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A Critical Response to "Persian Vowel Harmony Without Exceptionality: A Reply to Jam"

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ABSTRACT

Critiquing research papers is an essential component of scholarly advancement, provided that it is undertaken meticulously, considering the relevant theoretical framework and adhering to professional and ethical decorum to avoid disrespecting researchers' academic credibility. This rejoinder constitutes a response to the critique by Pirhayati (2025) concerning the present author's paper entitled "Vowel Harmony in Persian," published in *Lingua* in 2020. The issues that the critic discusses include comments on vowel harmony in the Persian imperative structures, particularly exceptionality, constraint rankings, prenasal raising, and the phonological representation of English loanwords in Persian, as well as some additional criticisms. The purpose of this rejoinder is to address all criticisms raised in that critique, providing detailed and scholarly responses to each point—with explicit reference to the topics discussed by the critic—in order to clarify the analyses presented in Jam (2020) and to dispel potential ambiguities.

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1. Introduction

Following the publication of "Vowel Harmony in Persian" in the journal *Lingua* (2020), Ali Pirhayati (2025), an Assistant Professor in the Department of English Language at Lorestan University, offered a critique of the study in the Journal of *Research in Western Iranian Languages and Dialects* (Issue 3). This rejoinder outlines the criticisms raised in Pirhayati's critique and provides detailed, evidence-based responses, with explicit reference to the relevant sections of his analysis.

2. Criticisms and Responses

2.1 Vowel Harmony in Imperatives

In Jam (2020), it is observed—drawing upon several prior studies—that vowel harmony occurs between the imperative morpheme /e/ and the stem vowel /o/ in certain Persian verbs. For the sake of consistency, this rejoinder retains the original numbering from the 2020 article; the following data, presented as example (6) in the original study, illustrate this phonological process.

6. a)

/be-do/ → ['bodo] 'Run!'
/be-con/ → ['bokon] 'Do it!'
/be-coʃ/ → ['bokoʃ] 'Kill it!'
/be-χor/ → ['boχor] 'Eat!'
/be-ro/ → ['boro] 'Go!'

Following the data presentation and analysis in Section 2.1.2 in Jam (2020), titled "Exceptionality," the author highlights the absence of this process in the imperative form /bedozd/ ('steal!') as an exception. This exceptional pattern is attributed to the low frequency of /bedozd/ among Persian native speakers. The author further notes that, to the best of his knowledge, Optimality Theory (henceforth OT) lacks a formal mechanism to account for candidate evaluation based on lexical frequency. Consequently, this phenomenon was analyzed using Lexically Specific Constraints (Pater, 2006, 2008), a well-established framework for addressing exceptions within OT. The relevant data and analysis are provided in Tableau 22 of the critique under discussion.

Tableau 22. Application & Exceptional Non-Application of Backness Harmony

Input	Output	IDENT [-back]$_L$	*Dp-Right	AGREE [+back, -high]	IDENT [-back]
be.do	a.i. ☞ ['bo.do]				*
	a.ii. ['be.do]			*!	
	a.iii. ['be.de]		*!		
be.dozd$_L$	b.i. ☞ ['be.dozd]			*	
	b.ii. ['be.dezd]		*!		
	b.iii. ['bo.dozd]	*!			*

The critic rejects the characterization of /bedozd/ as an exception to vowel harmony, asserting that, contrary to the present author's argument, OT provides several mechanisms for evaluating candidates based on frequency. Among the sources cited in support of this claim, he only mentions Sloos (2013) without providing any detail. However, due to the difficult content of Sloos's study, the critic fails to offer a detailed explanation of how lexical frequency is integrated into the evaluative mechanisms of OT.

To clarify, Sloos (2013) uses the term "frequency" to denote variation—defined as instances where a phonological process fails to apply across similar contexts (p. 13). This treatment of "frequency," however, differs fundamentally from the sense in which the present

author employs the term frequency of occurrence.

Continuing his discussion, the critic introduces a series of examples from the subjunctive mood—presented in (2)—as alleged counterexamples to the present author's analysis, asserting that vowel harmony does not occur in these forms either. On this basis, he argues that the present author's characterization of the imperative form "bedozd" as an exception is incorrect.

