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MODERN HEBREW STRESS: NO ESCAPE FROM EMERGENT IAMBS?

Idan Caspi: *i.caspi@uu.nl*
Utrecht University, Utrecht, the Netherlands

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ABSTRACT

Starting from the observation that stress assignment in Modern Hebrew (MH) is insensitive to syllable structure, I argue that an optimal analysis of the MH stress system must address three crucial factors that are intrinsic to this unstable system: (i) the early trochaic preference in MH-acquiring children (Adam & Bat-El, 2009), (ii) the paradox between universal principles (e.g., the Iambic–Trochaic Law) and the MH stress pattern (i.e., the occurrence of quantity-insensitive iambic feet), and (iii) the attested contemporary shift towards penultimate stress across the board (Bat-El, 2018). Through an examination of three previous Optimality-Theoretic analyses of MH stress - the trochaic analyses (Becker, 2002; Pariente & Bolozky, 2014) and the mixed analysis incorporating both iambic and trochaic feet (Graf & Ussishkin, 2003) - I conclude that an optimal analysis of the MH stress system must exhibit a degree of flexibility with respect to the predictions it generates. Accordingly, I show that the mixed-feet account captures these three factors in an optimal way.

1. INTRODUCTION

In Modern Hebrew (MH), stress is insensitive to syllable weight. That is, stress assignment does not distinguish syllabic structure: stress is attested independently on both light syllables (e.g., CV as in sim.lá 'dress') as well as heavy syllables (e.g., CVC as in ma.pál 'waterfall'). [1] This has led to the conclusion that MH is a quantity-insensitive system where light and heavy syllables are not contrasted (e.g., Bolozky, 1982; Bat-El, 1989; Graf, 1999). Importantly, it has been observed that the most frequent stress pattern in MH is final stress (e.g., Bat-El and Ben-David, 2025; Graf & Ussishkin, 2003). Specifically, final stress is treated as regular stress while all other cases such as penultimate stress are bound to a lexical specification of stress (see Graf, 2000). Thus, it is not surprising to find in the language minimal pairs such as the ones in Table 1.

These attested observations raise the question of how a system of stress in MH would look like given the insensitivity of stress to syllabic structure. One possible hypothesis, treating stress assignment as an exponent of lexical category membership (cf. Kiparsky, 1982; Inkelas, 2014), suggests a systematic stress

Table 1

Minimal pairs across lexical categories

Minimal pairs	Final stress	Penultimate stress
(a) V - V	ʁa. t͡s ú 'they wanted'	ʁá. t͡s u 'they ran'
(b) V - N	be.réχ 'he blessed'	bé.reχ 'knee'
(c) N - N	bo.kéʁ 'cowboy'	bó.keʁ 'morning'
(d) N - V	ʔo.ʁéχ 'length'	ʔó.ʁeχ 'he organizes'

pattern based on the lexical category of a word, where the class of words belonging to category X bears the stress pattern α whereas the class of words belonging to category Y bears the stress pattern β. However, the data in (1) refutes this hypothesis, showing instances within the same word category where stress position differs, regardless of syllable weight (compare (1a) or (1c) and (1b) or (1d)).

More crucially, the fact that MH stress is insensitive to syllable weight leads to a paradox between universal principles and the stress pattern observed in the language. Specifically, according to the so-called Iambic–Trochaic Law (I-T Law), a universal law proposed by Hayes (1995) that addresses foot patterns based on rhythmic principles as defined in (2), iambic feet such as the one in (2a), are predicted to be quantity-sensitive, whereas trochaic feet such as the one in (2b), are predicted to be quantity-insensitive.

(1) Iambic–Trochaic Law (Hayes, 1995, p. 80)

a. Elements contrasting in intensity naturally form groupings with initial prominence (i.e., trochees).
b. Elements contrasting in duration naturally form groupings with final prominence (i.e., iambs)

Table 2

Foot structures

(a) Iambic feet	(b) Trochaic feet
F [σ σs]	F [σs σ]

Given this state of affairs, the MH stress pattern becomes paradoxical, as it appears to conflict with the universal Iambic–Trochaic Law. In other words, MH is a quantity-insensitive system that nevertheless employs an iambic stress pattern. Therefore, I argue that MH stress system presents a theoretical challenge for phonological analysis. To reach a solution to this challenge, this paper explores three existing analyses in the framework of Optimality-Theory (Prince & Smolensky, 1993, 2004) of MH stress: the trochaic analyses of

Becker (2002) and Pariente and Bolozky (2014) and Graf and Ussishkin's (2003) mixed analysis incorporating both iambic and trochaic feet.

