

The Musical Foregrounding Hypothesis (0085)

How Music Influences the Perception of Sung Language

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Abstract

The question how music influences the perception of sung language is rather complicated. There are indications that music enhances lyric perception, but also that it obstructs it. Sometimes we are deeply moved by lyrics, sometimes we don't even hear them.



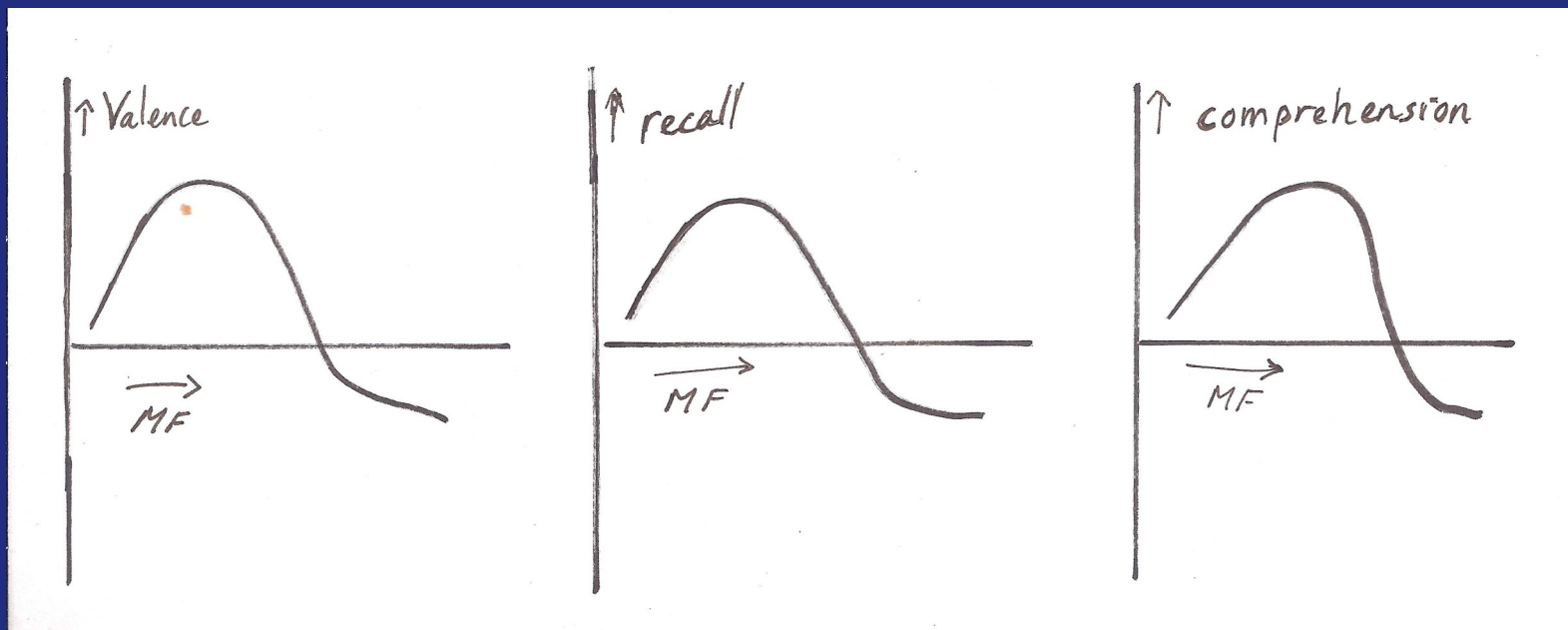
The linguistic concept of foregrounding, might be helpful to understand this paradoxical process. Foregrounding (the use of metaphors and parallelisms, etcetera) is supposed to draw attention to the language by obstructing normal understanding of it¹. The Musical Foregrounding Hypothesis (MFH) states that matching words to music has a similar, though much more complex, effect to language perception.

