

## Internally-Headed Relative Clauses in Akkadian

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# INTERNALLY-HEADED RELATIVE CLAUSES IN AKKADIAN: IDENTIFYING WEAK QUANTIFICATION IN THE CONSTRUCT STATE

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In a pair of recently published articles, Deutscher has argued that the early history of the relative clause in Akkadian is one fraught with dysfunction (2001, 2002). Old Akkadian relative clauses are described as “demonstrably dysfunctional” (2001: 405), “dysfunctional and maladaptive” (2002: 86, 95), and “an unstable way-station in the process of the emergence of a new relative clause structure in the language” (2002: 86–87). I suspect that Deutscher’s choice of pejorative terminology is meant more as an entertaining rhetorical device rather than carefully considered statement of linguistic theory, but, if nothing else, it has inspired me to attempt a redescription of the relative construction in Akkadian along lines similar to those enunciated by Deutscher. For a number of reasons that I adduce throughout the paper, I hypothesize that the relative clause in Old Akkadian generally as well as the construct relative clause in Old Babylonian is what is known as an internally headed relative clause (hereafter IHRC). To be more specific, I will argue that the

“unstable way-station” in Old Akkadian is perceived as “dysfunctional” because both the relative formed via the placement of the head of the relative in the construct state as well as those formed by means of the determinative-relative pronoun are IHRCs, but that, by the time of the Old Babylonian period, the relative clause formed with the determinative-relative pronoun had been reinterpreted as an externally headed relative clause (EHRC). In this paper, I investigate the construct relative in Old Babylonian drawing on the material in the Code of Hammurapi.

IHRCs have only achieved a reasonably coherent description in the past couple decades and largely in non-Western languages: the term itself derives from the particular form of IHRCs such as the following contrastive examples in (1) and (2) from Quechua (Cole 1987: 277; Basilico 1996: 499). Note that the languages that make use of IHRCs sometimes also make use of the kind of externally headed relative clause (EHRC) with which the reader will be more familiar.

This paper is based on a presentation of the same title delivered at the annual meeting of the American Oriental Society, March 18, 2005 in Philadelphia. I would like to thank

those who commented on the presentation at the AOS and/or on earlier draft versions.

## (1) Externally Headed Relative Clause

[<sub>DP</sub> [<sub>CP</sub> nuna ranti-shaq-n] bestya]      alli      bestya-m      ka-rqo-n  
 [<sub>DP</sub> [<sub>CP</sub> man buy-Perf-3] horse.Nom]      good      horse-Evid      be-Past-3  
 ‘The horse that the man bought was a good horse’

## (2) Internally Headed Relative Clause

[<sub>CP</sub> nuna      bestya-ta      ranti-shaq-n]      alli      bestya-m      ka-rqo-n  
 [<sub>CP</sub> man      horse-Acc      buy-Perf-3]      good      horse-Evid      be-Past-3  
 ‘The horse that the man bought was a good horse’

The terminology derives from the placement of the head of the relative clause in the two constructions: in the externally headed relative in (1), the head of the relative clause (*bestya*, “horse”) has moved outside of the relative clause (to the right in Quechua) and has been assigned case by the main clause (nominative case as the subject of *ka* “to be”), whereas, in the internally headed relative in (2), the head of the relative clause remains inside the relative clause and bears the case appropriate to its role within the relative clause rather than the main clause. If the location of the head noun and the assignment of case were the only factors determining whether or not a relative clause is head internal, then we would be forced to argue that the Akkadian relative clause is clearly an externally headed relative, but, as it happens,

there are several additional features of IHRCs involving definiteness and quantification that may well provide sufficient justification for a reanalysis of the Akkadian forms.

Based in large part on a seminal study of IHRCs in Lakhota (Williamson 1987), a growing number of researchers have noted that the head of an IHRC in a variety of languages must be indefinite and that IHRCs also display a quantificational phenomenon known as the definiteness effect (Munro 1976; Tellier 1989; Watanabe 1992; Basilico 1996; 2003; Shimoyama 1999; Nishigauchi 2003; Kim 2004). One of the examples from Lakhota cited by Williamson is in (3) below. Note that I have updated the syntactic terminology slightly and omitted the diacritics—see Williamson 1987, 171 for the original form.

(3) [<sub>DP</sub> [<sub>CP</sub> Mary [owiza wa] kage] ki]      he      ophewathu  
 [<sub>DP</sub> [<sub>CP</sub> Mary [quilt a] make] the]      Dem      I.buy  
 ‘I bought the quilt that Mary made’

Determiners follow the nouns they modify in Lakhota and, as can be seen in (3), the indefinite determiner *wa* modifies *owiza*, the head of the IHRC; at the same time, the definite determiner *ki* modifies [<sub>CP</sub> *Mary* [owiza wa] kage], namely the entire IHRC as a whole.