In this paper, I address the question of what the optimal analysis of the MH stress system is. Specifically, I claim that an optimal analysis must address three crucial factors of MH stress system: (i) the early trochaic preference in MH-acquiring children (Adam & Bat-El, 2009), (ii) the paradox between universal principles (e.g., I-T Law) and the MH stress pattern (i.e., the occurrence of quantity-insensitive iambic feet), and (iii) the attested contemporary shift towards penultimate stress across the board (Bat-El, 2018). I conclude that an optimal analysis of the MH stress system must exhibit a degree of flexibility with respect to the predictions it generates. Accordingly, I show that the mixed-feet account better captures the above three factors in an optimal way.

The paper is organized as follows: it first presents previous experimental data on the early trochaic preference during language acquisition (§2) and then examines the three analyses of MH stress (§3). The final section (§4) draws the conclusion that the mixed-feet account is more optimal than that of the trochaic.

2. EARLY TROCHAIC PREFERENCE

In contrast to the stress pattern found in MH where final stress is most frequent, a strong preference for penultimate stress (i.e., trochees) is attested in early stages of MH-acquiring children (Bat-El & Ben-David, 2025). Specifically, Adam and Bat-El (2007; 2009) conducted a longitudinal study and found that penultimate stress is predominately assigned in early stages of polysyllabic production. The shift from penultimate to final stress occurs gradually over the course of language acquisition.

Adam and Bat-El (2009) identified two strategies that all MH-acquiring children they studied adopted to avoid the frequent final stress pattern. The first strategy is to truncate polysyllabic productions to monosyllabic productions. The second strategy is to shift stress away from the final to penultimate position. An example of the strategies is shown in Table 3:

Table 3

Children's strategies for targets with final stress

Target word	Truncation	Stress shift
li.ʃón 'to sleep'	ʃon	jí.ʃon
kaʁ.náf 'rhino'	naf	á.naf

Note. Adapted from "Hebrew stress: Back to the future," by O. Bat-El, 2018, *Acta Linguistica Academica,* 65(1), p. 14.

Thus, in terms of foot types, in early stages of speech production, there is a clear preference for trochees. That is, given the fact that MH is quantity-insensitive, this early trochaic preference aligns with the I-T Law. However, the most frequent stress pattern in MH is final and thus the observed gradual shift of MH-acquiring children from the universal preferred trochaic pattern towards the more frequent iambic pattern is part of meeting the phonological constraint of assigning stress to the right-most syllable in MH (e.g., Bat-El & Ben-David, 2025).

Given the experimental results above, an optimal phonological analysis of MH stress system must account for both the early preference of trochees and the current inconsistency of the system with universal principles (T-I Law). In the next sections, I examine the predictions of three previous analyses of MH stress system against the above findings.

3. PREVIOUS ANALYSES OF MODERN HEBREW STRESS SYSTEM

As briefly discussed in the previous sections, MH is an iambic system on the surface that cannot be iambic according to metrical theory. This irregular behavior does not align with the universal I-T Law. Thus, MH stress is taken to be a rare example of a mismatch between frequency and universal principles. In the literature, there are three different analyses that aim to solve the mismatch puzzle; two analyses predict a purely trochaic system (Becker, 2002; Pariente & Bolozky, 2014) whereas the other analysis predicts emergent iambs (Graf & Ussishkin, 2003). The analyses differ regarding their prediction of foot structure.

In this section, I compare the three analyses within the nominal paradigm. This paradigm better reflects the irregularity of the system than that of verbs where stress is more systematic (Bat-El, 2018). The three analyses are situated within the framework of Optimality Theory (Prince & Smolensky, 1993, 2004; McCarthy & Prince, 1993). I will begin with a general introduction of this framework and its core notions that are relevant for the proposed analyses.

