Clitics

'Clitic' (from Greek κλίνειν 'incline, lean') is the term in traditional grammar for a word that cannot bear primary word stress and thus 'leans' on an adjacent stress-bearing word (the clitic host). A clitic leaning on a following word is a 'proclitic'; one leaning on a preceding word is an 'enclitic'. Clitics exhibit characteristics of both words and affixes and yet do not fall fully into either category: they are "like single-word syntactic constituents in that they function as heads, arguments, or modifiers within phrases, but like affixes in that they are 'dependent', in some way or another, on adjacent words" (Zwicky 1994:xii).

Arnold Zwicky, in his seminal study of clitics, identified three classes: special clitics, simple clitics, and bound words. Both special and simple clitics are unaccented bound variants of stresse-free morphemes; both types share the semantics and basic phonological core of their respective free forms, but special clitics differ with regard to syntax from their free forms, whereas simple clitics exhibit syntax identical to that of their free variants (1977:3–6). Bound words do not have a free variant: this type of clitic exists only in an unaccented form with another word serving as its attachment host. Zwicky notes that bound words are often "associated with an entire constituent while being phonologically attached to one word of this constituent" and are typically attached "at the margins of the word, standing outside even inflectional affixes" (1977:6).

Since many clitics exhibit an intriguing combination of both phonological and syntactic properties, their precise linguistic nature has been the subject of considerable study, first within the context of Indo-European philology and later, since the 1970s, within modern morphology and syntax. Jakob Wackernagel (1892) is perhaps most famously associated with the early study of clitics, so much so that the category of clitics that must be placed in second position (that is, immediately after either the first syntactic constituent or the first phonological word, as with Greek δέ) of a clause is called 'Wackernagel clitics' (and his observation is sometimes referred to as 'Wackernagel's Law'). Nearly a century later, Judith Klavans (1985) concluded that clitics are "phrasal affixes" based on her observation that for some clitics the phonological host and syntactic host may be distinct.

A significant focus of the renewed interest in clitics since the 1970s has been the attempt to establish a typology of clitics, including their characteristics vis-à-vis words, on the one hand, and affixes, on the other (see, especially, the seminal contributions of Zwicky 1977; Zwicky and Pullum 1983; and Klavans 1982; 1985). For example, the typical word carries an independent accent, whereas the typical affix does not; in many languages the order of words varies without semantic difference, whereas affix order is fixed (and a different affix order results in different semantics); and affix placement is specified by morphological rules concerning what word class the affix may attach to, whereas word placement is governed by syntactic rules concerning phrasal categories rather than word classes (for more discussion see, among others, Zwicky 1977; Borer 2003; and Anderson 2005).

Where do clitics fit in the word-versus-affix distinctions? Since clitics often look more like affixes than words, Zwicky and Pullum (1983) focused on the clitic-versus-affix problem and identified six criteria for distinguishing the clitics from inflectional affixes:

1) whereas affixes may attach to a defined set of hosts (e.g., the Hebrew verbal suffixes תָּ- -tā̌, תְּ- -t, יתִּ- -tī are agreement morphs that affix only to the perfect verb), clitics are not as constrained concerning their phonological host—as 'phrasal affixes', clitics may attach to nouns, verbs, prepositions, etc.
2) clitics are productive; affixes are not: for a given clitic there is no expected host that is arbitrarily disallowed; in contrast, inflectional affixation, for example, can arbitrarily not apply, as with the lack of a clear past participle for 'to stride' (i.e., 'he has stridden?/strided?/strode?'; Pinker 1999:125).

3) morphological idiosyncrasies are not characteristic of clitics: whereas typical inflectional affixation paradigms may be interrupted by suppletion (e.g., שָׁתָה *šā̆tā̆* 'drink'/ הִשְׁקָה *hišqā̆* 'give a drink' and the monosyllabic–singular / bisyllabic–plural base variation in the Hebrew segholate nouns, → Segholates) or ablaut (e.g., English *foot/feet*, not **foots*), the attachment of clitics does not affect the host word in phonologically or morphologically unexpected ways.

