On Shared Structural Innovations: the Diachrony of Adverbial Subordination in Semitic

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Abstract

The Semitic languages share the same pattern for adverbial subordination, but they do not share cognate subordinators. Following widely accepted approaches to syntactic reconstruction, such as Harris & Campbell (1995), it is possible to reconstruct a proto construction for this family, even without cognate material. However, in this article I argue that adverbial subordination cannot be reconstructed to the proto language and the shared structure is a case of parallel development which was motivated by influence from a type of relative clause. I suggest that parallel development was triggered by the presence of a shared structural feature, which created similar pressures in different nodes and allowed for identical lines of development to take place, but nevertheless yielded distinct outcomes. The development of adverbial subordinators as outlined here shows that despite structural similarities in adverbial subordination among the Semitic languages, it is unlikely that this pattern is reconstructable to the proto language.

1 Introduction

Since the renewed interest in syntactic reconstruction, there has been a lively discussion about what it is that historical syntacticians reconstruct, and particularly what kind of linguistic material may be used for reconstruction.¹ The general consensus used to be that form-meaning minimal pairing is not available in reconstructing syntax. However, a number of scholars from a range of methodological approaches have argued that syntactic reconstruction, like the reconstruction of phonology and morphology, is based on strict

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correspondences; that is, syntagms need to be in a regular relationship, not merely showing superficial similarities (Harris & Campbell 1995; Campbell & Harris 2002; Harris 2008; Barðdal & Eythórsson, in several publications, most recently in this volume, Walkden 2014; see also the introduction to this volume for a review). Harris and Campbell and others further argue that what is actually being reconstructed are patterns, i.e., a hypothetical slot-based structure, without committing to lexical content. Thus, shared syntactic features are patterns, not overt forms. In other words, for syntactic reconstruction a higher level of abstraction is needed. Although when exemplifying the methodology, sentences with cognate material are used, Harris & Campbell (1995: 350–351) insist that unless a specific form, such as a verb type, conditions syntax, it is not necessary for sentences to share cognate material in order for a reconstruction to be possible (contra Lightfoot 2002). They suggest using safeguards to ensure comparability, which may include cognate material (though this does not need to be fulfilled), functional identity and morphological cognates (such as verbal morphemes, case endings etc.). The idea that with syntactic reconstruction, patterns are the cognate material has also been advocated in a number of other studies (e.g., Barðdal & Smitherman 2013).

In the following, I will examine a potential pitfall in this methodology through a case study from Semitic. The evidence presented here suggests that while formal identity between syntactic structures can point to a shared inheritance, that inheritance is not necessarily the underlying syntactic structure, but rather what might be called “poise” in the sense of Enfield (2003), namely the starting point of a change, or structural pressure to develop in a certain direction. This pressure may motivate similar paths of change in various languages which develop independently of each other. The independent evolution of similar patterns is referred to in the literature as ‘drift’ or ‘parallel development’. While typically dismissed in studies of linguistic genealogy and reconstruction, I suggest that syntactic parallel development has value for syntactic reconstruction, by exposing underlying shared structures and more importantly, the possible mechanisms that operate in language.

Although the term “parallel development” has been used in linguistics at least since Meillet’s 1918 article “convergence des développements linguistiques”, the term is poorly defined and may be used to cover several rather loosely related phenomena (as noted already in Malkiel 1981). In many studies, parallel development may cover any similar feature in two languages. For example, Warnow et al. (2006) define parallel development as the development of a linguistic character in a particular set of languages, when “the state for that character arises more than once in the evolutionary history of that set of languages” (2006: 76). In other words, parallel development is when two

languages exhibit the same state, which does not appear in their ancestral origin. This should be distinguished from back-mutation, which is the reappearance of an ancestral state in a number of languages not through borrowing or inheritance. Crowley (1991: 180), who deals with morphosyntax, defines parallel development as “changes in languages that take place independently in separate languages after their separation from the protolanguage in such a way that the daughter languages end up converging structurally, or sharing features that were not originally present in the protolanguage”. Recently, Keiser (2009) suggested parallel development is at play to explain similar (phonological) change in isolated speech communities. He defines it as “two or more events of internally-induced linguistic change rather than the spread of a single event” (p. 3), and argues that isolation between speech communities is a conditioning factor for this type of change to take place. It seems, however, that isolation is not a conditioning factor to change itself, but rather a helpful circumstance for the linguist who needs to distinguish between contact-induced change and internal change. Some linguists also assume that the rise of a feature through parallel development can occur independently only once, since it is unlikely, or very rare, for a complex feature to develop more than once in two related languages. (Minett & Wang 2003: 291, 322; Warnow et al. 2006: 80). Minett and Wang (2003) agree, however, that some features, primarily phonological features, are more likely than others to independently develop multiple times (similarly, Warnow et al. 2006: 77).