3.1. Optimality-theoretic notions

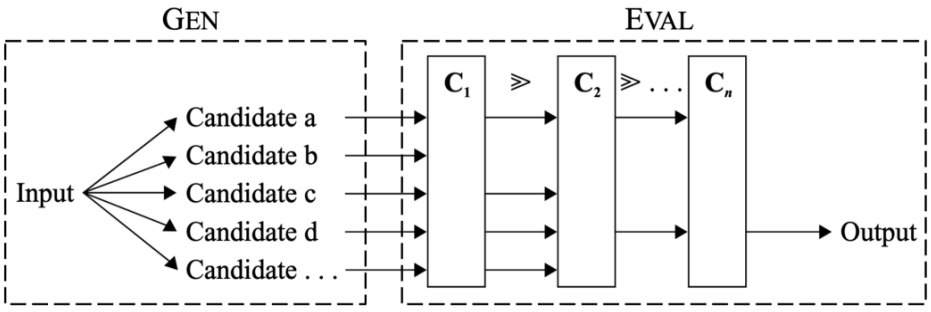
OPTIMALITY-THEORY (henceforth OT; Prince & Smolensky, 1993, 2004; McCarthy & Prince, 1993) is a constraint-based framework in which well-formed outputs are selected through the hierarchical ranking of violable constraints. For expositional purposes, I will outline how an OT grammar generally works along with the conventionalized notations which are later used in the subsequent OT analyses.

An OT grammar involves the process of pairing an input form with precisely one output form. This process is achieved through the combination of the following two components: (a) GEN (the generator) and (b) EVAL (the evaluator). GEN applies to an input and generates a set of candidates that correspond to a list of possible output forms of that input. In turn, EVAL is responsible for selecting the optimal candidate from the relevant set by applying a language-specific constraint hierarchy. As such, an output candidate is optimal relative to other competing candidates in the set when it is associated with the least serious violations of the hierarchically ranked constraints.

The hierarchical relation that gives rise to the ranking of constraints is that of domination, marked with the notation ≫. For example, the hierarchy C1 ≫ C2 is read as C1 dominates C2, namely that constraint C1 is ranked higher than C2. A schematic illustration of the OT procedure is given in (1):

Figure 1

An OT procedure



Note. Adapted from *Optimality Theory* (Vol. 10), by R. Kager, 1999, p. 8. Cambridge University Press

The OT procedure is usually demonstrated by a tableau, as in Figure 2. For a given input, a tableau lists vertically a set of possible output candidates in random order and hierarchically ranked constraints in descending order from left to right. If an output candidate violates a constraint, this is marked with '*'.

The optimal output candidate is conventionally marked with the index '☞'. Given the ranking C1 ≫ C2, this candidate is (2b), which has no violations of the higher-ranked constraint C1, a constraint violated by the

competing candidate (2a). Crucially, candidate (2b) violates constraint C2, but this constraint is ranked lower. Thus, relative to the competing candidate (2a), which has a fatal violation, marked as '*!', of the higher-ranked constraint C1, candidate (2b) only violates the lower-ranked constraint C2, making it the optimal candidate. The shaded cells represent potential violations that are no longer relevant for the selectional process of the optimal candidate.

Figure 2

An OT-based tableau

Input: /.../	C1	C2
a. Candidate a	*!	
☞ b. Candidate b		*

Finally, an important aspect relevant for the OT analyses of stress in MH in the subsequent sections is that of the lexicon. An input may include a lexically specified stress pattern that is stored in the lexicon accordingly. Such an input, together with its lexical specification, serves as the input to Gen. The preservation of this lexical specification is ensured in OT by ranking FAITHFULNESS CONSTRAINTS above MARKEDNESS CONSTRAINTS. FAITHFULNESS CONSTRAINTS require that the output preserve properties of the input (e.g., linear order of segments), whereas MARKEDNESS CONSTRAINTS require that the output satisfy conditions on structural well-formedness (e.g., syllables must have onsets). Having outlined the relevant OT background, I now turn to discussing the OT analyses of MH stress system.

3.2. The trochaic analyses

There are two trochaic analyses of the MH stress system: Becker (2002) and Pariente and Bolozky (2014). I will begin with Becker's (2002) analysis. According to Becker's (2002) proposal, MH stress system is trochaic and thus respects the universal I-T Law. To derive such a system, Becker takes into consideration not only the position of stress assignment but also the effect of high tones. More precisely, under this analysis a high tone is pronounced at the right edge of each trochaic foot. Becker (2002, p. 51) adopts the following constraints to account for the proposal that MH stress is a trochaic system:

(1) FIT-BIN
Feet must be binary under syllabic analysis.