If the indefinite determiner *wa* is replaced by the definite determiner *ki*, as in the following example, the IHRC is no longer grammatical (Williamson 1987: 171):

(4) \* [<sub>DP</sub> [<sub>CP</sub> Mary [owiza ki] kage] ki]      he      ophewathu  
 \* [<sub>DP</sub> [<sub>CP</sub> Mary [quilt the] make] the]      Dem      I.buy

This kind of restriction on the occurrence of a definite nominal phrase in a particular morpho-syntactic environment is known as a definiteness effect and has been investigated in excruciating detail in the years since Milsark’s initial description (Milsark 1974; see Chung and McCloskey

2002 for an extensive set of references and a history of investigation; see Chung and Ladusaw 2004 and Hallman 2004 for the most recent work on the syntax of indefinites and the definiteness effect). The behavior of the definite and indefinite articles in IHRCs clearly resembles the behavior

of the definite article in the construct state in that the definite article cannot appear on the head noun, while it may or may not appear on a modifier of the head noun. This resemblance should be kept in mind throughout the balance of the paper.

Within the broad expanse of Semitic languages, only the Semitic languages dating to the first millennium B.C.E. and later exhibit a definiteness effect in the strict sense of the term due to the fact that morphological definiteness seems to be limited to the later Semitic languages. Furthermore, in these later Semitic languages such as Aramaic or Biblical Hebrew, the only clear example of a definiteness effect is the restriction on the occurrence of the definite article on any noun that is in the construct state.

- (5) Biblical Hebrew  
 bēt            ham-melek  
 house.Const   Def-king  
 ‘the house of the king’

Thus in (5) the noun in construct, *bēt* “house,” which is also the head of the genitive construction cannot bear the definite article \*han- and the definiteness of the entire phrase is determined by the presence (or absence) of the article on the noun that follows and is not in construct, *ham-melek*, “the king.” The older Semitic languages, however, generally lack the definite article entirely and seem to make do with a system based on *specificity* rather than *definiteness*.

Unlike the definition of definiteness, which is relatively uncontroversial, the precise definition of specificity continues to show variation and uncertainty in the literature. In English, for example, the combination of an intensional predicate such as “to look for” with an indefinite nominal phrase like “a magazine” in (6) tends to have two rather different interpretations as exemplified in (7).

- (6) I am looking for a magazine  
 (7a) ‘I am looking for any old magazine’  
       (non-specific)  
 (7b) ‘I am looking for a particular magazine’  
       (specific)

In (7a), the indefinite noun phrase “a magazine” in (6) is interpreted as non-specific—any magazine will do as long as it is a magazine. In the interpretation of (6) in (7b), however, there is a particular magazine that the speaker is searching for, but for whatever reason the speaker is unable or unwilling to offer a better description: the indefinite noun phrase interpreted as in (7b) is specific, whereas the interpretation in (7a) is non-specific (for a more rigorous definition, see Hallman 2004, 709).

Although there is no commonly accepted definition of the term, the idea of an indefinite noun that is referentially specific has produced an extensive discussion in the literature (Donnellan 1966; Ioup 1977; Pesetsky 1987; Enç 1991; Diesing 1992; Ihsane and Puskás 2001). Without delving too deeply into what is a quite involved matter, specificity can be associated with entities that can be referenced in subsequent discourse through the use of a pronominal element (“it is on the couch” in reference to the specific magazine in [7b]), whereas pronouns cannot be used to refer to non-specific entities (“one is on the couch” in reference to the non-specific magazine in [7a]). Given these considerations, I would like to suggest that early Akkadian made use of a specificity based system that is preserved to some degree in the way that it forms relative clauses. When the head of a relative clause is in the construct state, the non-specificity of the head of the relative functions, in my view, much like the indefinite determiner in the Lakhota example in (3) above. If the speaker wishes to indicate that the head of the relative clause is specific, however, the noun in the construct state must be focalized and moved out of the relative and replaced by a resumptive pronoun in the form of the determinative-relative pronoun: this amounts, in other words, to the formation of a cleft-sentence in which the determinative relative pronoun inside the relative clause acts as a pronoun referring to the former, now external head of the relative that is in focus. That is to say, I would argue that the use of focus in conjunction with pronominal resumption to code specificity resulted in the formation of a discontinuous nominal phrase in which the external head of the relative

formed an entirely separate nominal phrase that was resumed by the determinative-relative pronoun (see Szabolcsi 1994; Aboh 2004; Ntelitheos 2004 for the role of focus in forming discontinuous nominal phrases in Hungarian, the West African language Gungbe, and Greek respectively).

### Deutscher's Hypothesis

Deutscher's proposal is a typological argument at its essence: relative clauses in which the "pronoun" inside the relative clause takes the same case as the "head" outside of the relative clause

#### (8) Latin relative clause

magister	[quem	canis	momordit]	puerum	videt
teacher.MascSgNom	[Rel.MascSgAcc	dog.Nom	he.bit]	boy.Acc	he.sees

'The teacher [whom the dog bit] sees the boy'

#### (9) Old Akkadian relative clause (HSS 10, 5, obv. 4–7; Michalowski 1993: 34; Kienast and Volk 1995: 182–84; Deutscher 2001: 406)

{ŠE šu a-na ŠE.BA / a-si-tu / a-na ŠE.NUMUN / li-sa-mi <sub>3</sub> -id-ma}
ûm [šū ana ŠE.BA ašit-u] ana ŠE.NUMUN
barley.Nom [Rel.Nom to/for ration(s) 1Sg.left-Sub] for seed-grain
lišamid-ma
Prec.Cause.lean.3cs-Conj

'As for the barley [that I left for rations], let him assign it as seed-grain ...'