While the existence of the phenomenon is widely acknowledged, the causes of such a development in related languages are far less clear. Parallel development in various parts of the grammar may have different causes. Phonological parallel development is by far the most frequently reported. Phonological features are often binary and are likely to exhibit parallel development if the sound change is typologically common; these changes are often the result of human anatomy, rather than of the language as a system (Keiser 2009). Especially in the case of phonological changes, there is a clear possibility of chance similarities as a result of random variation (Lass 1997: 351, 380, Keiser 2009: 12). In morphology, features may also be binary and hence a change in either direction could be purely coincidental rather than a result of some structural trait. For example, English *weren't* spread as the common negative past tense of *be* in some unrelated varieties of spoken English, while in others only *wasn't* is used (Wolfram & Schilling-Estes 2003; for a similar case of spread in Semitic, see Hetzron 1976).

In the case of syntax, several issues are at play. The appearance of formally similar structures in related languages is less likely to be a result of an accidental similarity, given that syntactic developments tend to be more complex

and involve more steps than developments in other domains of the grammar. Similar structures in related languages may legitimately be seen as a reflection of inheritance, as Harris and Campbell have suggested. In this article I suggest that there are at least some cases where a reconstruction of an immediate ancestor based on cognate structures is unwarranted, despite structural similarity; what we should reconstruct is the point of origin of the change, rather than a fully formed proto-structure. My discussion assumes the following definition of syntactic parallel development: parallel development is the independent development of similar changes in languages of common genetic origin because of a trait in their common genetic material (cf. Rieseberg & Burke 2001; Wood, Burke & Rieseberg 2005). In contrast to shared innovation, which stems from a single line of development whose outcome is attested in later dialects, parallel development is multiple lines of development which took place in the dialects post-split from their ancestor independently of each other (that is, no borrowing is involved). I further argue that independent parallel development is more likely to recur in languages of a genetically cohesive family, which share the relevant structural features. Syntactic changes due to parallel development are restricted and guided by a shared structure, unlike parallel morphological and phonological developments which are frequently random. The concept of syntactic parallel development is essential to syntactic reconstruction because it has implications for the evaluation of genetic relatedness between languages within a family or a branch, as well as for the probability of a certain change to occur.

In order to provide evidence for my argument, I will review the repeated development of finite adverbial subordination in the Semitic language family. Evidence is taken from both classical and modern languages. In Section 2 I outline the syntax of relative clauses and adverbial subordination in Semitic, highlight the problems and suggest a reconstruction. In Section 3 I discuss some broader implications, drawing on the work of La Polla and Enfield, and Section 4 summarizes and concludes the article.

2 Subordination in Semitic

The Semitic languages are attested since the first half of the third millennium BCE. Some of its members, like Akkadian and Aramaic, have a documented history spanning 2,500 years. The family has a fairly stable grammatical profile. It has two genders (masculine and feminine), and three numbers (singular, dual, and plural) on nouns, adjectives, pronouns and verbs. Syntactically, the family shows a consistent head-dependent word order throughout: VSO;

N-Attribute, and prepositions. The family has a basic three case system, with nominative *-u*, accusative/adverbial *-a*, and genitive/prepositional *-i*. The first two cases mark subject and object in verbal sentences respectively or a predicate in a non-verbal sentence, while genitive is used to mark any nominal dependent of other nominals or prepositions. Nominals have a nasal post-case suffix, which marks *state*, namely, its presence marks the noun as having no dependents, and its absence – as a head with a dependent.

The subgrouping of Semitic below shows a basic split between East Semitic and West Semitic (Huehnergard & Pat-El 2019). East Semitic has no modern survivors. Modern Semitic languages include members of a number of West Semitic nodes: Arabic, Hebrew, Aramaic, Ethiopic, and Modern South Arabian; these are shown in italics in Figure 8.1 below. Except for Hebrew, all modern Semitic languages have a number of distinct dialects.

All the Semitic languages individually exhibit at least two types of subordinated finite sentences: relative and adverbial. The term *finite* refers to the fact that they contain full predication where a subject is either explicit or expressed through agreement pronominal affixes on the predicate. No participial constructions are discussed here. The Semitic relative is superficially known to many typologists, but its features have not been fully accurately described thus far; therefore, a brief overview is in order.