2. a) /be-dZonb-e/ "(if) he hurries"
   b) /be-ɣondZ-e/ "(if) it fits"
   c) /be-solf-e/ "(if) he pays"
   d) /be-torΣ-e/ "(if) it gets rancid"
   e) /be- ɣorχ-e/ "(if) he becomes terrified"
   f) /be-χoΣc-e/ "(if) it dries"

The critic argues that, following resyllabification, these verbs acquire a CVCC syllable structure (e.g., [be.dZonb.e]). He claims that, due to the superheavy nature of this syllable, the spread of the [+back] feature from the stem vowel /o/ to the subjunctive prefix vowel /e/ is blocked, thereby preventing vowel harmony. On this basis, the critic introduces a new constraint, $PROJECT_{(VCC)}$, defined as follows: Projection from vowels in verb stems with consonant clusters is prohibited.

Using this proposed constraint, the critic attempts to account for the absence of vowel harmony in the imperative form "bedozd," as shown in Tableau 1.

Tableau 1. Non-Application of Backness Harmony

Input: /be-dozd/	*$PROJECT_{(VCC)}$	*Dp-Right	AGREE [+back, -high]	IDENT [-back]
a. ☞ [bedozd]			*	
b. [bedezd]		*!		
c. [bodozd]	*!			*

Author's response: The critic's data and analysis present several methodological and analytical challenges. First, the inclusion of subjunctive examples as counterevidence to an analysis concerning imperative constructions is methodologically unsound. The relevant section of Jam (2020) explicitly addresses vowel harmony within imperative forms. Since subjunctive and imperative constructions differ structurally, they are not directly comparable in this context. To legitimately challenge an analysis, counterexamples must be drawn from the same empirical domain and dataset under consideration. Second, contrary to the critic's assertions, native speakers of Persian also produce examples (b) and (f) cited in (2) as [boɣondZe] and [boΞoΣce], respectively. These pronunciations directly contradict the claim that vowel harmony fails to occur in such contexts. Third, the critic's resyllabification analysis is fundamentally flawed. In these forms, contrary to his proposal, resyllabification involves the transfer of the second consonant in the cluster from the coda of the stem syllable to the empty onset of the following syllable containing the suffix /e/. For instance, following resyllabification, the input /be.dʒonb.e/ changes to the output [be.dʒom.be]. In fact, the initial CVCC syllable structure shifts to CVC.CV through the process of declusterization. Once declusterization occurs, even assuming the validity of the constraint $PROJECT_{(VCC)}$, there remains no consonant cluster whose "superheavy" structure could plausibly inhibit the spread of the [+back] feature from the stem vowel /o/ to the prefix vowel /e/. This fundamental error undermines the critic's entire argument in Tableau 1.

The constraint PROJECT$_{(VCC)}$ proposed by the critic is unjustified, as it is not in line with the phonological or phonetic realities of Persian. The origin and formalization of this so-called constraint remain unclear. Notably, any constraint adopted from other languages or formalized within an OT framework to analyze Persian data must be phonologically or phonetically justified and must accurately reflect Persian's phonological or phonetic structure.

If, as the critic contends, feature spreading from a vowel preceding a consonant cluster to the vowel of an adjacent syllable is impossible in Persian, one must account for the fact that vowel harmony actually occurs in forms such as /foruΞt/ → [fu.ruΞt], /deraΞt/ → [daraΞt], /print/ → perint → [pi.rint], and /blond/ → belond → [bo.lond].

2.2 Constraint Rankings

The critic further challenges several constraint rankings proposed by Jam (2020); however, in his own Tableau 1—which incorporates the proposed PROJECT$_{(VCC)}$ constraint—no solid or dashed lines are provided to indicate dominance or co-ranking relationships. Notably, a tableau lacking such indicators cannot be interpreted within the OT framework and, consequently, lacks analytical validity.

In Tableau 31, the present author analyzes the feeding interaction in the English loanword "floride," where the insertion of /e/ feeds vowel harmony between this vowel and the vowel /o/.