In the Old Akkadian example in (9), in contrast with the example from Latin in (8), the case of the "relativizer" *šū* is identical with and determined by the "head" of the relative clause, namely *ûm*.<sup>1</sup> On the basis of a perusal of several typologies of relativization from fifteen to twenty years ago (Lehmann 1984; Nichols 1984; Givón 1990), Deutscher quite reasonably concludes that "the Old Akkadian construction can safely be assumed to be rare" (Deutscher 2001: 408).

1. An anonymous referee notes that the external head of the construction is written logographically and is not, therefore, a particularly good example of the phenomenon in question, but the nominative determinative-relative pronoun as the direct object of the verb within the relative clause makes it clear that the case of the pronoun is not determined by the verb within the relative. The nominal case of the relative construction in this example is driven by pragmatic factors (*casus pendens* as topic), but I find it an interesting example nonetheless and retain it here, see Deutscher 2001: 406 for additional examples.

are typologically rare. In comparison to, say, the classical languages of Europe such as Latin and Greek, which for better or worse provided an early model for typologists attempting to categorize the different kinds of relative clause found around the world, the situation in Old Akkadian does seem perverse. In (8) below, for example, as Ehrenkranz and Hirschland describe it, "[t]he relative word usually agrees in number and gender with its antecedent and takes the case appropriate to its function in its own clause" (Ehrenkranz and Hirschland 1972: 23).

Deutscher notes several descriptive features of relative clauses in Akkadian that might at least suggest the possibility of an IHRC analysis such as (1) the appositional character of early Akkadian relatives, (2) the role of the construct state in marking the head of genitive constructions, and (3) the association between "emphasis" (see below for the role of focus, another term for "emphasis," in my own proposal) and the relative headed by the determinative-relative pronoun (Deutscher 2001: 410–11). Indeed, Deutscher's descriptive work captures the phenomenon I describe below quite well, but neglects the possibility that there is a reasonable syntactic model that would fit such a description.

The development of *šu* from the head of a RC [relative clause] to a 'relative particle' must have its origins in appositional patterns. The whole genitive/relative complex headed by *šu* could be added as an apposition

after a noun, probably for the purpose of emphasis. (Deutscher 2001: 414)

It should be kept in mind, however, that although appositional and internally headed relatives do share a certain superficial similarity, they are fundamentally different in a number of ways.

Where I would disagree with Deutscher is the role he gives to clause boundary reanalysis. Deutscher suggests that relative clauses headed by the determinative-relative pronoun originated through appositional structures such as in (10) below (Deutscher 2001: 412).

(10)  $din-um$   $\check{s}u_{HEAD}$   $[idin-u]_{RC}$   
 legal.case-Nom Dem.Nom [he.judged-Sub]  
 ‘the legal case, (namely) the one that he  
 judged’

(11)  $din-um_{HEAD}$   $[\check{s}u$   $idin-u]_{RC}$   
 legal.case-Nom [Rel.Nom he.judged-Sub]  
 ‘the legal case that he judged’

Whereas Deutscher sees a progression from the appositional structure in (10) to the restrictive relativization in (11), I would like to adopt an even stronger version of Deutscher’s suggestion that relative clauses headed by a noun in the construct state provided a model for relatives formed using the determinative-relative pronoun: I would suggest that, whereas a non-specific head noun would occur in the construct state at the beginning of the relative clause as in (12), a specific head noun would be focalized and moved out of the relative clause entirely, while the slot it had previously occupied in the construct state within the relative was filled with a kind of resumptive pronoun<sup>2</sup> bearing all of the nominal features (including case) of the focalized head noun and thereby yielding the form in (13).<sup>3</sup>

2. One of the lesser known features of weak quantification environments that exhibit a definiteness effect (as is the case with IHRCs) is that definite nominal phrases can occur in such an environment when affected by focus; the historical scenario envisaged here would seem to provide the focus necessary to allow the resumptive pronoun to occur as the head of an IHRC.

(12)  $[din_{HEAD} idin-u]_{RC}$   
 $[legal.case he.judged-Sub]$   
 ‘A/the legal case he judged’

(13)  $[_{FOCUS} din-um]$   $[_{CP} \check{s}u]$   
 $[_{FOCUS} legal.case-Nom]$   $[_{CP} Rel.Nom]$   
 $idin-u]$   
 he.judged-Sub]  
 ‘It is  $[_{FOCUS}$  a legal case] (that) he judged’

Once the head noun was in focus and separated from the rest of the relative clause (now headed by the determinative-relative pronoun), these two elements would form a discontinuous nominal phrase analogous to a cleft-sentence at the clause level (“It is a legal case that he judged”). In other words, I would suggest that (10) above is not representative of any stage in the history of the Akkadian relative, and that (11) was derived from an underlying form such as (12) through focalization of the head noun and resumptive pronominalization.