2.1 *The Semitic Relative Clause*

Every branch of Semitic attests to two strategies of relativization: via annexation (construct), i.e., a sentence dependent on a nominal head, or via a relative marker, while the nominal head, if overt, is in apposition to the relative marker.² The relative marker inflects for gender, number and case, and reflects the syntax of its overt or covert nominal head, with the exception of state: the relative marker is marked as the head of the relative while the appositional noun is independent. Traditionally the marker was described as a pronoun; this has recently been challenged (Huehnergard & Pat-El 2018). Whether the direct head is a relative marker or a noun, its case is determined by the syntax of the main sentence, not the relative clause. Both these markers are called ‘heads’ because they carry morphological markers of having dependents (in the sense of Nichols 1986). I will call these types of relatives *nominally-headed* and *marker-headed* relatives. Nominal heads will be glossed as *cnst* (=construct) in the examples below; the relative marker is always marked as *head*. Examples 1–4 below are of nominally-headed relatives.

2 Abbreviations used in this article: acc=accusative; cnst=construct; du=dual; gen=genitive; impf=imperfect; nom=nominative; obl=oblique; opt=optative marker; pass=passive; pf=perfect; pre=preterit; rel=relative marker; sub=subordinative.

FIGURE 8.1 The internal classification of the Semitic languages

– nominally-headed relative

- (1) *qišt-i šarr-um ana rēd-îm iddin-u*
 gift-GEN.CNST king-NOM to soldier-GEN give.PRET.3MS-SUB
 'The gift the king gave the soldier'
 (Babylonian Akkadian, Buccellati 1996: 489)
- (2) *ʔilā yawm-i yubʕaʕūna*
 to day.M-GEN.CNST raise.IMP.F.PASS.3MP
 'Until the day they are raised [from the dead]' (Classical Arabic, Qurān 7: 14)
- (3) *qiry-at ḥānā Dāwīd*
 a town-FS.CNST camped David
 'A city in which David encamped' (Biblical Hebrew, Isaiah 29: 1)
- (4) *ba-mawāʕal-a yəkwennanu masāfənt*
 in-days-CNST rule judges
 'In the days in which the judges rule' (Gəʕəz, Ruth 1: 1)

Examples (1–2) above are of languages with an active case system, while examples (3–4) above are of languages with reduced or no case system, but where construct nouns are nevertheless morphologically marked. In examples (1–2), the head noun (Akkadian *qišt-i*, Arabic *yawm-i*) lacks the final post-case nasal morpheme which marks a noun as not having dependents. In example (3), the head noun, *qiry-at*, shows a feminine singular morpheme which only surfaces when a noun is a head (an independent form of the same noun would be *qiryā*). In example (4), the head noun *mawāʕal-a* is marked with a morpheme (-a) which indicates a head noun.

Examples 5–8 below are of marker-headed relatives. In this type, the relative clause is dependent on a marker whose inflection is conditioned solely by the syntax of the main clause. The preceding appositional noun may not be overt, but is contextually recoverable. Some form of agreement marker, whether pronominal or part of the verbal agreement morphology, marks the function of the head noun in the relative clause. In the following examples, the relative marker is marked in bold font and the antecedent and agreement markers in the relative clause are underlined.

– marker-headed relatives

- (5) *Šarru-kīn* *šar* *māt-im* *šu* *Enlil* *māḥir-am*
 Sargon king.CNST land-GEN rel.NOM.MS Enlil rival-ACC
lā iddin-u-šum
 NEG give.PRET.3MS-SUB-to him
 ‘Sargon, king of the land, to whom Enlil has given no rival’
 (Babylonian Akkadian, RIME 2.1.1.6.)
- (6) *šumma ʔinna walad-ay-hi llaḏayni qatal-ā-hu*
 then ADV child.M-DU.OBL-his REL.M.DU.OBL kill.PF-3M.DU-him
fī Ninwā harab-ā³
 in Nineveh flee.PF-3M.DU
 ‘Then, his children, who killed him in Nineveh, fled’ (Classical Arabic)
- (7) *hinne ʔēlōhē-nū ze qiwwīnū l-ō*
 here god.M-our REL hope.PF.1CP to-him
 ‘Here is our god whom we trust.’ (Biblical Hebrew, Isaiah 25:9)
- (8) *nabīy-āt ʔalla tanabbay-u həyya*
 prophet-PL REL.PL prophesy.PF-3M.PL here
 ‘The prophets who offer prophesies here.’ (Classical Ethiopic)

Table 8.1 provides the reconstruction of the relative marker to Proto-Semitic. The inflection of the marker is identical to the inflection of adjectives in Semitic, i.e., it includes gender distinction, three cases in the singular but only two in the dual and plural: nominative and oblique. It is morphologically marked as a head (construct).

Both patterns are easily reconstructable to Proto-Semitic and although some attempts have been made to derive one from the other (Deutscher 2009), these attempts are not only highly speculative, but unnecessary. Both patterns are attested in every branch, either productively or as a relic, and their syntax is identical even in languages which no longer use the original Semitic relative marker, like the Canaanite branch (Pat-El 2012). Given the distribution of these relatives in Semitic, we should reconstruct both to Proto-Semitic as follows (the equal sign marks appositional relation; a somewhat similar claim,

3 The particle *ʔinna* conditions the accusative. In the dual, the accusative is not distinct from the genitive and is therefore glossed as ‘oblique’ in example (6).