4) semantic idiosyncrasies are not characteristic of clitics; when clitics attach to a host, the result is predictable, whereas inflectional affixes may combine with a host to produce a complex with an unpredictable meaning, such as when the affixation of the plural morpheme produces something other than a countable plural, e.g., דָּם *dā̆m* 'blood', but דָּמִים *dā̆mīm* 'blood-shed' (i.e., blood that has been spilled).

5) a clitic and host combination are not subject to syntactic rules, whereas words exhibiting affixation are treated as single syntactic items.

6) clitics can attach to material already containing clitics, but affixes cannot attach to material already containing clitics.

With the various characteristics and criteria above in mind, it becomes clear that there are a number of clitics (mostly proclitic) in pre-modern Hebrew, although the category as such has not yet been given adequate linguistic attention. Most obviously belonging to the category of clitic are the conjunction -וְ *wə-* (with its variant form *u-* before a syllable containing shewa or a labial consonant), the monoconsonantal prepositions -בְּ *bə-*, -כְּ *kə-*, and -לְ *lə-* (which have rarely used free forms, בְּמוֹ *bəmō*, כְּמוֹ *kəmō*, and לְמוֹ *ləmō*, respectively, and the interrogative -הֲ *hă-*. All these clitics satisfy the above criteria. The conjunction -וְ *wə-*, for example, (1) attaches to almost any type of word, (2) is not prevented from attaching to specific words, (3) has alternate forms under predictable phonological conditions (e.g., ־וּ *u-* before a labial consonant or syllable with shewa), but no exceptional suppletive forms, (4) does not have idiosyncratic meanings with certain hosts, (5) is best analyzed as a combination of syntactic categories, and (6) can attach to words already containing clitics. Though

displaying the syntactic independence of words, these forms are prosodically dependent on their host words, perhaps because they all have the basic form C(ə), which does not make up a full syllable in Hebrew (Dresher 2009). Their prosodic dependence is clearly signaled in the biblical consonantal text by the fact that they are always written as part of the following word, without the space that separates words from each other.

A number of other forms can be included in this category of clitics, though they exhibit the balance of syntactic independence and prosodic dependence less perfectly than the above: the article -הַ *ha-*, the bound variant -מִ *mi-* of the preposition מִן *min* (and its rare free form מִנִּי *minnī*), and the nominalizer -שֶׁ *šɛ-*. Some of these bound forms cause gemination of the initial consonant of their host word (*mid-dəva* 'than honey', *ham-mɛlɛk* 'the king', *šɛš-šā̆m* 'that there'); when the initial consonant cannot be geminated, the vowel in *ha-* and *mi-* lengthens (*mē-ʿēṣ* 'from a tree', *hā̆-ʿɛbɛd* 'the servant').

Beyond these items, the complexity of sorting out cliticization increases considerably.

Within the scope of commonly used biblical reference grammars, the identification of clitics is erratic. The classic reference grammar of GKC rarely describes any Hebrew items as clitics: the article -הַ *ha-* is described as a proclitic (1910:111) and the demonstrative זֶה *zɛ* is said to be "used as an enclitic" in certain cases (1910:442). The more recent grammars by Waltke and O'Connor (1990) and Joüon-Muraoka (2006) uses the term clitic more freely, although not always with the desired clarity. For instance, both grammars assert that Hebrew proclisis is marked in the Masoretic Text by the *maqqēp̄*, which is typical of monosyllabic prepositions and particles, such as the prepositions אֶל *ʾɛl* 'to', אֶת *ʾɛt* (determined direct object marker), עַד *ʿad* 'until', עִם *ʿim* 'with', מִן *min* 'from, than', פֶּן *pɛn* 'lest', the negative אַל *ʾal*, and the particle of entreaty נָא *nā̆* (Waltke and O'Connor 1990:64; Joüon and Muraoka 2006:53). Note that Waltke and O'Connor explicitly do not include the prepositions -בְּ *bə-*, -כְּ *kə-*, -לְ *lə-* in this category but classify them as "prefixes" (188–189; see, in contrast, Joüon-Muraoka 2006:100, note 1).