The fundamental difference between Deutscher’s proposal and my own is the location of the head of the relative clause with respect to the relative clause as a whole. Deutscher’s proposal presumes that the head of a relative clause must be outside of the relative clause itself, hence the characterization of *dinum* as a head of the relative and *šū* as a relativizer in (11). My own proposal argues that relative clauses in the older phases of Akkadian are head internal. This hypothesis not only yields a more parsimonious explanation of relativization in Akkadian in that all relative clauses in Old Akkadian (whether headed by a noun in the construct state as in [12] or the determinative-relative pronoun as in [13]) make use of the same basic construction: where the head of the relative has been moved out of the relative clause itself, the construct state position

3. See Simpson and Wu 2002, for a convincing demonstration of the role of focus constructions in the development of relative clause constructions; Ouhalla 2004 describes how a similar process plays out in the later Semitic languages, but makes no reference to the earlier Semitic languages such as Old Babylonian. See Schachter 1973 for an earlier proposal along similar lines.

within the relative is still present and is occupied by a resumptive pronoun in the form of the determinative-relative pronoun.<sup>4</sup>

### The (Weak) Quantificational Test

Even if the history of relativization in Akkadian can be redescribed in reasonable terms as a development of a basic IHRC template into two distinct constructions, one of which—the construction involving the determinative-relative pronoun—eventually forms something quite like our own EHRC, in the absence of a morpho-syntactic test of some kind, my reconstruction of relativization in Akkadian remains somewhat speculative. One of the essential properties of IHRCs, however, is weak quantification. The opposition between weak and strong quantifiers is a more refined version of the definiteness effect that I alluded to at the beginning of the paper. In English, weak quantification is clearly evident in existential sentences, where weak quantifiers can occur, but strong quantifiers cannot (Milsark 1974; Williamson 1987: 175; Hallman 2004: 709).

(14) There is/are {a fireman / three firemen / many firemen / firemen} available.

(15) \*There is/are {the fireman / every fireman / most firemen / Sheila} available

(16) Externally headed relative clause in Korean (Kim 2004: 39)

John-un [[*e<sub>i</sub>* tomangka-n]-un sey-myeng-uy totwuk<sub>i</sub>]-ul capassta  
 PN-Top [[*e<sub>i</sub>* run.away-Impf]-Rel three-Cl-Gen thief]-Acc caught  
 ‘John caught three thieves (out of many more) who were running away’

(17) Internally headed relative clause in Korean (Kim 2004: 39)

John-un [[sey-myeng-uy totwuk-i tomangka-n]-un kes]-ul capassta  
 PN-Top [[three-Cl-Gen thief-Nom run.away-Impf]-Rel Thing]-Acc caught  
 ‘(Only) three thieves were running away and John caught all of them’

4. The historical derivation of an externally headed relative from an internally headed relative would also fit nicely in Kayne’s antisymmetric theory of relative clause formation (Kayne 1994: 86–115), particularly once head-initial IHRCs are acknowledged (see Basilico 1996 for the plausibility of head-initial IHRCs). If Basilico is correct in arguing that IHRCs must be headed by specific nominal phrase, then the semantic characterization of the materials in this paper would have to be

The weak quantifiers in (14) include noun phrases headed by an indefinite article, a cardinal number, “several,” as well as the bare plural, whereas the strong quantifiers in (15) cannot occur in an existential sentence. Williamson’s description of the opposition between weak and strong quantifiers is as follows:

“Cardinality expressions” (allowed in existentials) include the indefinite determiners *a* and *some*, the quantifiers *many* and *few*, and the cardinal numbers. In contrast, “quantified expressions” (ungrammatical in existentials) include the definite determiner *the*, demonstratives, proper names, definite pronouns, and the quantifiers *all*, *every*, *most*, and so forth. (Williamson 1987: 175)

In terms of meaning, the strong quantifiers are capable of picking a particular referent out of some larger set of possible referents, whereas the weak quantifiers are not. Thus “most firemen” necessarily refers to some but not all of the contextually salient set of firemen, but the weak quantifiers in (14) refer to some cardinal number of firemen or to the firemen who are available in a particular context. This contrast between strong and weak quantifiers is particularly clear in languages that make use of both IHRCs and EHRCs such as Korcan. Take, for example, the contrast between the two following examples (Kim 2004: 39).

reconsidered: one possibility is that the specificity contrast that I have discussed herein is actually a definiteness contrast. Nonetheless, my characterization of the syntactic contrast on the basis of weak quantification would presumably survive such a reconfiguration of the semantics of the construction. See also Ouhalla 2004 for an application of Kayne’s antisymmetric theory of relativization to the later Semitic languages.



The head of the EHRC in (16), namely *sey-myeng-uy totwuk-i*, “three thieves,” has moved from its original position within the relative clause to the right and left behind a gap in its original position—this is indicated by  $e_i$  in the example. But in (17), an IHRC, the same phrase *sey-myeng-uy totwuk-i*, “three thieves,” remains *in situ* within the relative clause and also displays a rather specific meaning in certain contexts. Whereas (16) can be used to refer to three thieves when there are three *or more* thieves in the available context, the IHRC in (17) cannot pick a group of three out of a larger group of thieves: the IHRC can only refer to three thieves—no more and no less—and the three thieves that it refers to must include all the thieves who are contextually available.