(2) Foot-Form (TROCHAIC)
Feet must be left headed
Ft → [σs σw]Ft >> [σs]Ft

(3) NON-FINALITY
Feet must not be final, or
A High tone must not be pronounced finally.

To capture the fact that in MH penultimate stress is lexically specified and final stress is assigned otherwise, Becker (2002) adopts the constraint in (4) from Graf (2000). This constraint ensures faithfulness of the output form to the underlying (lexically specified) input form.

(4) MAX-HEAD-FT (MAX-HDFT)
Every input foot-head has a correspondent output foot-head.

Importantly, Becker argues that a high tone emerges on the stressed syllable or shifts to the one that follows it. However, if the latter is in a phrase final position, the high tone shift cannot occur. Thus, in the case of penultimate stress, the ranking Max-HdFt ⩾ Non-Finality ⩾ Trochaic ⩾ Fit-Bin results in the optimal output candidate that involves the formation of a degenerate foot (e.g., ha-[tíH]Ft.ʁas}Ph 'the-corn').
This is illustrated in the tableau in Figure (3). Specifically, while none of the candidates violate the faithful constraint (i.e., MAX-HDFT), candidates (d)-(e) as well as (b) have a fatal violation of the high-ranked constraint of Non-Finality by having their feet final or high tone final. The left candidates (a) and (c) both respect the higher-ranking constraints of MAX-HDFT as well as NON-FINALITY but candidate (a) has a fatal violation of the Trochaic constraint by having its foot misaligned. In contrast, candidate (c) with the degenerate foot is the only candidate that violates the lowest constraint in the hierarchy (i.e., FIT-BIN) and thus it is selected as the optimal candidate. [2]

Figure 3

An OT-based tableau

F Input: /ha-tíʁas/	MAX-HDFT	NON-FINALITY	TROCHAIC	FIT-BIN
F a. [ha.tí^{H}]ʁas			*!	
F b. [ha.tí]ʁas^{H}		*!	*	
F ☞ c. ha[tí^{H}]ʁas				*
F d. ha[tí^{H}.ʁas]		*!		
F e. ha[tí.ʁas^{H}]		**!		

In case of final stress, the analysis occurs again at the phrasal level and distinguishes between the formation of foot in phrase final (5a) and phrase medial (5b) positions illustrating that stress is assigned to the lexical word (LW) rather than to the prosodic word (PrWd).

(5) a. ha sim.lá^{H} 'The dress'
b. ha sim.[lá ha^{H}]Ft katana 'The small dress' (lit. the dress the small)

In (5b), the binary trochee, marked by a high tone at its right edge, incorporates a vowel that belongs to the PrWd rather than being part of the lexical noun (see table 4). Under the principles of the Prosodic Hierarchy (Selkirk, 2014), feet must be properly contained in PrWds. Thus, it follows that the PrWd must contain the syllable that has the high tone on it as well.
To assign final stress without resorting to iambic feet (e.g., [sim.lá]$_{Ft}$), Becker (2002) adds the constraint of FINAL-STRESS that forces the alignment of the right edge of the lexical word (LW, R) with the right edge of a foot head (σs, R). Consequently, the ranking FINAL-STRESS ⩾ NON-FINALITY leads to the violation of NON-

FINALITY when the word with final stress is in phrase final position. Then, the ranking of TROCHAIC ≫ FT-BIN favours the formation of a degenerate foot. Accordingly, the optimal candidate with the degenerate foot is selected (e.g., sim[lá]$_{Ft}$}$_{Ph}$).

Given the ranking FINAL-STRESS ≫ NON-FINALITY ≫ TROCHAIC ≫ FT-BIN , we are expected to have the *unmarked* binary trochaic feet as well as the *marked* stressed degenerate foot concerning (a) the positions of stress (final/penult.) and (b) high tones in phrase final and phrase medial positions. A summary of the optimal candidates that Becker's (2002) trochaic system predicts is presented schematically in (7).

