VOWEL HARMONY AND ITS DISCONTENTS: RETHINKING URALIC SOUND SYMBOLISM

Madina Rafiqova
2nd-year student, Majoring in Philology and
Language Teaching at Kokand University, Andijan Branch
madinabonu0630@gmail.com
https://doi.org/10.5281/zenodo.21761713

Abstract: Vowel harmony has long served as one of the defining typological features of the Uralic languages, treated primarily as a matter of phonological patterning: the co-occurrence restrictions that require suffix vowels to agree in backness, and sometimes rounding, with the vowels of a word's root. This article argues that the near-exclusive framing of Uralic vowel harmony as a structural or morphophonological phenomenon has obscured a second, underexamined dimension of the same system: its role in sound-symbolic meaning-making. Drawing on comparative evidence from Finnish, Estonian, Hungarian, and smaller Finno-Ugric languages such as Mari and Udmurt, the article traces a persistent, cross-linguistic association between front-vowel harmony classes and concepts of smallness, closeness, and diminution, and between back-vowel classes and largeness, distance, and augmentation. This association recurs in expressive vocabulary, diminutive morphology, and child-directed speech across genetically related but geographically dispersed Uralic languages, in patterns too consistent to be dismissed as coincidental borrowing or independent onomatopoeic invention. The article reviews the iconicity and sound-symbolism literature developed largely outside Uralic studies, and asks why this literature has had so little uptake among Uralicists, who have generally treated harmony as an arbitrary phonological rule rather than as a system with residual semantic motivation. Rather than claiming that vowel harmony originated as a symbolic system, the article proposes a more modest and defensible thesis: that an originally phonological harmony system has, in certain lexical domains, been recruited and reinforced by iconic association, producing a synchronic layer of sound symbolism that coexists with, rather than replaces, the system's morphophonological function. The discussion considers the methodological obstacles to testing this claim and outlines a comparative research agenda for Uralic linguistics going forward.

Keywords: Vowel harmony, Uralic languages, sound symbolism, iconicity, phonaesthesia, Finno-Ugric, diminutives, Finnish, Hungarian, comparative linguistics.

Introduction

Vowel harmony is among the most frequently cited typological hallmarks of the Uralic language family, discussed in virtually every grammar of Finnish, Estonian, and Hungarian, and treated in the theoretical phonology literature as a paradigm case of long-distance featural agreement. In its standard description, harmony is a co-occurrence restriction: within a native word, vowels are drawn either from a "front" set or a "back" set, with certain "neutral" vowels able to combine with either, and suffixes typically alternate in form to match the harmonic class of the root they attach to. This pattern is usually explained, and rightly so, as a matter of phonological structure — a constraint on possible vowel sequences that operates independently of what a word means.

This article does not challenge that structural account. Instead, it asks a question that the structural account, by design, sets aside: whether the front–back distinction that harmony enforces has also come to carry meaning of its own, beyond its grammatical function. The

question is not new to phonology in general — the broader literature on sound symbolism, from Sapir's early experimental work through the modern iconicity research surveyed by Hinton, Nichols, and Ohala, has repeatedly found that front vowels are cross-linguistically associated with smallness and back vowels with largeness, in contexts ranging from nonsense-word experiments to naturally occurring diminutive morphology. What is comparatively unexplored is whether the Uralic languages, whose harmony systems make the front–back distinction unusually salient and pervasive, show a correspondingly strong version of this association, and whether that association can be documented systematically rather than anecdotally.

This article assembles comparative evidence from across the Uralic family to argue that such an association is real, recurrent, and worth taking seriously as an object of study in its own right. It reviews why Uralic linguistics, despite its long engagement with harmony as a structural phenomenon, has largely not engaged with the sound-symbolism literature, and it proposes that this is a disciplinary gap rather than a reflection of the absence of relevant patterns in the data. The remainder of the article develops this argument through a review of the existing literature, a discussion of representative evidence, a description of the comparative method used, and a set of results and their implications for future research.

Literature Review

The phonological description of Uralic vowel harmony is extensive and well established. Classic treatments of Finnish and Hungarian harmony, along with later generative and Optimality-Theoretic accounts by scholars such as Ringen and Vago, have modeled harmony as a matter of featural spreading or output-oriented constraint satisfaction, with little attention to semantic correlates. Comparative Uralic phonology, exemplified by the work of Sammallahti on Proto-Uralic reconstruction, situates harmony within the family's broader phonological history but likewise treats it as structurally, not semantically, motivated.

The sound-symbolism literature developed largely independently of Uralic studies. Sapir's early experiments linking vowel quality to perceived size established the basic front/small–back/large association that later work has replicated across unrelated language families. Hinton, Nichols, and Ohala's edited volume on sound symbolism remains the standard synthesis, documenting cross-linguistic patterns in diminutive and augmentative morphology that closely parallel the front–back distinction central to Uralic harmony. Ohala's work on the "frequency code" offers an articulatory-acoustic explanation for why front, high vowels are so often associated with smallness.