- (18) CH §119, reverse, iii 74 – iv 4  
 74–75. *šum-ma a-wi-lam / e-<sup>2</sup>i<sub>4</sub>-il-tum*  
 76. *iš-ba-su<sub>2</sub>-ma*  
 77. GEME<sub>2</sub>-su<sub>2</sub> ša DUMUMEŠ  
*ul-du-šum*  
 78. *a-na KU<sub>3</sub>.BABBAR it-ta-din*
- col. iv  
 1. KU<sub>3</sub>.BABBAR DAM.GAR<sub>3</sub> *iš-qu<sub>2</sub>-lu*  
 2. *be-el* GEME<sub>2</sub> *i-ša-qal-ma*  
 3. GEME<sub>2</sub>-su<sub>2</sub> *i-pa-tar<sub>2</sub>*

Although various diagnostics for weak quantification in Akkadian could be adduced at this point (see the brief discussion of the absolute state with cardinal numbers at the conclusion of this paper), I would like to limit myself to a small set of relative clauses found in the Code of Hammurapi rather than dealing with the Old Akkadian material.<sup>5</sup> In doing so, I hope to clarify the end of the historical process that begins with the IHRC in Old Akkadian and lay the groundwork for a future study of the Old Akkadian material. In the Code of Hammurapi, there are a dozen or so relative clauses that are headed by a noun in the construct state (Ravn 1941: 36–40). Take, for example, the following law, dealing with the sale of a female slave: CH §119, rev., col. 3, line 74 through col. 4, line 4 (Ravn 1941: 38).

If a claim has seized a man, and

He sells a female slave of his  
 who has given birth to children  
 for him,

The silver that the trader paid,  
 The owner of the female slave will  
 (re)pay and he will set his female slave free

Note in particular the construct relative clause in the first line of column 4 in (18).

- (19) *kasap tamkār-um išqul-u*  
 silver.Const trade.agent-Nom he.weigh.Perf-Rel  
 ‘the (amount of) silver that the trade-agent paid (for the female slave)’

This statute identifies a particular amount of silver in any particular transaction that meets the other requirements of the statute and states that precisely the same amount of silver that the slave-owner received is to be paid back to the purchaser so as to free the mother of the slave-owner’s children. The use of the construct relative

in this circumstance is particularly interesting because the statute does not state a particular cardinal amount like “three shekels of silver,” but rather the amount of silver that changed hands in any particular event necessarily amounts to a cardinal number and that same cardinal number is the amount that the slave-owner is to pay. The amount that the slave-owner pays to redeem his slave cannot be more than or less than the precise amount that he was originally paid, thus any kind of strong quantificational reading is excluded. This was presumably meant to protect the former

5. Rebecca Hasselbach’s recent study of Sargonic Akkadian is not yet available to me, so any effort on my part to deal with the Old Akkadian materials in detail would, undoubtedly, be premature.

owner of the slave from extortion on the part of the purchaser: if the statute had simply stipulated that the seller must repurchase the female slave and then set her free, it would undoubtedly have led to some form of extortion on the part of the buyer, who could presumably demand any price for the female slave. The use of the construct relative determines a particular amount of silver without specifying, for example, that the same particular pieces of silver that the owner received in the first place must be used to redeem the slave,

(20) CH §232, rev., xix 82–92

82–83. *šum-ma* NIG<sub>2</sub>.GUR<sub>11</sub>/ *uh<sub>2</sub>-ta-al-li-iq*

84–85. *mi-im-ma* / *ša u<sub>2</sub>-ḫal-li-qu<sub>2</sub>*

86–87. *i-ri-ab* / *u<sub>3</sub> aš-šum* E<sub>2</sub> *i-pu-šu*

88–89. *la u<sub>2</sub>-dan-ni-nu-ma* / *im-qu<sub>2</sub>-tu*

90–91. *i-na* NIG<sub>2</sub>.GUR<sub>11</sub>/ *ra-ma-ni-šu*

92. E<sub>2</sub> *im-qu<sub>2</sub>-tu* *i-ip-pe<sub>2</sub>-eš*

In lines 87–89 in (20), a construct relative (*bit ipušu*) serves as the direct object of two conjoined verbs: *lā udanninūma imqutu*. The verbs that are conjoined by *-ma* are in the subjunctive since they are governed by *aššum*, but clearly this is not the case for *bit ipušu*; some other motivation is needed for the occurrence of a construct relative in this passage. As in the previous example, I would like to suggest that the house that the building contractor is required to build as a replacement for the poorly built one that has collapsed must be equivalent to, but not identical with, the one that collapsed. Without delving too far into the semantics of identity, I think it can be said that if the replacement were truly the “same” as the house that collapsed, then the new house would collapse just as easily as the old house had. What is clearly at stake in the statute is the number of square feet, or in the Mesopotamian idiom, the number of *sar* that the house should cover. In this respect, the use of the construct relative to code “identity of quantity” rather than “identity of substance” is perfectly reasonable and analogous to the use of the construct relative in (18) above.

which would presumably be the meaning of the relative clause if it made use of the determinative-relative pronoun. In the terminology used in Grosu and Landman, the construct relative in (19) requires “identity of quantity” but not “identity of substance” (Grosu and Landman 1998: 132).