The Musical Foregrounding Hypothesis (MFH)

Matching words to music changes their sound and their temporal order, and connects them to other sounds. I will call this musical foregrounding (MF).

MF obstructs language perception in different ways and alienates the language, but by doing so draws attention to certain aspects of it at the same time.

There will be an inverted-U-shaped relationship between the amount of MF and comprehension, valence and recall, depending on the interpretability of the foregrounding.



Furthermore, MF affects the interpretation and the emotional contents of the words.

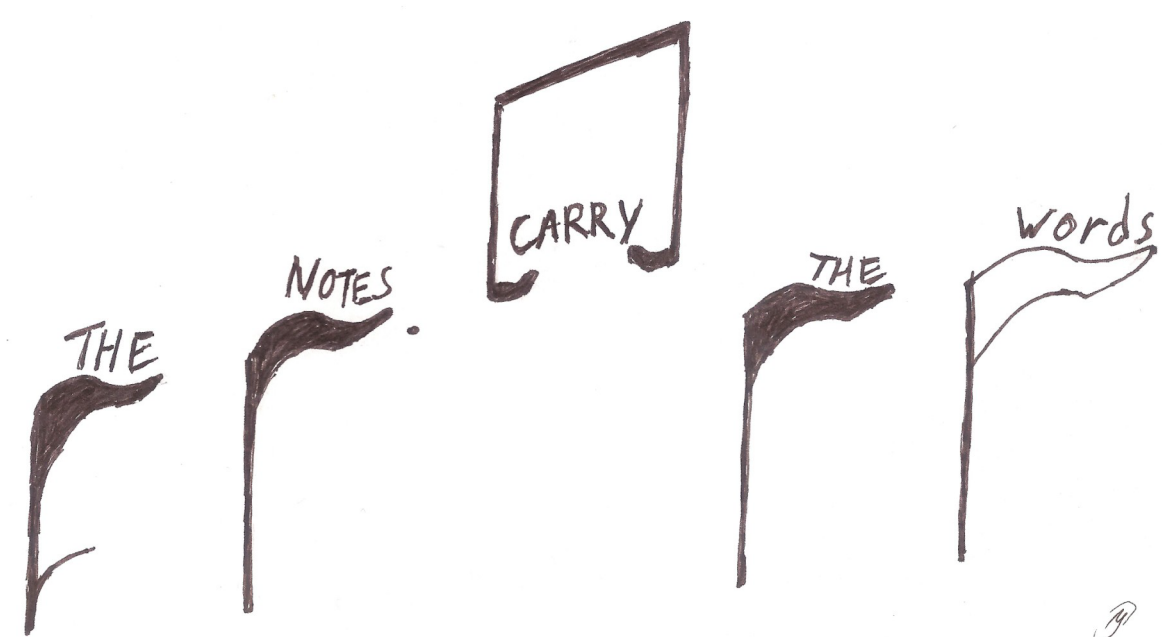
Sub-hypotheses and Support

Because of the complexity of music, the MFH leads to several sub-hypotheses. Such as:

* Music in song distracts attention from the words.



* Music will be interpreted, if possible, as linguistic prosody.* If well aligned it supports comprehension.