Table 4

Becker's (2002) predictions

Stress Pattern	Phrase Final	Phrase Medial
Final	F σ [σ$_s$^{H}]$_{Ft}$}$_{Ph}$ e.g. sim[lá^H]$_{Ft}$}$_{Ph}$	F (… σ (σ [σ$_s$)$_{LW}$ σ^H]$_{Ft}$ …)$_{PrWd}$ e.g. (ha (sim[lá)$_{LW}$ ha^H]$_{Ft}$ …)$_{PrWd}$
Penultimate	F [σ$_s$^{H}]$_{Ft}$ σ}$_{Ph}$ e.g. [tí^H]$_{Ft}$ ʁas}$_{Ph}$	F (…([σ$_s$ σ^H]$_{Ft}$)$_{LW}$ σ …)$_{PrWd}$ e.g. (…([tí.ʁas^H]$_{Ft}$)$_{LW}$ σ…)$_{PrWd}$

Pariente & Bolozky (2014) also predict a trochaic system, but their account differs from Becker's (2002) in that it does not take into consideration the phrasal position of the input or high tones. Rather, in their system, the optimal output candidate with final stress involves the formation of a degenerate foot, whereas the optimal output candidate with penultimate stress involves the formation of a binary trochaic foot. For comparison, this is summarized in Table 5 for the same items I used in Becker's (2002) analysis.

Table 5

Pariente and Bolozky's (2014) predictions

Stress pattern	Optimal output candidates
Final	F σ [σ$_s$]$_{Ft}$ e.g. sim[lá]$_{Ft}$
Penultimate	F [σ$_s$ σ]$_{Ft}$ e.g. [tí.ʁas]$_{Ft}$

So far, I have discussed trochaic-based OT analyses of the MH stress system. In the next sections, I discuss Graf & Ussishkin's (2003) analysis, which does not assume an explicit trochaic system.

3.3. The mixed analysis

The other competing OT analysis makes no mention of the foot form. Instead, Graf & Ussishkin (2003) suggest an OT analysis involving the interaction of constraints on prosodic structure that naturally results in the emergence of both iambic and trochaic feet. In addition to the constraints of MAX-HDFT and FIT-BIN (see §3.2), their analysis includes the following constraints (Graf & Ussishkin, 2003, p. 255):

(1) AllFoot-Right
The right edge of every foot is aligned with the right edge of the prosodic word.

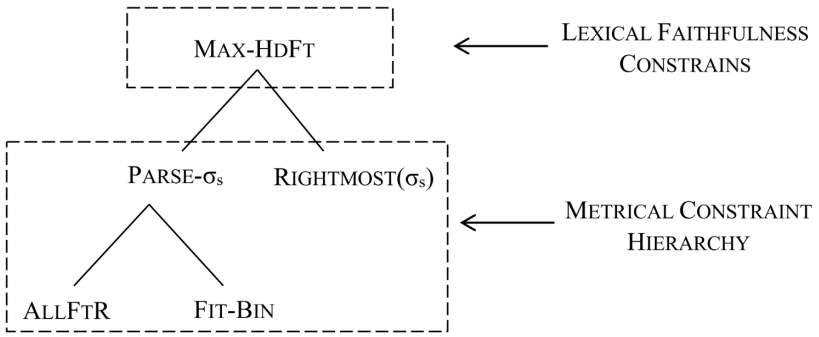
(2) Parse-σ_s
Every syllable is contained in a foot

(3) Rightmost(σ_s)
Align-R (σ_s; PrWd)
The main stressed syllable is final in the PrWd.

Instead of stipulating a foot-form constraint, as in the trochaic analyses in §3.2, Graf & Ussishkin (2003) propose that the headedness of feet (iambic or trochaic) is solely determined by a particular ranking of the above constraints. Specifically, to preserve lexically specified stress (e.g., penultimate stress in MH), they propose that Lexical Faithfulness Constraints such as Max-HdFt are ranked higher than constraints referring to alignment and prosodic well-formedness, which they label as Metrical Constraints Hierarchy. A summary of the hierarchical ranking of the constraints is given in Figure 4, which I sketch here as a Hasse diagram.

Figure 4

Hierarchical-ranking of Faithfulness Constrains ≫ Metrical Constraints



To illustrate how Graf & Ussishkin's (2003) analysis predicts emergent iambic and trochaic feet, I use the same bisyllabic forms as in the trochaic analyses in §3.3 for ease of comparison. For example, consider again the lexically specified form with penultimate stress such as tí.ʁas 'corn'. Given the constraint hierarchy from Figure 4, we obtain the tableau in Figure 5. [3] Candidates (a) and (d) violate a higher ranked lexical faithfulness constraint (i.e., Max-HdFt) by having their foot head misaligned with the lexically specified penultimate stress of the input. While both candidates (b) and (c) violate the lower ranked metrical constraints, candidate (b) is eventually selected because it violates fewer metrical constraints than candidate (c).