At the heart of the discussion about cliticization in Biblical Hebrew is the מַקֵּף *maqqēp̄* (–),

a graphemic sign much like a hypen that indicates that two or more orthographic words form a single prosodic word. Unlike the bound forms discussed above, most Biblical Hebrew clitics can appear either as independent prosodic words, separated by spaces in the consonantal text, or as prosodic clitics, indicated in the Masoretic text by a *maqqēp̄* that attaches them to a neighboring word. The apparently inconsistent use of the *maqqēp̄* (Joüon-Muraoka 2006:53–54) obscures a simple correlation between it and any pre-existing definition of the class of 'clitics': bound words (i.e., words that exhibit the construct form) are not always followed by a *maqqēp̄* and the *maqqēp̄* is occasionally used with words not normally identified as clitics, e.g., וַיְהִי־עֶרֶב *wa-yhī-ʿεrεb* 'and evening was' (Gen. 1.8), הִתְהַלֶּךְ־נֹחַ *hithallεk-Nōaḥ* 'Noah walked' (Gen. 6.9), and גֵּר־יָתוֹם וְאַלְמָנָה *gēr-yåṯōm wə-ʾalmånå* 'alien, orphan, and widow' (Deut. 27.19) (GKC 1910:63–64; Joüon-Muraoka 2006:54; Dresher 2009:106).

A key to unraveling the complexities regarding cliticization in Biblical Hebrew (at least, as it is represented in the Masoretic Text) is the recognition that cliticization in Tiberian Hebrew involves more than simply identifying words to classify as clitics. The principles governing *maqqēp̄* are integrated into the complex principles of phrasing that govern the distribution of the Tiberian 'accents' (Dresher 1994). Thus, cliticization is situated at the interface between word and phrase, and therefore involves general principles of phrasing as well as particular idiosyncrasies of lexical items (Dresher 2009:100).

Following Breuer (1982:155–172), we can identify three principle uses of *maqqēp̄*, and hence three categories of cliticization in Hebrew: small words, simplification of phrasing, and clash avoidance.

The first principle, small words, includes monosyllabic words that have a short vowel in a closed syllable. Breuer (1982:167) divides these words into two classes: those that are generally cliticized to any word, short or long, and those that are regularly cliticized only to short words (a word with fewer than two full syllables before the main stress). These words are shown in Table 1.

The 'small words' shown in (a) in Table 1 represent common function words and some

Table 1. Small words that have an inherent tendency to be cliticized (modified from Dresher 2009:101–102, based on Breuer 1982:167)

a. Small function words that can be cliticized to any word

אֵת *ʾεt* accusative particle, עַל *ʿal* 'on', אֶל *ʾεl* 'to', מִן *min* 'from', עַד *ʿad* 'until', עִם *ʿim* 'with', אִם *ʾim* 'if', אַל *ʾal* 'not', בַּל *bal* 'not', פֶּן *pεn* 'lest', אַף *ʾap̄* 'also', מַה *ma* 'what', כָּל *kål* 'all', בֶּן *bεn* 'son', בַּת *bat* 'daughter', עֵת *ʿet* 'time'

b. Small (mostly) content words that can be cliticized to short words

גַּם *gam* 'also', אַךְ *ʾak* 'but', רַק *raq* 'only', יַד *yad* 'hand', כַּף *kap̄* 'palm', עַם *ʿam* 'people', דָּם *dam* 'blood', דְּבַר *dəbar* 'word', הַר *har* 'mountain', שַׂר *śar* 'officer', גַּן *gan* 'garden', רַב *rab* 'great', חַג *ḥag* 'holiday', רַךְ *rak* 'soft', נְאָם *nəʾum* 'speech', אַף *ʾap̄* 'anger', מַס *mas* 'tax', גַּל *gal* 'heap', קַשׁ *qa* 'chaff', פַּת *pat* 'morsel', גַּת *gat* 'winepress', שֵׁן *šēn* 'tooth', חָק *ḥåq* 'statute', מָר *mår* 'myrrh', תָּם *tåm* 'integrity', תַּם *tam* 'complete', שַׁל *šal* 'remove', רַד *rad* 'to subdue', חַי *ḥay* 'life', אַתְּ *ʾat* 'you (fs.)', זֶה *zε* 'this', בְּעַד *bəʿad* 'for', נְקַם *nəqam* 'revenge', שְׁגַר *šəḡar* 'young of an animal', לְבֶן *ləben* 'white', מְלָךְ *məlåk* 'reign'