The other example that I would like to discuss in this section is also among the most complicated in the Code: CH §232, rev., col. 19, lines 82–92 in (20) below.

If (a builder) destroyed property,  
Whatever he destroyed,  
He will replace, and because  
he did not strengthen a house that he built,  
and it collapsed,  
Out of his own property,  
He will build a house (equivalent to) the one  
that fell.

The syntactic phenomenon that is of particular interest in (20), however, is the way in which reference is made to the house that has collapsed later on in the statute. Elsewhere in the Code, when a nominal phrase that has occurred earlier in the protasis is repeated in the apodosis so as to anaphorically refer back to the same individual, it is typically repeated with the addition of the appropriate form of the distal demonstrative *šū* immediately after it. This does not, however, seem to be that case with the construct relative in line 92.

(21) *šumma [awilum] . . . , [awilum šū] iddâk*  
‘If a man . . . , that man will be killed’

(22) *aššum . . . [(bit) ipušu] . . . imqutu, [bit imqutu] ippeš*  
‘Because . . . the house collapsed, he will build (a house equivalent to) the house that collapsed’

The apparent impossibility of using a demonstrative pronoun for anaphoric reference in the apodosis in this example strongly suggests that *bit imqutu* is non-specific. One of the standard diagnostics for specific noun phrases is the possibility

of referring back to a specific, indefinite noun with an anaphoric element such as a demonstrative as in (21): the impossibility of doing so in (22) provides a substantial piece of evidence that relatives that use a lexical noun in the construct state to indicate the head of the relative clause are non-specific.

### The Difference a Strong Quantifier Makes in Old Babylonian

The last piece of evidence that I would like to offer in support of an interpretation of the construct state in Old Babylonian as a form of weak quantification is the contrastive distributional be-

havior of certain strong quantifiers in Old Babylonian. Like weak quantification above, there are few if any previous analyses of strong quantification in Old Babylonian. On the basis of both standard translational equivalencies and, as we will see in a moment, differences in morphosyntactic distribution, two lexemes that we might expect to exhibit properties associated with strong quantification are *kalu* “all” and *kilallān* “both.” In semantic terms, these two lexemes are relative close to the prototypical examples of strong quantifiers in English such as “each” or “every,” and they also make use of a distinctive morphosyntactic pattern as in (23) below.<sup>6</sup>

- (23) Resumptive strong quantification in Old Babylonian  
 (ARM 1, 76, obv., line 17: [DUMU].MEŠ *ka-lu-šu-nu šu-ma-am i-šu-u<sub>2</sub>*)  
 mārū kalu-šunu šum-am išū  
 son.Nom.Pl all-3Pl.Poss name-Acc they.have  
 ‘All the sons are famous, lit. have a name’

Huehnergard mentions this construction and refers to *kalu* as a quantifier (Huehnergard 2000: 92), but I do not know of any other discussion of the construction in the secondary literature. *CAD* (sub *kalu*) lists primarily Old Assyrian examples with a limited number of examples from Mari, which I take as examples of Old Babylonian practice, but further clarification of the dialectical situation is needed. The syntax of the construction seems to be fairly clear: *kalu* and the noun that it quantifies over are not in a bound relationship such as the construct state but rather in an appositional structure. The difference, however, between the standard appositional construction and the construction in (23) is that there is also a kind of resumptive pronoun in the form of a possessive pronoun that agrees with the quantified noun in person, number and gender and that possesses the quantifier *kalu*.

The construction in (23) can, perhaps, be associated with strong quantification in the Old Babylonian period and, presumably, earlier in the history of Akkadian. In simple, distributional terms, it should be fairly clear that the strong quantificational construction in (23) is a kind of

analytic genitive construction that avoids the use of the construct state. If the construct state codes weak quantification at some point in the history of Akkadian morphosyntax as detailed above, then it would make a certain amount of sense for strong quantifiers to be in complementary distribution with the construct state as well. Since most of the examples in the *CAD* of *kalu* in the construct state—where it is actually functioning as a strong quantifier—derive from first millennium sources and the first millennium also witnesses the development of the definite article in the languages that surrounded and infiltrated previously Akkadian-speaking regions, a certain amount of contamination from the quantificational systems of other Semitic languages such as Aramaic would not be surprising in the later texts.

6. Mark Baker has noted the problem of using rough equivalency of lexical meaning as a way of identifying strong quantifiers in Mohawk (Baker 1995), and it remains unclear whether or not *kalu* would qualify as a strong quantifier under the narrower definition adopted by Baker. The contrast between *kalu* and *mala*, “as much as there is,” may be informative in this regard, but I have not yet been able to ascertain which of the two is proportional and, consequently, the strong quantifier of the two.

