific terminology per language, like the term “perfect” for a tense name in Akkadian, but from a linguistic stand-point, the term “perfect” does not categorize its usage in any way. This issue brings us back to the previous point and requires us to expound further what a “perfect” is in Akkadian specifically. In addition, linguistic terminology can diverge based on which scholar uses the term. If the same term is used for two distinct phenomena, confusion results in the scholarly literature and in our conceptions. In fact, the term *compound* itself that I use here so blithely can be conceived of quite differently in other languages than in Sumerian.

1.1 Previous Ideas

One attempt to classify Sumerian compounds is by employing the process of Noun Incorporation. In a broad sense, Noun Incorporation is the insertion of a noun into a verb in some way. However, this definition isn’t very useful because it does not reflect the method in which this occurs or the result therefrom. In my current determination, there are two levels within which Noun Incorporation can operate, on the syntactic level and on the lexical level. Baker (1985:76-77) examined this process on a syntactic level and used Onondaga, a native American language, as a guide. The example he gives (in morphology):

Pet waʾ-ha-htu-ʾt-aʾ neʾ o-hwist-aʾ

Pat PAST-3MS-lost-CAUS-ASP the PRE-money-SUF

“Pat lost the money”

vs.

Pet waʾ-ha-hwist-ahtu-ʾt-aʾ

Pat PAST-3MS-money-lost-CAUS-ASP

“Pat lost money”

Here, the object noun is moved directly before the verb, displacing any verbal morphology. Also, the noun itself loses its own morphology and instead becomes tied to the verb. Thus, the valency of the verb is reduced, i.e. the verb no longer has an object and loses that argument.

On the lexical level, Noun Incorporation occurs in such terms as *babysit*. In this example, the noun *baby* has fully engaged with the verb *sit*, and the result is a new lexical item. Notice also that this word is inflected in accordance with the verbal component, hence the past tense *babysat*. Here, it is incorrect to say \*“sit a baby,” thus proving that this is not the result of any syntactic movement. The nominal component of these incorporated entities can have various relations to the verb, like being an instrument of the action like *handpick* (cf. also Karahashi 2004:101-102), or mode of the action like *dry-clean*, or something less transparent, like *troubleshoot*.

1.2 Noun Incorporation in Sumerian

Neither of the previous examples given appear to be the appropriate category to explain Sumerian compounds. First, any reduction in valency, as in the syntactic form of Noun Incorporation, would have a significant effect in Sumerian, due its ergative-absolutive nature in the perfective stem. This would affect the agent of the verb, making it lose its ergative status and thus be reflected as an absolutive. As such, every agent of a Sumerian compound verb would need to be absolutive because the nominal component of the compound can no longer be treated as the object of the verbal component. However, Zólyomi (1996; see clarification in Karahashi 2004:100) notes that this is not the case. We might also expect the object of the verbal component to appear in the semantic object of the compound, but the standard is for it to appear as an oblique object.

As for the lexical form of Noun Incorporation, we would expect the nominal component of the compound to be fully bound to the verb and the inflectional morphology to form around both components. However, this is typically not the case as we see with *gu3 mu-na-de2-e*, where the noun *gu3* is kept outside the full verb. If the *gu3* were fully lexically incorporated into the verb, we would expect forms like \**mu-na-gu3-de2-e*. However, most compound verbs do not allow for this morphologic ordering, with the possible exception of *si—sa2* (to be examined later).

Karahashi (2004:103) declares that Sumerian compounds exhibit a form of Noun Incorporation that she calls lexical but discontinuous. This characterization gets us closer to the picture of what is happening in Sumerian. The compounds are lexical because the components form a new meaning when together as opposed to separated. They are discontinuous because they form multiple components in the syntax and don’t inflect the same way.

1.2 A Note on Syntax

Syntactically speaking, non-transparent compounds operate no differently than their transparent counterparts. The nominal component acts as the object of the transitive verbal component and thus always appears in the absolutive, i.e. with no morphological ending. Therefore, an argument can be made that the nominal component loses its syntactic status and thus becomes endingless. Nevertheless, I don’t think this is necessary to postulate, though I will note that in the case of the Sumerian absolutive, the difference between the two options cannot be observed in the writing.