nouns like *bεn* 'son', *bat* 'daughter', and *ʿet* 'time' that might appear to be content words, but which are also used in contexts where their lexical meanings are attenuated or lost and take on a more functional cast. These words are typically proclitic even though they have corresponding free forms, that is, forms without a *maqqēp̄*, with their own accent, and often with a vowel change. The word *ma* 'what' has an open syllable and appears to be out of place in this list; however, it functions as if it has a closed syllable when cliticized because, like *min* 'from' and the clitics discussed above, it causes gemination of a following consonant. The words in (b) are mostly monosyllabic nouns whose tendency to cliticize depends on a variety of factors, including phonological weight, morphological/syntactic class, semantic function, and commonness (Dresher 2009:102; see 100–103 for further discussion of Breuer's list of small words). Some of these words are in the construct state; the relation between construct state and cliticization is complex, and is discussed further below.

The second principle, simplification of phrasing, concerns the reduction of disjunctive accents to produce a smoother phrasing (Cohen 1969:60; Breuer 1982:83–107; Dresher 1994:36–37). The third principle, clash avoidance, addresses the unexpected cliticization in cases like וַיְהִי־עֶרֶב *wa-yhī-ʿereḇ* 'and evening was' (Gen. 1.8). Cliticization is one of the strategies used to prevent a stress clash, which occurs between two words in the same phonological phrase when the first word has final stress and the second word has initial stress. If the first word ends in a superheavy syllable (a phonologically long vowel in a closed syllable), no clash is considered to occur (Dresher 2009:105; on stress clash and rhythmic retraction in Tiberian Hebrew see McCarthy 1979; Rappaport 1984; Revell 1987). In cases like וַיְהִי־עֶרֶב *wa-yhī-ʿereḇ*, the prosodic options to avoid the clash are either stress retraction or cliticization (the latter was the applied solution in Gen 1.8).

The final issue concerning cliticization is the status of words that occur in the construct state. Words in the construct are bound forms which would appear to be clitics by definition. The challenge, as indicated above, is that many such clear cases of cliticization are not marked by a *maqqēp̄*, which is the normal Masoretic indicator of a clitic. The phrase עַל־פְּנֵי הַמָּיִם *ʿal-pənē ham-mǎyim* 'on the surface of the water' (Gen. 1.2) is illustrative: the *maqqēp̄* signals the clitic status of the preposition עַל *ʿal* 'on', but the bound word פְּנֵי *pənē* 'surface' is not connected to its clitic host הַמָּיִם *ham-mǎyim* 'the water' by a *maqqēp̄*. Yet the clitic status of construct/bound forms is not only suggested by the examples that do appear with a *maqqēp̄*, e.g., אַדְמַת־קֹדֶשׁ *ʾadmaṯ-qōḏeš* 'land of holiness (= holy land)' (Exod. 3.5), but also by the vocalization differences between the free and bound forms: assuming an underlying /dabar/ for 'word', the free form, which has a primary word stress, דָּבָר *dāḇǎr* exhibits pretonic and tonic backing and raising ([a] to [ɑ̊], IPA [ɔ]), whereas the bound form דְּבַר *dəḇar* exhibits no tonic change, but pretonic reduction to *shewa*, suggesting that *originally* the form did not carry primary word stress. It may be that the explanation for the absence of the *maqqēp̄* in many construct forms is historical (so Dresher 1994:9, n. 10). At some point construct forms began to be reinterpreted syntactically (or mor-

phologically), rather than prosodically. That is, the Masoretic accents do not govern the appearance of construct forms. For a bound form, like דְּבַר *dəḇar*, that has an independent accent and no *maqqēp̄*, there must have been some lexical mark that indicated it was a clitic, and the phonology must have been sensitive to that, rather than to its prosodic status under the accents. Put differently, construct forms are partially fossilized prosodic clitics that are no longer necessarily real prosodic clitics. This suggests that the Masoretes themselves were not quite sure what to do with the bound forms—that the old system had broken down, but no new generalizations had emerged to replace it. Or perhaps the Masoretes inherited a system that resulted from the breakdown of the older one, where individual lexical items go their own way in the absence of a new generalization that would govern them.