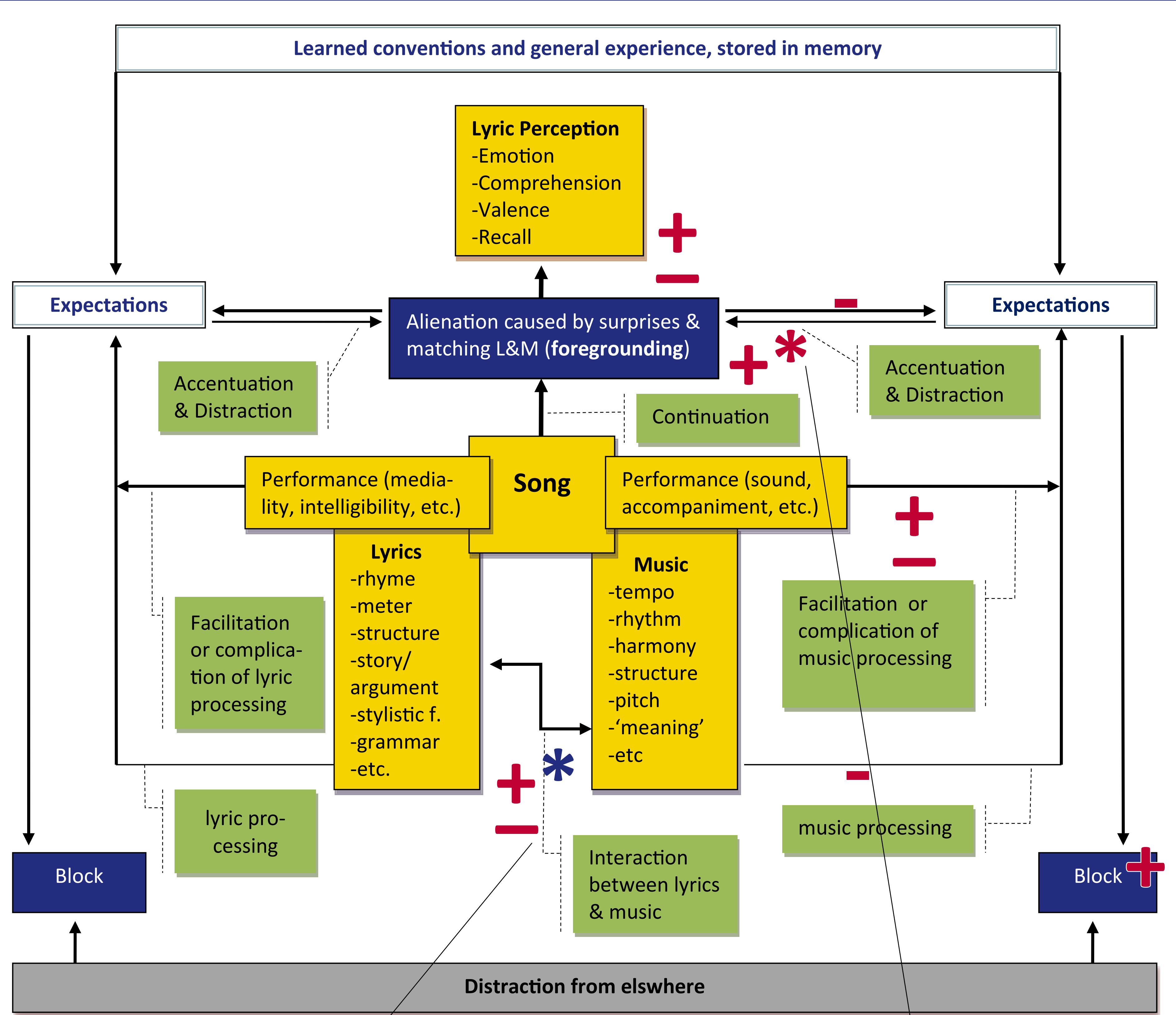
* Music and lyrics affect each other through song structure.*

* A song sung a capella will cause more foregrounding than a song accompanied by an instrument that defines rhythm and harmony.

Support for some of these sub-hypotheses is found in the existing literature, others should be tested².

An MFH-based model of lyric perception explains the relationship between the MFH and its sub-hypotheses.