- (24) Externally headed relative clause in Korean (Kim 2004: 39)

John-un  $[[e_i \text{ tomangka-n}]\text{-un} \text{ sey-myeng-uy totwuk}_i\text{-ul} \text{ capassta}$   
 PN-Top  $[[e_i \text{ run.away-Impf}]\text{-Rel} \text{ three-Cl-Gen} \text{ thief}]\text{-Acc} \text{ caught}$   
 'John caught three thieves (out of many more) who were running away'

- (25) Internally headed relative clause in Korean (Kim 2004: 39)

John-un  $[[\text{sey-myeng-uy totwuk-i tomangka-n}]\text{-un} \text{ kes}]\text{-ul} \text{ capassta}$   
 PN-Top  $[[\text{three-Cl-Gen} \text{ thief-Nom} \text{ run.away-Impf}]\text{-Rel} \text{ Thing}]\text{-Acc} \text{ caught}$   
 '(Only) three thieves were running away and John caught all of them'

### Partitives, Specificity, and the Construct State

It may be helpful at this point to return to the contrast between an EIIRC and an IHRC in Korean: examples (16) and (17) above, repeated here as (24) and (25).

In both (24) and (25), note that the head of the relative clause is itself a genitive construction, *sey-myeng-uy totwuk*.

- (26)
- sey-myeng-uy totwuk*
- 
- three-Human-Gen thief

- (27a) 'three of the thieves' (in an EIIRC as in [24])

- (27b) 'the three thieves' (in an IHRC as in [25])

In the absence of any other context, this expression means simply "three thieves," but as noted above, it takes on two very different interpretations depending on whether it is the external or internal head of a relative clause: as an external head, it has a partitive meaning as in (27a), "three of the thieves," but as an internal head, it can only refer to an indivisible group of three thieves as approximated by the translation in (27b): "the three thieves." The role of partitivity in differentiating strong and weak quantifiers has a rather involved history extending back to Milsark (1974) that I will pass over here, but one particularly clear example of the opposition between the two interpretations in (27) and its relation to specificity has emerged in Enç's study of partitives in Turkish (Enç 1991).

Enç points out that, unlike indefinite nouns in English which can be either specific or non-specific, Turkish draws a regular contrast between specific and non-specific noun phrases in certain morphosyntactic positions. Indefinites in the direct

object position, for example, are always unambiguously specific or non-specific in Turkish as a function of case-marking:

If the [noun phrase] bears the accusative case morpheme *-(y)i* [or one of its allomorphs], it is obligatorily interpreted as specific . . . If the [noun phrase] does not carry case morphology, it is obligatorily interpreted as non-specific (Enç 1991: 4).

This is roughly the same mechanism that, as I argued above, exists in Old Babylonian. As an example of this opposition, Enç offers a pair of contrasting examples (Enç 1991: 4–5, ex. 12 and 13).

- (28) Ali bir piyano-yu kiralamak istiyor
- 
- PN one piano-Acc to.rent wants
- 
- 'Ali wants to rent a certain piano'

- (29) Ali bir piyano kiralamak istiyor
- 
- PN one piano to.rent wants
- 
- 'Ali wants to rent a (non-specific) piano'

Where the Turkish data takes on a far greater interest, however, is when Enç constrains the discourse environment in which specific and non-specific noun phrases are used. Enç stipulates a discursive interaction in which the first utterance is (30) below, while the second utterance is one of the pair of alternatives in (31) and (32).

- (30) odam-a birkaç çocuk girdi
- 
- my.room-Dat several children entered
- 
- 'several children entered my room'

- (31) iki kız-ı tanıyordum
- 
- two girl-Acc I.knew
- 
- 'I knew two girls'

- (32) iki kız tanıyordum
- 
- two girl I.knew
- 
- 'I knew two girls'

Whereas in (31), the example in which “two girls” bears the accusative case and is consequently specific, *iki kız-ı* can be used to refer to two members of the group of children in (30), the example in (32), where the expression *iki kız* is non-specific, cannot be used to refer to two members of the group. This opposition obviously bears a great deal of similarity to the discourse behavior of the two types of Korean relative clause repeated above in (24) and (25). Moreover, only the example involving a specific noun phrase in (31) can be paraphrased with a partitive construction in Turkish.

- (33) kız-lar-dan iki-sin-i taniyordum  
girl-Pl-Abl two-Agr-Acc I.knew  
'I knew two of the girls'

Given the similarities between the IHRC in Korean and the absence of case-marking as an in-

dication of non-specificity in Turkish, the obvious question is: in what ways can the construct relative IHRCs in Old Babylonian be seen as analogous to the constructions in Korean and Turkish. What was labelled as “identity of quantity” above in my discussion of the construct relative in Old Babylonian is quite similar to Enç’s discourse analytical constraints on the coreference of non-specific nouns in Turkish: when a noun phrase in Turkish is non-specific, it can share an “identity of quantity” with a previous noun phrase, but not an “identity of substance,” just as construct relatives in Old Babylonian can share an “identity of quantity,” but not an “identity of substance” with an expression earlier in the discourse. Korean does not exhibit the same kind of interclausal coreference restriction, but only an EHRC, which is presumably specific, can be further modified by a partitive expression as exemplified in (34), whereas an IHRC such as in (25) cannot form a partitive construction.