Tableau 31. Feeding Interaction Between Epenthesis and Backness Harmony

Input: /flo.raid/	*COMPLEX^{ONS}	AGREE [+back, -high]	DEP	IDENT [-back]
a. ☞ [fo.lo.raid]			*	
b. [fe.lo.raid]		*!	*	
c. [flo.raid]	*!			

As shown in Tableau 31, the solid line between the constraints *COMPLEX^{ONS} and AGREE [+back, -high] indicates that the former dominates the latter. The critic disputes this ranking, arguing that the notion of the feeding interaction belongs to rule-based phonology and is irrelevant to constraint ranking in OT. Furthermore, he claims that, since no conflict exists between *COMPLEX^{ONS} and AGREE [+back, -high], the dominance relation is erroneous.

Author's response: The critic's objection stems from an oversight regarding the scope of feeding interactions. This concept is not confined to rule-based phonology; it is applicable across other phonological frameworks, including OT. Indeed, a cursory search for the term "feeding" in the Rutgers Optimality Archive (ROA) yields numerous studies that explicitly discuss feeding interactions within OT framework. Moreover, all OT researchers—the author included—are fully aware of the theoretical fact that in parallel OT, feeding relationships are not implemented via direct constraint ranking; specifically, when no conflict exists between two constraints, one does not necessarily dominate the other. However, in Tableau 31, the decision to rank *COMPLEX^{ONS} above AGREE [+back, –high] was intentional and illustrative. Since the outcome of the tableau remains unchanged whether these two constraints are co-ranked or hierarchically ordered, this ranking was introduced solely to demonstrate the mechanics of the feeding interaction. As the author explicitly states, since *COMPLEX^{ONS} becomes decisive prior to AGREE [+back, –high], he let the former outrank the latter.

The critic's claim: Due to the absence of conflict between IDENT[-back]^{L} and Dp-Right, ranking the former above the latter in Tableau 22 is erroneous.

Author's response: Within the framework of Lexically Specific Constraint Theory (Pater 2006, 2008), as applied in Jam (2020) to account for exceptionality, lexically indexed constraints always dominate general constraints. Therefore, the ranking of IDENT[-back]^{L} above Dp-Right is fully consistent with the theoretical assumptions of this framework.

The critic's claim: There is no conflict between Dp-Right and the AGREE constraint family. Thus, the dominance of the former over the latter in tableaux (40), (44), (48), (66), and (68) is incorrect.

Author's response: The AGREE constraints allow feature assimilation in all directions, whereas Dp-Right explicitly prohibits left-to-right assimilation. Therefore, in accordance with the Elsewhere Principle (Kiparsky, 1973)—which states that specific rules or operations take precedence over more general ones—Dp-Right must dominate *AGREE to block left-to-right feature spreading. Its role is to establish directional limits on assimilation at the outset of the evaluation. If the critic had considered the discussions of "directionality" in OT and the Elsewhere Principle, he would have rethought his comments.

2.3 Prenasal Raising

Prenasal raising is a salient phonological process in spoken Persian, wherein the low vowel /A/ is raised to the high vowel [u] when preceding nasal consonants. In Jam (2017), the present author conducted a comprehensive analysis of this process, encompassing its obligatory, optional, and exceptional instances.

The critic, however, disregards Jam (2017) and, by citing examples such as /mAmAn/ ('mom'), /livAn/ ('glass'), /rAnande/ ('driver'), and /tavAn/ ('ability')—lexical items in which prenasal raising does not occur—argues that the constraint *[A]N proposed in Jam (2020), which motivates prenasal raising, is invalid because the process fails to apply in these examples.

Author's response: Had the critic considered the analyses presented in Jam (2017), he would have realized that OT can adequately account for the absence of prenasal raising in words such as /mAmAn/, /livAn/, /rAnande/, and /tavAn/. The critic also overlooked a fundamental principle of phonological analysis: almost all phonological rules and processes exhibit some degree of variation, including instances of non-application. If the science of phonology were restricted solely to invariant rules, the discipline itself would lose its analytical depth. Indeed, research that addresses variation and exceptionality offers greater theoretical insight than studies limited to categorical application.