Despite this parallel, cross-citation between the two literatures is minimal. Uralicist phonology rarely engages the iconicity literature, and general sound-symbolism research rarely draws on Uralic data despite the family's unusually rich harmony systems, which would seem to make it a natural testing ground.

Main Body

The core empirical observation motivating this article is that, across several Uralic languages, front-harmonic vocabulary shows a statistically noticeable skew toward meanings of smallness, proximity, and affection, while back-harmonic vocabulary skews toward largeness, distance, and neutrality or coarseness. This pattern is clearest in expressive and diminutive vocabulary, the lexical domain where sound symbolism is generally expected to be strongest across languages regardless of family.

In Finnish, diminutive suffixation interacts with harmony in ways that are often treated as purely mechanical, since the suffix's own harmonic form is determined by the root. But

the deeper pattern is that a disproportionate number of expressive words denoting small creatures, close relationships, or affectionate address are independently front-harmonic at the root level, prior to any diminutive suffixation — a fact that a purely mechanical account of harmony does not predict, since root vowel choice is not itself governed by the suffix system. Words for small, delicate, or nearby referents recur with front-vowel roots at rates that merit systematic quantification rather than passing anecdote.

Hungarian offers a partially independent test case, since it belongs to a different branch of the Uralic family and has had a largely separate contact history from Finnish. Hungarian diminutive formation, like Finnish, is harmony-sensitive, and Hungarian child-directed and expressive vocabulary shows a similar, though not identical, skew toward front vowels in words denoting small size, endearment, or immediacy. Because Hungarian and Finnish are only distantly related and have been geographically separated for millennia, a shared skew of this kind is not easily explained by direct borrowing; it is more plausibly explained either by deep inheritance from a shared ancestral tendency or, more likely given the general cross-linguistic robustness of the front/small association, by independent but parallel recruitment of the same articulatory-acoustic iconicity documented in the general sound-symbolism literature.

Smaller Uralic languages provide a further, if less systematically studied, layer of evidence. Descriptions of expressive and ideophone-like vocabulary in Mari and Udmurt note similarly skewed distributions, though the descriptive grammars from which this evidence is drawn were rarely designed to test sound-symbolic hypotheses and typically report such patterns only in passing.

Two competing explanations must be weighed against each other. The first, a strong iconicity hypothesis, would hold that the front–back harmonic distinction is itself sound-symbolically motivated at some level, perhaps reflecting deep articulatory-acoustic associations that also shaped which vowel alternations became grammaticalized as harmony in the first place. The second, a weaker recruitment hypothesis, holds that harmony arose for independent phonological reasons and only subsequently became a convenient vehicle for expressive, iconic word formation, because it already provided a robust, transparent front–back contrast that speakers could exploit. The evidence assembled here cannot fully distinguish between these hypotheses, but it is more consistent with the weaker recruitment hypothesis, since the semantic skew is strongest precisely in the expressive and diminutive lexicon, the domain where iconic recruitment of existing phonological contrasts is well attested cross-linguistically, rather than being uniformly distributed across the vocabulary as the strong hypothesis might predict.

Research Methodology

This article adopts a qualitative comparative-lexical methodology, appropriate to an initial mapping of a pattern rather than a definitive quantitative test. The core method involved compiling representative wordlists from Finnish, Estonian, Hungarian, and, where descriptive material allowed, Mari and Udmurt, focusing on three semantic domains chosen because they are the domains in which sound symbolism is most robustly attested cross-linguistically: diminutive and augmentative vocabulary, kinship and endearment terms, and basic vocabulary for size and distance. For each domain, words were classified by their root-level harmonic class (front, back, or neutral-vowel) using standard reference grammars and dictionaries for each language, and the resulting distributions were compared against the languages' overall front/back vocabulary ratios to identify whether the target domains showed a meaningful skew relative to the lexicon as a whole.

This method has clear limitations that must be stated directly. Wordlists were compiled from available grammars and dictionaries rather than from balanced corpora, introducing

selection effects that a corpus-based frequency study would avoid. The smaller Uralic languages are represented by thinner and less standardized descriptive material than Finnish or Hungarian, limiting the reliability of comparisons involving them. No formal statistical significance testing was performed, given the exploratory nature of the wordlists; the results reported below should therefore be read as indicative patterns warranting further quantitative investigation rather than as confirmed statistical findings. The methodology is best understood as a first comparative survey intended to justify a more rigorous, corpus-based follow-up study.

Results

The comparative survey found a consistent skew toward front-harmonic roots in diminutive, endearment, and small-size vocabulary across Finnish, Estonian, and Hungarian, with the skew most pronounced in diminutive and endearment terms and somewhat weaker, though still present, in basic size and distance vocabulary. Back-harmonic roots were correspondingly overrepresented in augmentative and large-size vocabulary, though this skew was generally less pronounced than the front-vowel skew observed for smallness and closeness, consistent with cross-linguistic findings that the front/small association tends to be stronger than the back/large association.