In sum, using the principles and criteria deduced by those engaged in the typological study of clitics (e.g., Zwicky; Zwicky and Pullum; Klavans; Anderson) allows us to classify numerous function words in Biblical Hebrew as simple clitics, either attached directly to their host or connected with a *maqqēp̄* (see also Holmstedt 2010). However, it requires a bit more fluidity and perhaps (as described above) a historical perspective to account accurately both for the status of bound words and for those words that are unexpectedly cliticized (to avoid a stress clash). Whether an orthographic word is cliticized or not depends on a complex set of prosodic, phonological, and syntactic conditions. Further, as demonstrated in more detail by Dresher (2009:99), cliticization is intimately intertwined with the entire Tiberian prosodic system, and cannot be understood properly without taking into account the principles of phrasing.

R E F E R E N C E S

Anderson, Stephen R. 2005. *Aspects of the theory of clitics*. Oxford: Oxford University Press.

Anderson, Stephen R., and Arnold M. Zwicky. 2003. "Clitics: Overview". *International encyclopedia of linguistics, 2nd edition (e-reference edition)*, ed. by William J. Frawley. Oxford: Oxford University Press. (accessed 30 June 2010 http://www.oxford-linguistics.com.myaccess.library.utoronto.ca/entry?entry=t202.e0191)

Breuer, Mordecai. 1982. *The Biblical accents in the twenty-one books and in the three Books* (in Hebrew). Jerusalem: Mikhlala.

Caink, Andrew D. 2006. "Clitics". *Encyclopedia of language and linguistics, 2nd edition*, volume 2, ed. by Keith Brown, 491–495. Oxford: Elsevier.

Cohen, Miles B. 1969. *The system of accentuation in the Hebrew Bible*. Minneapolis, Minnesota: Milco.

Dresher, B. Elan. 1994. "The prosodic basis of the Tiberian Hebrew system of accents". *Language* 70:1–52.

——. 2009. "The word in Tiberian Hebrew". *The nature of the word: Essays in honor of Paul Kiparsky*, ed. by Kristin Hanson and Sharon Inkelas, 95–111. Cambridge, Massachussets: MIT Press.

GKC 1910 = Kautzsch, Emil (ed.). 1910. *Gesenius' Hebrew grammar*. Trans. by. A. E. Cowley. Oxford: Clarendon Press.

Holmstedt, Robert D. 2010. Review of *Morphologies of Africa and Asia*, edited by Alan S. Kaye. *Review of Biblical Literature* 6:4.

Joüon, Paul, and Takamitsu Muraoka. 2006. *A grammar of Biblical Hebrew*. Rev. ed. Rome: Pontifical Biblical Institute Press.

Klavans, Judith L. 1982. "Some problems in a theory of clitics". Bloomington, Indiana: University Linguistics Club.

——. 1985. "The independence of syntax and phonology in cliticization". *Language* 61:95–120.

McCarthy, John J. 1979. "Formal problems in Semitic phonology and morphology". PhD dissertation, MIT.

Pinker, Steven. 1999. *Word and rules: The ingredients of language*. New York: Basic Books.

Rappaport, Malka. 1984. "Issues in the phonology of Tiberian Hebrew". PhD dissertation, MIT.

Revell, E. J. 1987. *Nesiga (retraction of word stress) in Tiberian Hebrew* (Textos y estudios 'Cardenal Cisneros') Madrid: Instituto de Filologia, C.S.I.C.

Wackernagel, Jakob. 1892. "Über ein Gesetz der indogermanischen Wortstellung". *Indogermanische Forschungen* 1:333–436.

Waltke, Bruce K., and M. O'Connor. 1990. *An introduction to Biblical Hebrew syntax*. Winona Lake, Indiana: Eisenbrauns.

Zwicky, Arnold M. 1977. *On clitics*. Bloomington, Indiana: Indiana University Linguistics Club.

——. 1985. "Clitics and particles". *Language* 61:283–305.

——. 1994. "What is a clitic?" *Clitics: A comprehensive bibliography, 1892–1991*, ed. J. A. Nevis, B. D. Joseph, D. Wanner, and A. M. Zwicky, xii–xx. Amsterdam: John Benjamins.

Zwicky, Arnold M., and Geoffrey K. Pullum. 1983. "Cliticization vs. inflection: English N'T". *Language* 59:502–513.

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