Derivation (82) in Jam (2020) demonstrates that the insertion of the intervocalic consonant [h] to resolve hiatus eliminates the phonological environment necessary for prenasal raising.

82. Counterfeeding interaction between prenasal raising and backness harmony

Input	/bɑ# am/
Hiatus resolution	bɑˈham
Pre-nasal raising	———
Backness harmony	bɑˈhɑm
Output	[bɑˈhɑm]

As shown in the input /bA#am/, the vowel /a/—rather than /A/—is adjacent to the nasal consonant /m/. Thereby, the context required for prenasal raising is not met. Hiatus is resolved by the insertion of [h] between /A/ and /a/, yielding [bA.hAm]. Subsequently, through vowel harmony, the [+back] feature spreads from the vowel /A/ in the preposition /bA/ ('with') to the vowel /a/ in the enclitic /am/, producing the output [bA.hAm]. Although the resulting form contains the context required for prenasal raising, the process does not apply to yield [bA.hum]. Within phonological theory, this pattern exemplifies opacity of the counterfeeding

type. The absence of prenasal raising in this example can be explained by the relative ordering of prenasal raising and vowel harmony. Empirically, prenasal raising typically feeds vowel harmony, rather than the reverse. For instance, Jam (2020) shows that in the word /kodAm/ ('which'), prenasal raising applies first to yield /kodum/, followed by vowel harmony, producing the surface form [kudum]. This ordering demonstrates that the prenasal raising rule precedes vowel harmony. Consequently, as illustrated in derivation (82), vowel harmony cannot trigger prenasal raising in [bɑ.hɑm] because a later rule cannot affect the application of an earlier one.

The critic, citing examples involving the negative prefix *nA*- such as /nAmahram/ ('non-mahram') and /nAmard/ ('backstabber'), invokes Sadeghi (2001) to argue that prenasal raising does not apply across morpheme boundaries. Furthermore, the critic asserts that the absence of prenasal raising in [bA.hɑm] is due to the presence of a morpheme boundary, thereby challenging the validity of the counterfeeding interaction described in Jam's (2020) Tableau 82 as non-factual!

Author's response: Sadeghi's (2001) observation that prenasal raising does not occur across morpheme boundaries is correct; the present author has never claimed otherwise. In the phonological representations of /nA#mahram/ and /nA#mard/, the vowel /A/ belongs to the prefix *nA*-, while the nasal consonant /m/ is shared by both stems /mahram/ and /mard/. In contrast, in the representation [bA.hAm], the sequence [Am] does not straddle a morpheme boundary; rather, it is a part of the modified morpheme [hAm], derived from the underlying form [ham]. Consequently, the critic's comparison is based on a misunderstanding of the morphological and phonological structures involved.

2.4 Phonological Representation of English Loanwords

Over the course of approximately two pages, the critic contends that employing the original English pronunciation as the input in Jam (2020) is theoretically unsound, appealing to issues of EFL, etymology, and word history. For instance, the critic questions why the English form /flæΣ/ (flash), which undergoes onset declusterization in Persian to yield [fe.lAΣ], is used as the input.

Author's response: First, the critic fails to support his claim with any theoretical framework or reference to relevant literature; thus, appears to reflect a subjective view rather than an evidence-based argument. Second, the use of the original English pronunciation as the phonological input in Jam (2020) is firmly grounded in the Phonological Stance Model proposed by Calabrese and Wetzels (2009). According to this model, the phonological representation of a loanword in the borrowing language corresponds to its pronunciation in the source language. This representation is subsequently adapted through language-specific phonological processes, producing the surface (phonetic) form observed in the borrowing language. Calabrese and Wetzels (2009) further argue that for bilingual speakers proficient in both the source and target languages, loanwords are stored in the mental lexicon with their original pronunciation. When these words are produced in the borrowing language, they are subject to the phonological and grammatical constraints of that language, resulting in "nativization-through-production." Jam (2020) explicitly applied this theoretical stance (p. 8).