TABLE 8.1 A reconstruction of the relative marker in Semitic (Huehnergard 2006: 112)

	masc.sg	fem.sg
nom.	<i>ḏū</i>	<i>ḏātu</i>
gen.	<i>ḏī</i>	<i>ḏāti</i>
acc.	<i>ḏā</i>	<i>ḏāta</i>
	masc.dual	fem.dual
nom.	<i>ḏawā</i>	<i>ḏ(aw)ātā</i>
obl.	<i>ḏaway</i>	<i>ḏ(aw)ātay</i>
	masc.pl	fem.pl
nom.	<i>ḏawū / ʔulū</i>	<i>ḏawātu / ʔulātu</i>
obl.	<i>ḏawī / ʔulī</i>	<i>ḏawāti / ʔulāti</i>

on synchronic grounds with no diachronic implications, can be found in Goldenberg 1995):⁴

$$\begin{array}{ll} N_{\text{case.cnst}} & S \\ N=\partial V_{\text{case.cnst}} & S \end{array}$$

Semantically and distributionally, these two strategies are identical (there is no restrictive/non-restrictive distinction in Semitic); in terms of their internal syntax, however, they differ. The marker-headed relative may contain either a verbal or nominal predicate, and has an obligatory anaphoric pronominal affix which represents the head noun in the relative clause (the so-called ‘resumptive pronoun’; see underlined elements in examples 5–8 above). This anaphoric pronoun may be missing only in cases where the antecedent is the direct object in the relative clause (the phenomenon of direct object arguments omission is known in main clauses as well; Khan 1988). However, the nominally-headed relative clause may contain only verbal predication and typically does not make use of anaphoric pronouns. In addition, nominally-headed relatives tend to be very short, typically containing a single verb.

4 S stands for sentence. The equal sign marks appositional status here, that is the head noun and the relative marker are appositional to each other.

TABLE 8.2 Relative clause syntax in Semitic

	Marker head	Nominal head
Relation of nominal antecedent to RC	appositional	head
Use of resumption	obligatory	non-obligatory
Type of predication	nominal/verbal	verbal

These relative clauses differ in their relation to their nominal antecedent: the relative clause is dependent on the nominal antecedent of the nominally-headed relative, but appositional to the head of the marker-headed relative. As a result, the noun antecedent in nominally-headed relatives cannot be modified with any additional nominal attribute, e.g., adjectives, possessive suffixes, external possessive constructions, etc. Most languages abandoned or reduced the use of nominally-headed relatives at some point during their history, likely due to these distributional restrictions. See Table 8.2 for a summary of the differences between the relatives.

2.2 The Semitic Adverbial Clause

In this section I review the syntax and development of adverbial clauses in Semitic. I argue that they developed from one of the two types of relatives discussed above, the nominally-headed relative. I suggest that loss of inflection is a significant stimulus in this process. I also demonstrate that the innovation of new adverbial subordinators occurred multiple times in these languages.

Adverbial subordinate clauses in all the Semitic languages are marked with a subordinating particle followed by a full predication.

- (9)

ašar
where

iqabbū
say.3MP.SUB

kasp-am
silver-ACC

l-uddin
OPT-give.IMP.1CS

'Let me deposit the silver where they designate'

(Akkadian, AbB 2 105:12–13)
- (10)

ʔaḥṭaʔa-hū
miss.PF.3MS-him

sahm-ī
arrow-my

ḥīna
when

ramay-tu
shoot.PF.1CS

'My arrow missed him when I shot [it]' (Classical Arabic)

- (11) *kēn* *tōʔbēd-ûn* *ʕēqeb* *lō* *tišməʕ-ûn*
 thus perish.IMPFF-2MP because NEG hear.IMPFF-2MP
bə-qôl *YHWH* *ʔēlōhê-kem*
 in-voice YHWH god-your
 'You will thus perish because you have not adhered to YHWH, your God'
 (Biblical Hebrew, Deuteronomy 8:20)

The source of these subordinators is not always clear; however, often the morphological pattern is indicative of their origin. Almost all of these subordinators are substantives, rather than adverbs or prepositions. For example, in Hebrew, the particle *terem* 'before' is from an unknown root with no other attestations in the language, but it must have been a substantive because its bi-syllabic pattern is only found with substantives in this language (Fox 2003: 107). Prepositions in Semitic primarily originate from substantives; still, except for very few examples, none of the Semitic subordinators is attested as a preposition before it is attested as a subordinator. In some cases, subordinators are not attested as prepositions at all (e.g., Hebrew *terem* 'before', *pen* 'lest'; Arabic *haytu* 'where'; Ugaritic *atr* 'where'), but in other cases prepositions and subordinators are attested concurrently, none of which are obviously original (e.g., Akkadian *ēma* 'wherever/in wherever'; Hebrew *ʔaḥar* 'after conj./prep.').