- (34) Externally headed relative clause in partitive construction (Korean)<sup>7</sup>  
John-un [[*e<sub>i</sub>* tomangka-n]-un sey-myeng-uy totwuk<sub>i</sub>]-dul joong doo-myeng-ul capassta  
PN-Top [[*e<sub>i</sub>* run.away-Impf]-Rel three-Cl-Gen thief]-Pl among 2-Human-Acc caught  
'John caught two of the three thieves who were running away'

As demonstrated above for Old Babylonian as well, a non-specific noun phrase cannot refer to a specific noun phrase if the “identity of substance” interpretation is the one that is intended. Where the prior noun phrase is a non-specific IHRC in Old Babylonian, a following noun phrase that refers to it must, likewise, be a non-specific IHRC as exemplified in (21) and (22), repeated below as (35) and (36).

- (35) *šumma [awilum] . . . , [awilum šū] iddāk*  
'If a man . . . , that man will be killed'  
(36) *aššum . . . [(bit) ipušu] . . . imqutu, [bit imqutu] ippeš*  
'Because . . . the house collapsed, he will build (a house equivalent to) the house that collapsed'

Thus, as noted above, the use of an IHRC in the form of an Old Babylonian construct relative, necessitates the use of another IHRC in the second half of (36) to “refer” or perhaps better to “equate” the newly rebuilt house that is required of the negligent builder to the flawed house that had previously collapsed. If an “identity of substance” had been found necessary—if, for example, a verb that did not involve creation or building such as *nadānu(m)* ‘to give’ had been used instead—then we might reasonably expect that an externally headed relative using the determinative-relative pronoun would have been used so as to allow for a subsequent act of reference to be achieved using an anaphoric device such as the demonstrative pronoun in (35).

### Implications

The role of cardinality in weak quantificational environments in general and the construct state

7. Thanks to Grace Park for the modified example in (34).

IHRCs in Old Babylonian in particular cannot be overestimated. One of the hallmarks of the research tradition that has studied weak quantification, extending from Milsark's foundational work (1974) down to several recent treatments (Hallman 2004; Chung and Ladusaw 2004), has been an association between phrases headed by a cardinal number (the archtype in some sense of other weak quantifiers such as the indefinite determiner in English and an analogous use of "one" as a kind of indefinite determiner in a variety of Semitic languages) and a variety of morphosyntactic phenomena such as the definiteness effect in existential sentences (in English) and IHRCs (in Old Babylonian and Korean). Likewise, within the constraints of Old Babylonian morphosyntax, one also finds a rough similarity between the morphological form of cardinal numbers, generally known as *the absolute state* and the morphosyntactic device that I argue codes weak quantification in Old Babylonian, namely *the construct state*. These two morphosyntactic devices cannot be equated: certain exponents of *grammatical number* as well as indicators of *grammatical gender* to the degree that they are coded through portmanteau morphemes are retained in the construct state but lost in the absolute state.<sup>8</sup> But, as in the Turkish example dealt with in the preceding section, they share one crucial feature, namely the absence of nominal case-marking and the specificity that can presumably be associated with such case-marking.

Given the extremely small amount of material that the proposal described herein is based on, further corroboration is needed both within the known corpora of Old Babylonian letters and the Old Akkadian materials when they become available. What is of more importance, perhaps, than the particular empirical components of this proposal is my effort to make sense of relativization in Akkadian through appeal to ongoing work

in syntactic theory rather than typological abnormality. The model that I have sketched out in this paper provides an empirically testable scenario, namely that (1) several factors would seem to suggest that the construct state exhibits weak quantification and that weak quantification is used to indicate the head of an IHRC in the form of the construct relative in the Old Babylonian dialect of Akkadian, (2) if the construct state in such IHRCs is a weak quantification environment, then the only way in which a demonstrative element such as the determinative-relative pronoun could occur in such an environment would be if the underlying head of the relative were in focus as if it were a kind of cleft sentence, and (3) a focus construction resulting in a discontinuous nominal phrase would also result in a full copy of all the nominal features (including case) in the form of the determinative-relative pronoun that acts as a resumptive pronoun when the noun in focus is moved out of the relative clause. This scenario would yield the kind of relative regularly found in Old Akkadian, in which the external head of the relative and the determinative-relative pronoun within the relative clause itself exhibit the same case-marking. In the Old Babylonian dialect, however, the resulting form of such a relative clause could easily have been reinterpreted as a kind of externally headed relative with the corresponding loss of case-marking distinctions on the determinative-relative pronoun, while the original construct relative should still retain the features that we might expect to find in an IHRC. In this paper, I have offered several examples of construct relatives in the Code of Hammurapi that seem to exhibit just such a feature, namely weak quantification of the noun that occurs in the construct state.

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8. There are additional phonological constraints affecting the preservation of certain vowels in the construct state—including residual case marking in a few instances—that I pass over here.

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