1.3 Our Approach

With this in mind, the current paper will examine how the components of known compound verbs can be manipulated within clauses. Specifically, I seek to determine what words and morphemes can come in between the two components and how they alter the syntax and the semantics. One very common example is *igi—zid—bar*, where *zid* = “loyal, true” is inserted in the middle to modify the nominal component. The resultant meaning is different from the bare compound *igi—bar* = “to see,” and this modified form means “to look upon worthily” or something close to that.

2. CODE

First, I load the CSV file I made with list of compounds from [ePSD](http://psd.museum.upenn.edu/epsd/nepsd-frame.html) (Electronic Pennsylvania Sumerian Dictionary). Then, I load the data from pre-established material from [ETCSL](http://etcsl.orinst.ox.ac.uk/) (the Electronic Text Corpus of Sumerian Literature) and [ETCSRI](http://oracc.museum.upenn.edu/etcsri/) (The Electronic Text Corpus of Sumerian Royal Inscriptions), which include lemmatization of every word. The compounds CSV file also contains columns denoting where the lemmatized compounds differ within both these projects, because of the lack of standardized lemmas between them. A function then analyzes this data and searches for potential compounds by looking for the noun’s lemma followed by the verbs lemma. Once I gather every potential compound into a list of dictionaries, I convert it to a Data Frame. For now, I limit the number of terms allowed between each component to one. Further study may examine multiple terms that could occur in between them. The resulting Data Frame is saved to a CSV in the output folder.

In the next section, I limit the number of compounds to analyze to the 30 most frequent. More work can be done later to examine the less frequent compounds. Using these 30 compounds, I form two new tables. One table gives counts for each compound, middle morpheme combination, with the nominal suffixes and the middle terms separated by a colon. The second table separates these two types of middle morphemes gives counts for the compounds in three categories: zero morphemes interceding, only suffixation on the nominal component, and only middle terms. These are each saved into a CSV in the output folder.

3. RESULTS

Once the tables are generated, it is necessary to look closely at the examples that the program finds, because it will find cases which do not fit our definition of compounds. As such, the frequencies given for the middle terms and the suffixed nouns may not be completely accurate. More work needs to be done to cut out the false positives in the output. Nevertheless, the numbers and examples can give us significant insight into how compounds appear in Sumerian clauses.

3.1 Simple Typology

3.1.1 Adjective

Most commonly, a simple adjective is inserted between the two components. The resulting meaning is typically translated into English as adverbial. For example:

*igi—zid—bar* – “to look on with favor or satisfaction”

*gu2—hul—de2* – “to speak joyfully”

Sometimes this adjective can be supplemented with the demonstrative *-bi*, which may reinforce its adverbial nature.

*gu3-gu3 hul-bi de2-de2* “uttering its wicked cry”

(Home of the Fish C.1: [link](http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=c.5.9.1&display=Crit&charenc=gcirc&lineid=c591.C.1#c591.C.1))

*ki gal-bi ši-im-ma-an-aŋ2* “he loves you greatly”

(Shulgi U 17: [link](http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=c.2.4.2.21&display=Crit&charenc=gcirc&lineid=c24221.C.17#c24221.C.17))

3.1.2 Oblique Object

On occasion, an oblique object can occur in between the components. In these examples, the oblique object is in fact the semantic object:

*si nam-e sa2-sa2-me-en* “who decides fate directly”

(Ishme-Dagan A + V 201: [link](http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=c.2.5.4.01&display=Crit&charenc=gcirc&lineid=c25401.A.201#c25401.A.201))

*igi uŋ₃-še₃ u₃-ši-bar-ra-zu* “when you look upon the people”

(Gudea Cylinders 62: [link](http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=c.2.1.7&display=Crit&charenc=gcirc&lineid=c217.62#c217.62))

3.1.3 Ergative

Even more rarely, we encounter the subject of the entire action:

*igi baḫar2-e mu-e-ši-[in-il2-e]* “the potter lifts his gaze to you”

(Proverbs 16: C.5, cf. other examples with *engar* and *sipad-tur:* [link](http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=c.6.1.16&display=Crit&charenc=gcirc&lineid=c6116.C.16.c3.5#c6116.C.16.c3.5))

3.1.4 Pronouns

A pronoun can intercede also, possibly to emphasize the actor:

*er2 e-ne ba-še8-še8* “holy Inana, she cried”

(Gilgamesh, Enkidu and the Netherworld: 46 et al.: [link](http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=c.1.8.1.4&display=Crit&charenc=gcirc&lineid=c1814.1.46#c1814.1.46))