An MFH-based model of lyric perception



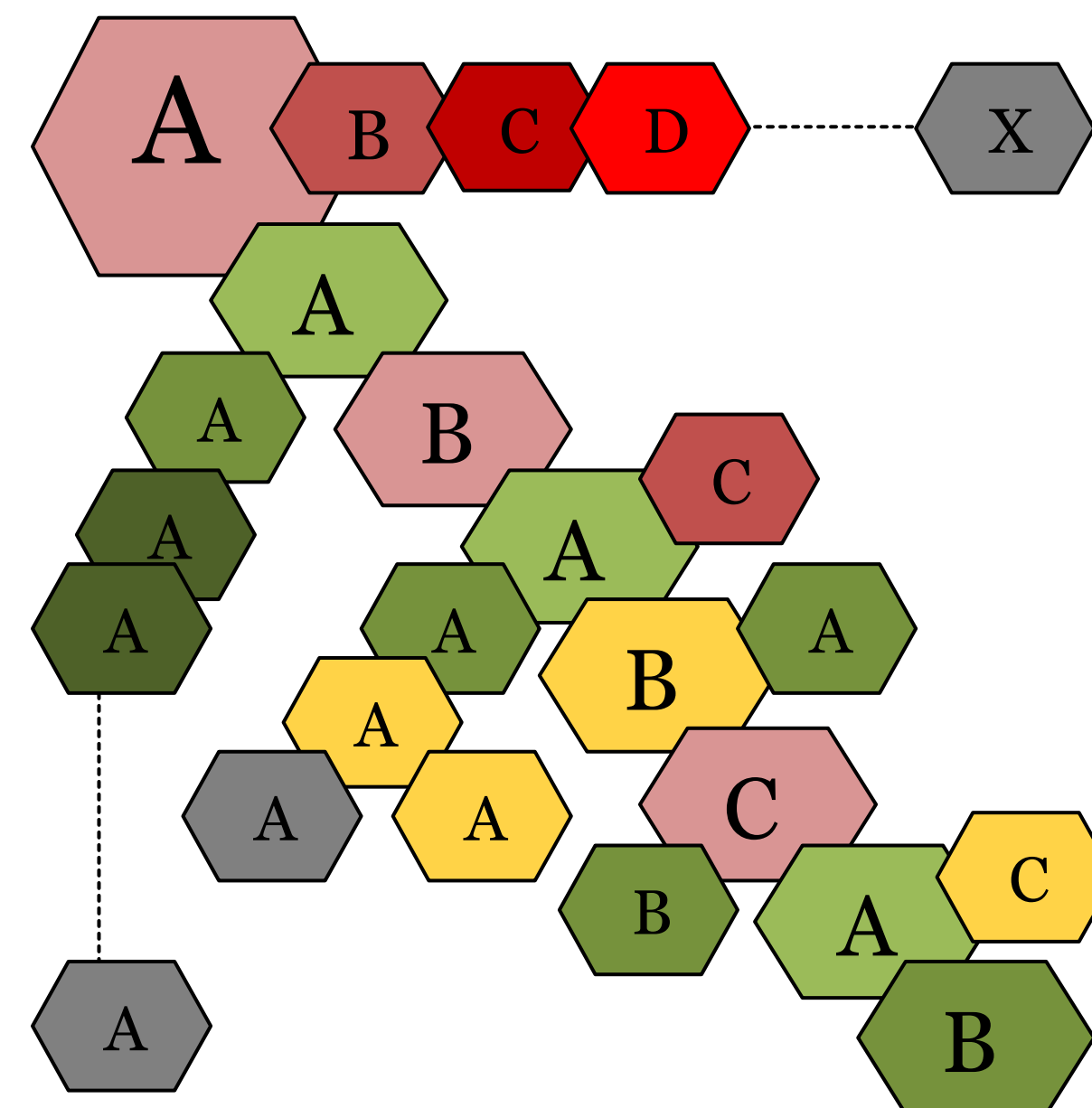
* Language and music affect each other through song structure

* Repetition is a core feature of music^{3, 4}, in language it is less accepted.
* Music is a balancing act between Repetition And Surprise (RAS-hypothesis).