Prepositions which can be reconstructed to Proto-Semitic in this function are never attested as subordinators (Gai 1985: 125). Hence the development is likely not a case of noun > preposition > adverbial subordinator, but rather noun > adverbial subordinator. Such a development is quite different from what is reported for other languages. In the languages of Europe, for example, the most common sources for adverbial subordinators are adverbs, adpositions, complementizers, interrogatives and relativizers (Kortmann 1998: 216). Heine & Kuteva (2000) list a number of possible sources for subordinators cross-linguistically, which are mostly postpositions and locative markers, though in some languages, demonstratives and verbs are possible too.

Furthermore, subordinators regularly have a morphological form which is identical to nominal heads ('construct' nouns). Not all languages mark nominal heads in the same way synchronically: Arabic has no post-case nasalization ('nunation') on nominal heads (cnst *ḥin-a-* vs. abs *ḥin-an*), Akkadian has no post-case nasalization ('mimation') or case ending (cnst *ašar-* vs. abs *ašr-u-m*) and Ethiopic has a special vocalic ending (cnst *ʔasm-a* vs. abs *səm*). The semantics of the subordinators may or may not be distinct from their original meaning. For example, Hebrew *ʕēqeb* 'because' is likely derived from a noun meaning 'consequence' (cf. Arabic *ʕaqib-un* 'consequence'); Arabic *ḥīna* 'when' is a construct of a noun meaning 'incidence, duration of time'.

Adverbial subordinated clauses attested in the Semitic languages are syntactically very similar indeed, to the degree that they could easily be considered cognates. They share the following structural features:

- a. These sentences are typically introduced by substantives (and not by interrogatives or prepositional phrases)
- b. In languages where case is still viable, these particles carry a relic of case, typically accusative, for example, in Arabic: *ḥīn-a*, *ḥatt-ā*, *rait-a* and earlier *yawm-a*, but other cases, or none, are also attested
- c. The morphology of the subordinator, if still apparent, is usually that of a nominal head ('construct' noun). For example, these forms lack final post-case nasalization in Akkadian and Arabic, and carry a special morpheme marking nominal heads in Ethiopic
- d. The noun-turned-subordination marker is not represented syntactically in the finite sentence following it, e.g., via an anaphoric pronoun

What may be reconstructed on the basis of the correspondences in all branches is a common pattern, which following the principles outlined in Harris & Campbell (1995) and in Harris (2008), should be reconstructed as: N^{case.cnst}. S. However, there are several problems with assuming that this is the likely reconstruction of adverbial subordination in Semitic: first, it is clearly a specific case of the reconstruction suggested above for nominally-headed relatives (N^{case.cnst} S). Second, the value of N in this reconstruction is unreconstructable as there is no overlap between the sets of adverbial subordinators in the various languages, not even in closely related languages (Pat-El 2008: 61). Note the following selection for the variety of these forms in a number of languages. With the possible exception of particles built on *kī-* (Akkadian *kīma*, OSA *k*, Hebrew *kī*), none of the other markers listed here is etymologically related to other markers in the same column:

TABLE 8.3 A sample of subordinators in the Semitic languages

	before	Because	so that	When
Akkadian	<i>adi ... lā</i> (<i>adi</i> =until)	<i>kīma, aššum</i>	<i>kīma, aššum</i>	<i>kīma, ašar</i> (rare)
Arabic	<i>qabla, ṭamāma</i>	<i>liṭanna, bi-sabab</i>	<i>likay, ḥattā, biḥaytu</i>	<i>ḥīna</i>
Hebrew	<i>ṭerem</i>	<i>ṣeqeb, kī, yaʿan</i>	<i>ləmaʿan</i> neg. <i>pen</i>	<i>kī</i>
Ethiopic	<i>ṭamqədma,</i> <i>ṭənbala</i>	<i>ṭasma</i>	<i>kama</i> neg. <i>ṭənbala</i>	<i>soba</i>
OSA		<i>k, ywm</i>	<i>brt, k</i>	<i>lhm, ln, ywm, brt</i>

Almost no adverbial subordinator can be reconstructed as such further than the language in which it is attested. With no overlap in etymological content both an inheritance and a mutual borrowing are unlikely. Since there are no shared adverbial subordinators, even if the pattern appears to be shared, we cannot conclude that any of the attested subordinators in Proto-Semitic is original; in fact, they all seem to reflect a fairly shallow history. Since the reconstructed pattern is for all intents and purposes the nominally-headed relative, the adverbial function of the pattern itself cannot be said to be Proto-Semitic. The sole difference between nominally-headed relatives and adverbial clauses is that the head of nominally-headed relatives inflects according to its function in the main clause, while the adverbial subordinating marker does not inflect at all, or shows a fossilized inflection.