Moving to the assignment of final stress, consider the same hierarchy of the violable constraints from (4) and a noun like sim.lá 'dress'. This gives rise to the tableau in Figure 6. While none of the logically possible candidates violate the higher-ranking constraints of lexical faithfulness, candidates (b)-(d) violate the lower ranking metrical constraints. Specifically, both candidates (b) and (c) have fatal violations of Rightmost(σs). Unlike candidate (b), candidate (c) further violates additional lower-ranked metrical constraints. Candidate (d) has a fatal violation of the metrical constraint of Parse-σ_s in addition to its violation of Fit-Bin. The only candidate that does not violate any of the constraints is candidate (a). Therefore, candidate (a) with the iambic feet is selected.

Note that under Graf and Ussishkin's (2003) analysis, there is no need to postulate constraints that make explicit reference to foot structure. Rather, the correct optimal candidates are selected merely on the basis

of the constraint hierarchy Graf and Ussishkin (2003) propose in Figure (4). As such, iambic as well as trochaic foot emerge as a result of the hierarchical-ranking of the proposed constraints.

Figure 5

An OT-based tableau

F Input: /tíʁas/	MAX-HDFT	RIGHTMOST(σ_s)	PARSE-σ_s	ALLFTR	FIT-BIN
F a. [ti.ʁás]	*!				
F ☞b. [tí.ʁas]		*!			
F c. [tí]ʁas		*!	*	*	*
F d. ti[ʁás]	*!		*		*

Figure 6

An OT-based tableau

Input: /simla/	MAX-HDFT	RIGHTMOST(σ_s)	PARSE-σ_s	ALLFTR	FIT-BIN
F ☞a. [sim.lá]					
F b. [sím.la]		*!			
F c. [sím]la		*!	*	*	*
F d. sim[lá]			*!		*

3.4. The optimal analysis

In the previous sections, I discussed the predictions of different OT analyses of MH stress system. While Becker (2002) as well as Pariente & Bolozky (2014) propose a trochaic system, Graf & Ussishkin (2003) propose a system that generates both iambic and trochaic feet as emergent feet resulting exclusively from a particular hierarchical-ranking of constraints. The foot structure that each analysis predicts is summarized below.

All three analyses agree that feet must be syllabic, but they differ along some crucial lines. First, there are some differences between the two trochaic analyses. While Becker (2002) takes into consideration the phrasal position (medial/final) of the input as well as high tones, Pariente & Bolozky (2014) propose a trochaic system without considering such factors. Second, Graf & Ussishkin (2003) differ from both trochaic analyses in that in their system (a) feet must be binary and (b) iambic feet can emerge in the language.

In the reminder of this section, I will discuss the three analyses against the factors that are intrinsic to this unstable system: (i) the early trochaic preference in MH-acquiring children (Adam & Bat-El, 2009), (ii) the paradox between universal principles (e.g., the Iambic–Trochaic Law) and the MH stress pattern (i.e., the

occurrence of quantity-insensitive iambic feet), and (iii) the attested contemporary shift towards penultimate stress (Bat-El, 2018). By the law of parsimony, I will determine which analysis better accounts for these factors without resorting to a new OT analysis.

Table 6

Summary

Analysis	Proposed by	Penultimate	Final
Trochaic analyses	Becker (2002)	F F [tí^{H}]ʁas / [tí.ʁas^{H}]	F F sim[lá^{H}] / sim[lá σ^{H}]
	Pariente & Bolozky (2014)	F [tí.ʁas]	F sim[lá]
Mixed-analysis	Graf & Ussishkin (2003)	F [tí.ʁas]	F [sim.lá]

While the trochaic analyses align with the universal I-T Law and thus resolve the paradox between universal principles and the MH stress pattern (i.e., the occurrence of quantity-insensitive iambic feet), they face some undesirable consequences. First, a high tone shift in MH was not evident in an acoustic experiment in Cohen et al. (2018). Recall that high tones within the trochaic analysis of Becker (2002) generate highly marked structures (i.e., degenerate feet: $[\sigma_s]_{Ft}$). In the absence of experimental evidence of high tones in the language, Becker's (2002) trochaic analysis can be solely understood by means of theory-internal assumptions; a clearly undesirable outcome.