3.1.5 Genitives

Some examples allow the noun to be modified by a genitive:

*igi nam-til₃-la hu-mu-ši-in-bar* “may he look at him with the eye of life”

(Išme-Dagan O B7: [link](http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=c.2.5.4.15&display=Crit&charenc=gcirc&lineid=c25415.1.B.C.7#c25415.1.B.C.7))

3.1.6 Absolutive

Sometimes, it seems like another object is placed in between. It remains to be determined if the nouns should be treated in conjunction, if the verb should be treated as ditransitive, or perhaps the entire phrase should be a three-component compound:

*gu2 ŋiš ha-ma-ŋa2-ŋa2* “let them submit”

(Enmerkar and the Lord of Aratta 48,79: [link](http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=c.1.8.2.3&display=Crit&charenc=gcirc&lineid=c1823.48#c1823.48))

*mi2 iri im-me* “he flatters”

(Lugalbanda and Anzu 113,114: [link](http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=c.1.8.2.2&display=Crit&charenc=gcirc&lineid=c1822.113#c1822.113))

3.1.7 Pronoun

Examples:

*a2-zu mu-da-an-aŋ2* “she gave your order”

(Shulgi R 4: [link](http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=c.2.4.2.18&display=Crit&charenc=gcirc&lineid=c24218.A.4#c24218.A.4))

*igi-ni mu-na-an-ŋal2* “he looked at him”

(Shulgi O A.37 [link](http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=c.2.4.2.15&display=Crit&charenc=gcirc&lineid=c24215.A.37#c24215.A.37))

These examples do not appear to change the meaning of the compound in any significant way, except that the pronominal element seems to refer to the object of the entire action.

3.1.8 Case Marking

Some nominal components include a case marking. Technically this should therefore not be considered a type of compound, which requires the noun be in the absolutive state. However, it is interesting to note that some compounds allow some variation with no apparent difference in meaning:

*gu2-da—la2* vs. *gu2—la2*

*nam-še3—tar* vs. *nam—tar*

Each compound exhibits variation regarding the usage of these types of middle elements. One compound may have numerous examples with an inserted adjective, like *igi—bar*, but others may not, like *en3—tar*. Some may allow more inflectional endings to the noun, like *igi—ŋal2*, whereas others have almost no such examples, like *ki—aŋ2*.

3.2 Analysis

The notion that the nominal component of the compound has no syntactic status becomes less tenable when regarding middle terms. If this were the case, the middle term must also lose its syntactic status and be incorporated into the verb. This is not to say that such a process is impossible, but in the examples that we have there is only one incorporated term. In order for this proposition to work, we must also incorporate the middle adjective and thus both noun and adjective would have no syntactic status. Thus, in the example *igi—zid—bar*, it would not only be *igi* that has no syntactic role, but *zid* as well. This notion becomes less viable and more convoluted, and, given that we have other simpler options, it is better to abandon this one for now.

4. FURTHER REMARKS

We could apply this approach to English using our native understanding by looking at such combinations as *to* *take care (of)* and *to* *pay attention (to)*. In each case the meaning expressed by the components does not resolve to their combination. How does one *take* a *care* or *pay* an *attention*? The actions expressed by the verbal component do not reflect the action expressed. However, there is some connection in the nominal part to the full meaning. *Care* is very relevant to the notion of *taking care* as is *attention* to *paying attention*. Note also in Sumerian that the nominal component of compound verbs is often related to the sense of the whole, e.g. *igi—bar*, where the *igi* is very relevant to the notion of “seeing,” or *a—dug4* where *a =* “water” is semantically applicable to the greater meaning “to irrigate.”

Another connection between these English examples and the Sumerian compounds are the modifiers that can be placed in syntactically appropriate positions to give the expressions more nuance, e.g. *to* *take good care (of)* and *to* *pay close attention (to)*. One can also inflect the verbs as in Sumerian, like *he took care (of)* and *she was paying attention (to)*. However, these examples do not seem to allow any possessives: \**he takes her care* or \**she pays their attention*.

This procedure for analyzing compounds allows us to explore the combinational possibilities with other sentence elements and gives us a fuller view concerning their usage. In this way, it may be improper to view Sumerian compounds as belonging to a single category, where each can be manipulated in the same way. Instead, the results lead to the opposite view, namely that compounds can be manipulated in Sumerian sentences in different ways, and each compound has certain preferences. To be continued…

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