It is, therefore, more likely that adverbial subordination is not reconstructable to Proto-Semitic, but rather is a result of reanalysis of nominally-headed relatives which took place independently in each branch. The reanalysis of a nominally-headed relative was facilitated by ambiguity. As was mentioned above, in this type of relative, there are typically no anaphoric markers which represent the head noun in the relative clause; see example (12), where the antecedent of a marker-headed relative (*he-šārîm* fp) is represented in the relative via an anaphoric pronoun (*-hen* 3fp). Such anaphoric checks are common in marker-headed relatives, and make the role of the head noun in the relative clause explicit. When the anaphoric pronoun is missing, the head noun is less likely to be understood as a head of a relative clause, because it is not represented in the relative clause (13):

- (12) *he-šārîm* *ʔāšer yāšab* *bā-hen* *Lôṭ*
 DEF-cities.FP REL reside.PF.3MS in-them.3FP PN
 Nⁱ PREP-PRONⁱ
 'The cities in which Lot resided.' (Biblical Hebrew, Genesis 19: 29)
- (13) *hōy ʔĀrîʔel ʔĀrîʔel qiryat* *ḥānā* *Dāwid* (***b-āh*)
 Oh Ariel Ariel town.FS.CNST camp.PF.3MS David (**in-her)
 Nⁱ (**PREP-PRONⁱ)
 'Oh Ariel, Ariel, a city in which David encamped.'
 (Biblical Hebrew, Isaiah 29: 1)

In addition, nouns in construct are proclitic and therefore unstressed, forming one intonational unit with their dependent, or the first element of their dependent if it is a sentence. As a result, in some languages, construct nouns, including head nouns in nominally-headed relatives, show vowel

shortening, sometimes syncope (Steiner 2012) and loss or fossilization of inflection (Huehnergard & Pat-El 2018). The lack of inflection, in particular case inflection, on the head noun obscures the function of this noun in the main clause. The lack of anaphoric resumption in the relative and the reduction or loss of inflection on nominal heads of nominally-headed relatives leads to an ambiguity regarding the relationship between the head and the subordinated clause. Subsequently, these nominal heads were understood not as nouns with a following relative clause, but rather as mere markers of subordination, frequently semantically reduced; head nouns with specific semantics, e.g., temporal, spatial or causal, were particularly susceptible to such reanalysis. The example in (13) would then be understood as “Oh Ariel, Ariel, where David encamped”. In this case, the Hebrew noun *qiryā* ‘city’ did not become a subordinator, but in Akkadian, for example, nouns denoting ‘place’ (*ašar*) and ‘house’ (*bēt*), did. In example (14) below the noun *bēt* ‘house’ is semantically reduced and simply means ‘where, in which’. Even though *bēt* is marked as a head of the relative, that is, it is in construct with no case and no boundedness markers, it is synchronically not the head of a relative. Its sole function is marking a spatial adverbial clause. Since the nouns *bēt* and *ašar* are not attested as adverbs in Akkadian, it is unlikely that the development is NOUN > ADVERB > ADVERBIAL SUBORDINATOR (contra Givón 1974).

- (14) *mātu bēt šarru bēl-ī iškun-īni ...*
 land where king lord-my place.PRET.3MS-me
šarru bēl-ī ūdu
 king lord-my know.STAT.3MS
 ‘The king my lord knows the land where the king my lord placed me’
 (Akkadian, Neo-Assyrian, SAA 16 127 013–14)

The role of head noun inflection, or lack thereof, in creating adverbial subordinator particles is substantiated further in languages where the relative lost its inflection. In these languages, the no-longer-inflected marker can also function as an adverbial subordinator.

Most of the languages which allow relative markers to be used as adverbial subordinators either lost nominally-headed relative as an option (Aramaic) or mutated it (Arabic; Pat-El 2014). In example (15), the relative marker is a fossilized noun *ʔāšer*, cognate with Akkadian *ašar* ‘place / where’, and can function, albeit rarely, as an adverbial subordinator. This marker probably developed from adverbial subordination, not from an adverb, as there is no evidence that it was ever used as an adverb (Huehnergard 2006). Example (16), of a Late Antique dialect of Hebrew, reflects a further reduction of this marker, resulting

in a proclitic *šeC-*, similarly with causal meaning. The Aramaic relative marker in example (17) has lost its inflection and prosodic independence fairly early, and can be used in this dialect and others as an adverbial subordinator. The relative marker in example (18) reflects an innovation within the historical record of Arabic, where the original relative marker, which was inflected for gender-number-case in some early dialects, was replaced by a combination of definite article and demonstrative, which subsequently lost its inflection (Stokes 2018).