Further note that neither of the trochaic analyses accounts for the inconsistency of the current MH stress system nor the changes it advances as a result of that. More specifically, under the two trochaic analyses, MH acquiring children's early trochaic preference and their gradual shift to the frequent final stress pattern can be explained by their shift from the *unmarked* trochaic foot to the highly *marked* degenerate foot.

In addition, given Bat-El's (2018) premise that languages strive for regularity and naturalness, it is very likely that the current unsystematic MH stress system undergoes a change regarding its stress pattern (i.e., the attested contemporary shift towards penultimate stress; see Bat-El, 2018). However, both trochaic analyses may struggle to account for such a change due to the rigid predictions they generate since both allow exclusively for either a trochaic or degenerate foot.

Considering Graf & Ussishkin's (2003) mixed analysis of both emergent iambic and trochaic feet, the I-T Law becomes irrelevant since the mixed analysis does not predict a purely trochaic nor iambic system. Instead, iambic as well as trochaic feet emerge as a consequence of the hierarchical ranking of the proposed constraints, without resorting to marked structures such as degenerate feet. Thus, such a mixed system becomes more flexible with the optimal candidates it selects.

If both foot types (trochaic/iambic) are in principle available in the language, we can explain the early trochaic preference of MH-acquiring children explicitly: MH-acquiring children shift from an early preference for trochees to the more frequently attested iambs. Importantly, this account does not require positing a shift from unmarked to marked foot structures over the course of language acquisition, as would be necessary under a purely trochaic system such as that of Becker (2002) or Pariente & Bolozky (2014). Furthermore, such flexibility is essential for explaining ongoing changes in the currently unstable stress system. This is

particularly evident in the attested contemporary shift toward penultimate stress among adult MH speakers (Bat-El, 2018).

To conclude, the mixed analysis of Graf & Ussishkin (2003) better accounts for the crucial factors of the MH stress system than a purely trochaic analysis. Having shown that the relevant factors of the unstable MH stress system follow directly from a particular hierarchical-ranking of violable constraints, any analysis that posits either explicit foot-structure constraints or introduces additional constraints is unnecessary by the law of parsimony.

4. CONCLUDING REMARKS

The goal of the present paper was to examine which Optimality-theoretic analyses of Modern Hebrew stress system better capture crucial factors that are intrinsic to this unstable system: (i) the early trochaic preference in MH-acquiring children (Adam & Bat-El, 2009), (ii) the paradox between universal principles (e.g., the Iambic–Trochaic Law) and the MH stress pattern (i.e., the occurrence of quantity-insensitive iambic feet), and (iii) the attested contemporary shift towards penultimate stress across the board (Bat-El, 2018).

I examined the predictions of the trochaic analyses of Becker (2002) and Pariente & Bolozky (2014) and concluded that a purely trochaic system resolves the apparent paradox between the Modern Hebrew stress pattern and universal principles (see factor (ii)). However, this comes at the cost of generating predictions that are too rigid to account for language change, both during acquisition and in the adult grammar (factors (i) and (ii)). I then considered the predictions of the mixed analysis of Graf & Ussishkin (2003). This analysis shows that a particular hierarchical-ranking of violable constraints yields the natural emergence of both trochaic and iambic feet. As a result, it better accounts for the language change-related factors (i.e., (i) and (ii)) and resolves the paradox by rendering the I–T Law irrelevant, since it does not predict a purely trochaic or a purely iambic system.

Importantly, what I hope to have shown here is that the relevant factors of the unstable MH stress system follow directly from a particular hierarchical-ranking of violable constraints in the sense of Graf & Ussishkin (2003). Accordingly, resorting to a rigid trochaic system or assuming additional foot-structure constraints becomes redundant.

ADDITIONAL INFORMATION AND DECLARATIONS

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FOOTNOTES

1. Throughout this paper the following abbreviations are used: C – consonant, V – vowel or verb, σ – syllable, σ_s – stressed syllable. Other abbreviations and notations are mentioned explicitly in text.

2. For illustrative purposes, only candidates that respect the faithful constraint under discussion are mentioned. Furthermore, throughout the discussion on all previous OT analyses only the crucial constraints that are relevant for the selection of the optimal candidate are mentioned. See the original sources of each analysis for the fuller picture.

3. Dashed lines in OT tableaus represent that the two constraints are hierarchically-ranked with respect to one another. See Kager (1999).

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