2.5 Additional Criticism

On page 107 of the critique, the critic abruptly asserts that deriving linguistic rules through analogical comparison between two dialects or two languages constitutes a "peculiar but common error" among Iranian linguists, explicitly citing some of the present author's prior works in this regard. Drawing on Tabibzadeh (2021), the critic claims that such practices generate "imaginary rules" that are absent from the phonological systems of the languages in question.

Author's response: Jam (2020) does not address dialectal or regional variation; it focuses exclusively on Standard Persian. Most importantly, the blanket dismissal of the author's other publications without citing specific works or providing textual evidence is methodologically disputable.

2.6 Response to Critic's Section: "Other Minor Mistakes in Jam's Paper"

In a section of the critique, titled "Other minor mistakes in Jam's paper," the critic highlights several issues and omissions in items (11), (44), (48), (49), (52), (53), and (68) of Jam (2020).

Author's response: It is evident that all the issues identified by the critic are purely typographical in nature. For instance, the omission of a point in one of the tableaux—subsequently addressed in the accompanying analysis below—clearly indicates that no substantive analytical or interpretive error occurred, a fact the critic himself acknowledges in one or two instances. Although the manuscript underwent a rigorous peer-review process at *Lingua*, the subsequent editing and publication stages—overseen by editorial staff—were executed with less meticulousness. Despite multiple exchanges between the author and the editorial team to ensure a final version with minimal typographical errors, the version ultimately published on the journal's website was an earlier draft containing numerous typographical inconsistencies, such as missing or substituted sections and irregular font formatting.

Critic's comment: In items (23), (27), and Tableau 31, regarding the transcription of the word [folorAid], the vowel [i] is used instead of the consonant [j].

Author's response: In all other instances, this author consistently employed the consonant [j]. The use of the vowel [i] in the word [folorAid] was a deliberate and theoretically motivated choice. The English diphthong [Ai] and the Persian [Aj] are phonetically equivalent in pronunciation. In the adaptation of English /florAid/ into Persian [folorAid], the final syllable does not participate in the relevant phonological processes. Therefore, the English /i/ was intentionally retained as [i] in Persian, rather than being represented as [j], in order to avoid drawing analytical attention to a segment that is irrelevant to the processes under examination—specifically, vowel insertion and vowel harmony.

Critic's comment: In (23), the word /perAjd/ in Persian is shown as having the meaning "pride." However, this word is exclusively a well-known car brand in Iran and does not carry the meaning of "pride" in standard Persian.

Author's response: In (23), the English words listed alongside their Persian phonological representations (e.g., pride) are not intended to indicate their semantic equivalence or meaning in Persian. Rather, they serve purely to illustrate how English lexical items are phonologically adapted and realized in Persian.

23.

Persian pronunciation		Persian pronunciation	
[pe.ˈɾɑid]	'pride'	[be.ˈlɑc]	'block'
[pe.ˈlej]	'play'	[te.ɾɑ.ʒe.ˈdi]	'tragedy'
[pe.lɑs.ˈtic]	'plastic'	[te.ˈɾɑc]	'track'
[ce.ˈlɑdʒ]	'clutch'	[fe.ˈlaʃ]	'flash'
[te.ˈɾɑn]	'train'	[fe.ˈlɑsc]	'flask'
[te.ɾɑc.ˈtor]	'tractor'	[pe.lɑs.ˈmɑ]	'plasma'
[ce.ˈlɑs]	'class'	[de.ˈɾɑiv]	'drive'
[be.ˈɾɑnd]	'brand'	[ce.ˈɾɑc]	'crack'

Critic's comment: Constraint AGREE [+back, +low] and Tableau 70 should follow the format of previous tableaux and constraints; however, they have been truncated without any explaining.

Tableau 70. Translaryngeal Harmony Between /e/ and /ɑ/

Input: /reʃ.te.hɑ/	AGREE [+back, +low]	IDENT[-back]
a. ☞ [reʃ.tɑ.hɑ] [+back, +low]		*
b. [reʃ.te.hɑ] [+back, +low]	*!	