- (15) *nātan ʔēlōhīm šəkār-ī ʔāšer nātattī šiphāt-ī lə-ʔiš-ī*
 give.PF.3MP god wage-my REL give.PF.1S servant.FS-my to-man-my
 ‘God paid me my due, because I gave my maidservant to my husband’
 (Biblical Hebrew, Genesis 30: 18)

- (16) *kol ʔādām qôrē kə-dark-ô šen-neʔēmar ...*
 every man read.PTCL.MS as-way-his REL-say.PF.PASS.3MS
 ‘Every person reads according to his custom, because it is said [in the bible] ...’ (Mishnaic Hebrew, Berakhot 1: 3)

- (17) *hī lābšā mānīn šāʔīn d-lā yittēn barnāš*
 she wear.PF.3FS clothes dirty REL-NEG give.IMP.F.3MS person
ʕēnā-wy ʕal-āh
 eyes-his on-her
 ‘She wears dirty clothes so that no-one will look at her’
 (Jewish Palestinian Aramaic)

- (18) *il-ḥaqq ʕalayy ʔilli mā rabbet-ak zayy n-nās*
 DEF-blame on-me REL NEG teach.PF.1CS-you like DEF-man
 ‘I am to blame because I didn’t raise you properly’ (Palestinian Arabic)⁵

The reanalysis of heads in nominally-headed relatives as adverbial subordinators was enabled by reduction of inflection, itself a phonological process motivated by the proclitic position of these heads (for more on the phenomenon of relative marker > adverbial subordinator in Arabic, see Diem 2007).

When languages stop using the nominally-headed relative productively or when such relatives are no longer transparent to speakers, the method of creating adverbial subordinating markers changes as well. Aramaic lost the

5 In other modern dialects of Arabic, some adverbial clauses, particularly temporal ones, include a head noun, typically indefinite, followed by a relative particle but missing a resumptive pronoun. Often the head nouns of these clauses are in construct (Brustad 2000:102–103).

ability to form nominally-headed relatives fairly early. In addition, its relative marker lost inflection and remained as an uninflected relative marker. In this branch, adverbial subordination is marked by both a marker derived from a noun or a prepositional phrase but also obligatorily followed by the relative marker (Pat-El 2008); e.g., *bātār dī < b-?ātār dī* (in-place rel) 'after'.

3 Discussion

The repeated innovation of adverbial markers in Semitic can hypothetically have a number of explanations: (i) a result of contact with transference of matter; (ii) a result of contact with transference of pattern; (iii) a reflection of common inheritance followed by subsequent lexical replacement; or (iv) parallel development. An explanation based on contact is problematic for a number of reasons. While the syntax of the adverbial clause is similar across Semitic, there is no shared set of subordinators even between languages which were in prolonged and early contact (e.g., Akkadian and Aramaic). The lack of evidence makes tracing a common locus for the spread of this pattern impossible. Of course, it is possible that contact drove structural changes without transfer of cognate forms (e.g., Epps 2006, Matras & Sakel 2007); however, in this case, since the basic pattern is reconstructable to the proto-language, contact is an unlikely explanation. The development happened in every branch and its results are apparent in all attested languages regardless of the level of contact, or lack thereof, between them.

Lexical replacement could account for the different subordinators populating a similar structure. According to this scenario, speakers could identify links between subordinators and nouns with similar semantic value, and were able to exchange these items as part of a lexical renewal. The problem with such a hypothesis is that studies on the rate of lexical replacement suggest that even with lexical replacement, some cognate material, should be retrievable. Pagel et al. (2007) show that high-frequency words are replaced at a lower rate than low-frequency words. Their study suggests that the linguistic half-life of a word (the time in which there is 50% chance of replacement) varies between 750–10,000+ years depending on frequency rates. This study concentrated on nouns, but function words are more frequent in speech than common nouns, and are therefore expected to be replaced less frequently. We would, therefore, expect to find some cognates between languages whose split occurred relatively recently, like the Aramaic-Canaanite subbranch; the fact that we do not find such material suggests that the explanation is likely not lexical replacement.