The pattern held independently in Finnish and Hungarian despite their distant relationship and separate contact histories, which weakens the possibility that the skew reflects recent inter-language borrowing rather than either deep inheritance or independent parallel recruitment. Evidence from Mari and Udmurt, while less systematically comparable, was broadly consistent with the pattern found in Finnish and Hungarian, though the thinner descriptive record for these languages limits confidence in the strength of the association.

Neutral-vowel roots, which are compatible with either harmonic class under most Uralic harmony systems, did not show a comparably strong semantic skew in any of the languages surveyed, which is consistent with the recruitment hypothesis, since neutral vowels do not participate as actively in the harmonic contrast that the proposed iconic association is built upon.

Discussion

The consistency of the front/small–back/large skew across genetically related but geographically and historically separated Uralic languages supports treating Uralic vowel harmony as a system that has been at least partly recruited for sound-symbolic purposes in specific lexical domains, without requiring the stronger and harder-to-support claim that harmony itself originated as an iconic system. This finding situates Uralic data within, rather than apart from, the broader cross-linguistic sound-symbolism literature, and it suggests that Uralicists' general inattention to this literature has left a genuine empirical pattern underexplored.

The results also have implications for how harmony is taught and described pedagogically and typologically. Presenting harmony purely as an arbitrary morphophonological rule, as most grammars do, is phonologically accurate but incomplete as an account of how the system is exploited by speakers in expressive and child-directed registers, where the front–back contrast appears to carry real, if informal, semantic weight.

The weaker recruitment hypothesis favored by the results is also the more cautious and defensible position given the data's limitations. A stronger claim about the origins of harmony itself would require reconstructive evidence from Proto-Uralic expressive vocabulary that is not reliably available, given the fragmentary nature of the reconstructed lexicon in exactly the semantic domains where sound symbolism is expected to be strongest.

Conclusion

This article has argued that Uralic vowel harmony, despite its long-standing treatment as a purely structural phonological phenomenon, shows a consistent and cross-linguistically recurrent association between its front-vowel class and meanings of smallness, closeness, and endearment, and between its back-vowel class and meanings of largeness and distance. This association is most visible in diminutive, endearment, and basic size vocabulary across Finnish, Estonian, and Hungarian, and is corroborated, more tentatively, by evidence from Mari and Udmurt. The pattern is best explained not as evidence that harmony originated as a symbolic system, but as evidence that an independently motivated phonological contrast has been recruited by speakers, in specific expressive domains, to carry iconic meaning consistent with well-documented cross-linguistic tendencies in sound symbolism.

The broader significance of this argument is disciplinary as much as empirical. Uralic phonology and general sound-symbolism research have developed along largely separate tracks, despite the fact that Uralic harmony systems would seem to offer unusually favorable conditions for testing iconicity hypotheses, given how pervasively and transparently they mark a front–back contrast across the lexicon. This article's comparative survey, while methodologically preliminary, indicates that the gap between these literatures is a matter of disciplinary habit rather than an absence of relevant patterns in the data.

Future research should move from the qualitative wordlist comparison used here toward corpus-based frequency analysis, ideally supplemented by psycholinguistic experiments testing whether contemporary speakers of Uralic languages still perceive front- and back-harmonic nonsense words as differing in implied size, in the manner long documented for unrelated language families. Reconstructive work aimed at recovering expressive vocabulary in Proto-Uralic or its major daughter branches, however fragmentary, would also help distinguish more confidently between the weaker recruitment hypothesis favored here and stronger claims about the symbolic origins of harmony itself. Until such work is undertaken, the present article's more modest claim stands: that vowel harmony in the Uralic languages is not semantically inert, and that treating it as such has left a genuine and tractable pattern in the data unexamined.

References

1. Hinton, L., Nichols, J., & Ohala, J. J. (Eds.). (1994). Sound Symbolism. Cambridge University Press.
2. Ohala, J. J. (1994). The frequency code underlies the sound-symbolic use of voice pitch. In L. Hinton, J. Nichols, & J. J. Ohala (Eds.), Sound Symbolism (pp. 325–347). Cambridge University Press.
3. Ringen, C., & Vago, R. M. (1998). Hungarian vowel harmony in Optimality Theory. Phonology, 15(3), 393–416.
4. Sammallahti, P. (1988). Historical phonology of the Uralic languages. In D. Sinor (Ed.), The Uralic Languages: Description, History and Foreign Influences (pp. 478–554). Brill.
5. Sapir, E. (1929). A study in phonetic symbolism. Journal of Experimental Psychology, 12(3), 225–239.
6. Suomi, K., Toivanen, J., & Ylitalo, R. (2008). Finnish Sound Structure: Phonetics, Phonology, Phonotactics and Prosody. University of Oulu.
7. Vago, R. M. (1980). The Sound Pattern of Hungarian. Georgetown University Press.
8. Zsigri, G. (1998). Vowel Harmony: A Comparison of Segmental and Autosegmental Approaches. JATE Press.