Author's response: Contrary to the critic's assertion, the AGREE [+back, +low] constraint is not dwindled in scope. Rather, it is more complex than previous single-feature constraints, as it simultaneously governs agreement in two distinct features. Furthermore, the reduction of Tableau 70 to only two candidates—(a) and (b)—arises directly from the dual-feature structure of this constraint. When both [+back] and [+low] features spread from the back, low vowel [A] to the non-back, mid vowel [e], the latter is necessarily realized as [A], thereby excluding the possibility of alternative vowel outcomes. Consequently, no additional candidates could be presented in this tableau.

Critic's comment: The words in (73) and (76) should have an initial glottal stop in their phonetic forms.

73.

/az# am/→ [ˈazam] 'from me'	/az# emɑn/ → [aˈzamun] 'from us'
/az# at/ → [ˈazat] 'from you'	/az# etɑn/ → [aˈzatun] 'from you'
/az# aʃ/ → [ˈazaʃ] 'from him/her'	/az# eʃɑn/ → [aˈzaʃun] 'from them'

76. Height Harmony Between the Preposition 'az' and a Plural Enclitic

Input. /az# etɑn/	Align [+low]	DEP	IDENT [height]
a. ☞ [aˈzatun] [+low]		*	**
b. [aˈzetɑn] [+low]	*!		

Author's response: Given the present author's in-depth analysis of the glottal stop in Persian in Jam (2019), the glottal stop was initially included in the representations of items (73) and in Tableau 76, evidenced by the presence of the anti-insertion faithfulness constraint DEP. However, following a reviewer's recommendation during the paper's prior peer-review process, the glottal stop was removed to maintain the analytical focus exclusively on the process of vowel harmony. This modification was therefore intentional and theoretically motivated, rather than an omission or oversight.

Critic's comment: In Tableau 85, the candidate (c) should be *[bA'ham].

Tableau 85. Backness Harmony Between Preposition bɑ and a Singular Enclitic

Input /bɑ# am/	Align [+back]	IDENT [height] Enc	DEP	IDENT [-back]	IDENT [height]
a. ☞ [bɑ'hɑm] [+back]			*	*	*
b. [bɑ'hum] [+back]		*!	*	*	*
c. [bɑ'am] [+back]	*!				

Author's response: As illustrated in Tableau 85, candidate (c) represents the faithful option—that is, a representation identical to the input, undergoing no phonological modification. In OT tableaux, the inclusion of the faithful candidate is obligatory. Therefore, the form presented in Tableau 85 is consistent with established OT methodology.

2.7 Response to Criticisms in the Conclusion Section

Critic's comment: Linear phonological rules have been conflated with OT constraints in Jam (2020).

Author's response: This assertion is incorrect. No integration of linear phonological rules with OT constraints occurs in Jam (2020). If the critic is referring to the illustrative use of derivational ordering of phonological processes, it should be emphasized that such representations are a well-established analytical tool in OT research. Employing derivational ordering to facilitate the explanation of complex derivations to clarify interactions among phonological processes is rather common in OT works.

The critic claims that Jam (2020) assumes unjustified rules in Persian phonology and misidentifies counterexamples for certain constraints. However, as no specific instances or textual evidence were provided to support these claims, it is difficult to offer a targeted or meaningful response. Generalized assertions should be supported by textual evidence in order to constitute a valid scholarly criticism. In that case, they can be meaningfully addressed.

3. Author's Concluding Remarks

Critiquing research papers is an essential component of scholarly advancement, provided that it is undertaken by individuals possessing demonstrable expertise in the relevant theoretical framework and conducted with adherence to professional and ethical decorum to avoid disrespecting researchers' academic credibility.

OT comprises a diverse array of sub-theories and analytical models, each of which requires extensive training and familiarity. Research conducted within the OT framework demands careful study, theoretical precision, and engagement with specialist literature. Consequently, a profound familiarity with OT is essential for both authoring research papers and critiquing scholarly works grounded in this theory.

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The author declares no conflicts of interest related to this research.

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