Independent development has been shown to account for similar structures with no cognate material in other language families. LaPolla (1994) reviews a number of cases in the Tibeto-Burman family ('anti-ergative' marking, ergative marking, direction marking, causative marking, person marking, and existential verbs), which not only show similar developmental paths, but also sometimes use similar morphological material in the evolution of these new categories. In each case even closely related languages show a development of the same category from different morphemes. While a reconstruction to a shared ancestor is unlikely, LaPolla concluded that independent parallel development reveals the motivation for the development, namely, the starting point, which can be traced to the proto language. LaPolla suggested that a set of semantic distinctions (agentivity/non-agentivity, animacy, and others) were essential to the organization of the protolanguage speakers' world view. In the current article, I suggested that the motivation may be even more concrete, as a set of fairly common and simple changes cause ambiguity in the interpretation of a shared pattern and lead to reanalysis.

A view on parallel development from a different angle is found in a number of publications by N. J. Enfield who developed the idea of 'typological poise', which he uses to explain how the existing grammatical structure encourages (or constraints) grammatical development in a certain direction (e.g., Enfield 2001, 2003). When two languages show similar structural compatibility to undergo a change in a specific direction, they are said to be 'poised'; such compatibility may be a result of a number of factors, such as areal or genetic relatedness. The term should be used as a measure for the likelihood that languages will evolve in a certain direction independently. Thus, if a language is 'poised' for certain grammatical developments, whether in its existing grammatical structure or semantic mapping, it will be more likely to realize certain changes. In the case of closely related languages with shared grammatical structure, a similar poise may be found in many or all members of a family. The evidence and analysis presented in this article support the hypothesis that language poise is a good predictor for independent development. The Semitic languages show a development which is relatively rare cross-linguistically (Heine & Kuteva 2000), but is a likely outcome internally, given these languages' poise.

Parallel development may create structures that could be erroneously attributed to inheritance, as they show distinct similarity and thus may be taken to be cognate patterns. However, such structures, while creating uniformity, also exhibit diversification. Therefore, unlike genetically shared features, which reflect real correspondence, parallel development is responsible for patterns that cannot be reconstructed to a common ancestor, but it can point to an underlying shared pressure, or stimulus of change. For the most part, parallel

development is assumed to be irrelevant for subgrouping (e.g., Nakhleh et al. 2005: 384); however, I suggest, similarly to LaPolla (1994), that there is value in studying the underlying stimuli which motivate parallel development. Although a chance factor cannot be dismissed, a detailed and specific repeated path of change with identified motivation in more than two languages within a genetically cohesive language branch is highly unlikely to be a random event (see also Keiser 2009: 12). Identifying the structural features likely to participate in a change ('poise') is needed for the evaluation of what types of changes are plausible (though not predictable). Although this was not directly addressed in the current article, reconstructing the underlying structure which stimulated the change, in this case, a type of relative clause, is possible based on instances of multiple instances of parallel development.

It is quite likely that instances of parallel development are more common than is currently documented in the linguistic literature. There are obvious complications in identifying such a situation, as in languages with a shallow historical record, it is almost impossible to distinguish parallel development from other causes of similarity. At this point I would like to cautiously suggest the following:

- (1) languages with similar structures are susceptible to similar changes
- (2) the results of parallel development cannot be used for subgrouping, but they expose stimuli of change, which given (1) are likely to be repeated (contra Nakhleh et al. 2005)
- (3) understanding the motivation behind parallel development may help formulate better constraints on change within individual language
- (4) the results of parallel development-induced change may reflect shared structural features not otherwise easily reconstructable

4 Summary

Given the inability to reconstruct a set of shared adverbial subordinating markers in Semitic, I have argued here that their development is likely the result of parallel development on the basis of nominally-headed relatives. The nominal head in such relatives is not typically represented in the relative clause via agreement markers, and so its syntactic function in the relative clause remains unspecified. In many languages, the case on such nouns was reduced due to their proclitic status. I suggested above that nominal heads in such relatives, especially heads with spatial, temporal and causal semantics, were susceptible to be reanalyzed as adverbial subordinators. The Semitic languages repeatedly

resorted to this common solution for the same reasons, using similar but not identical linguistic material. Such solutions are likely to be repeated as long as the relevant features are still part of the grammar.

I have argued based on the evidence presented here that syntactic reconstruction based on cognate patterns may conflate genuine inherited syntactic material with cases of parallel development, where a change has taken place independently in more than one node. I suggest that parallel development may be triggered by a shared structural feature, which created similar pressures in distinct nodes and allowed for identical lines of development to take place. While the incentive for the development may be reconstructed to the ancestral node, the result of the development cannot. The development of adverbial subordinators, as outlined here, shows that despite structural similarities in adverbial subordination among the Semitic languages, it is unlikely that this pattern is reconstructable to the proto language. Rather, I have suggested that the stimulus, a type of relative clause, is responsible for the development independently in each node. The case outlined here also shows that parallel development can occur multiple times in situations in which the cause for the development is still part of the synchronic grammar. The arguments in this article are not intended to deny that syntax can be reconstructed on the basis of cognate pattern, but rather to supply evidence that this is not always the correct analysis.

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