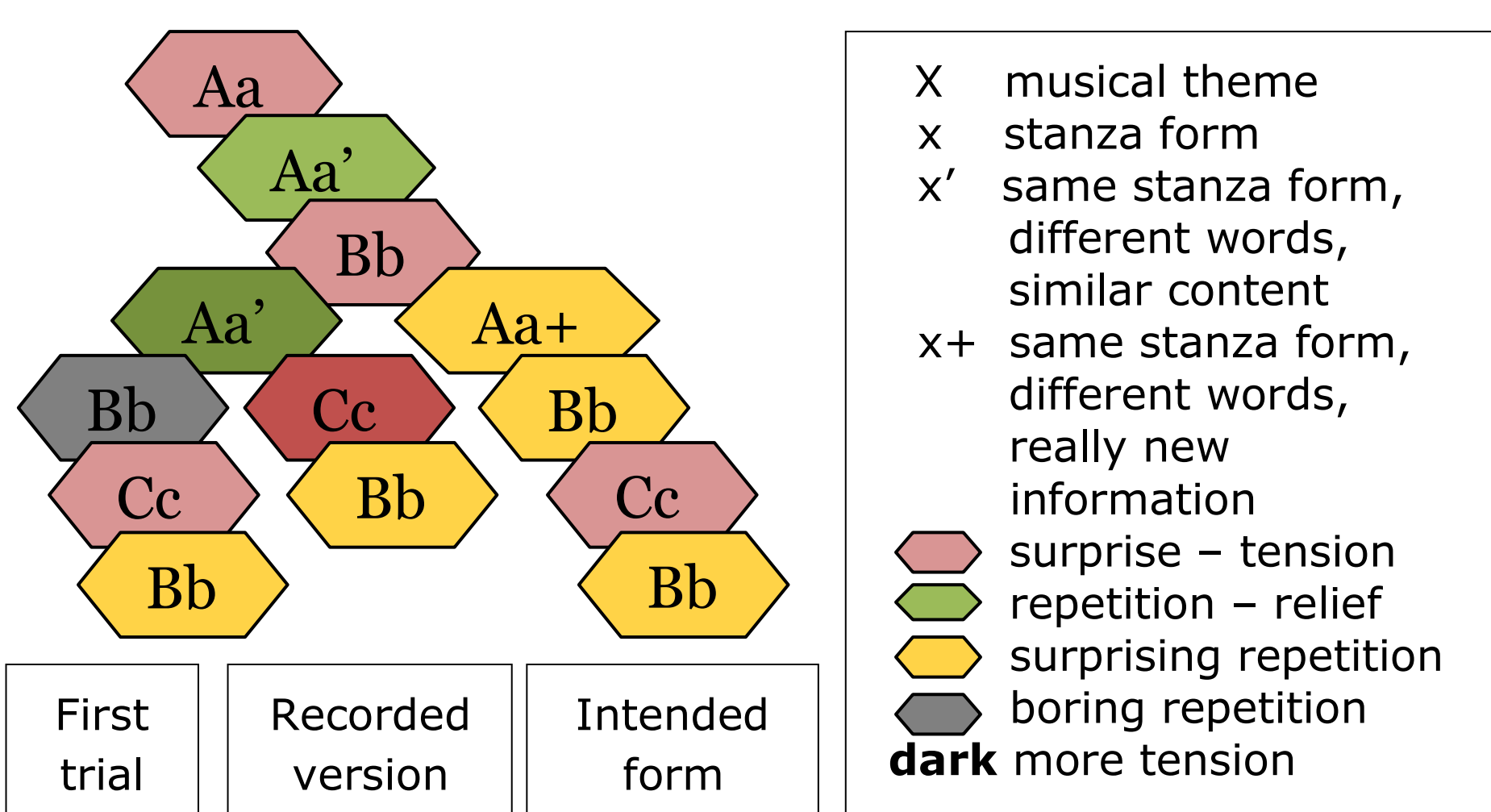
Therefore, music will make repetition more accepted in language, while language makes it less accepted in music.

* This might explain why listeners expect ABAB-alternations^{4, 5} in songs but AAA BBBB-clustering in instrumental music.

The illustration below shows how RAS & MFH predict tension, surprise and boredom in songs.



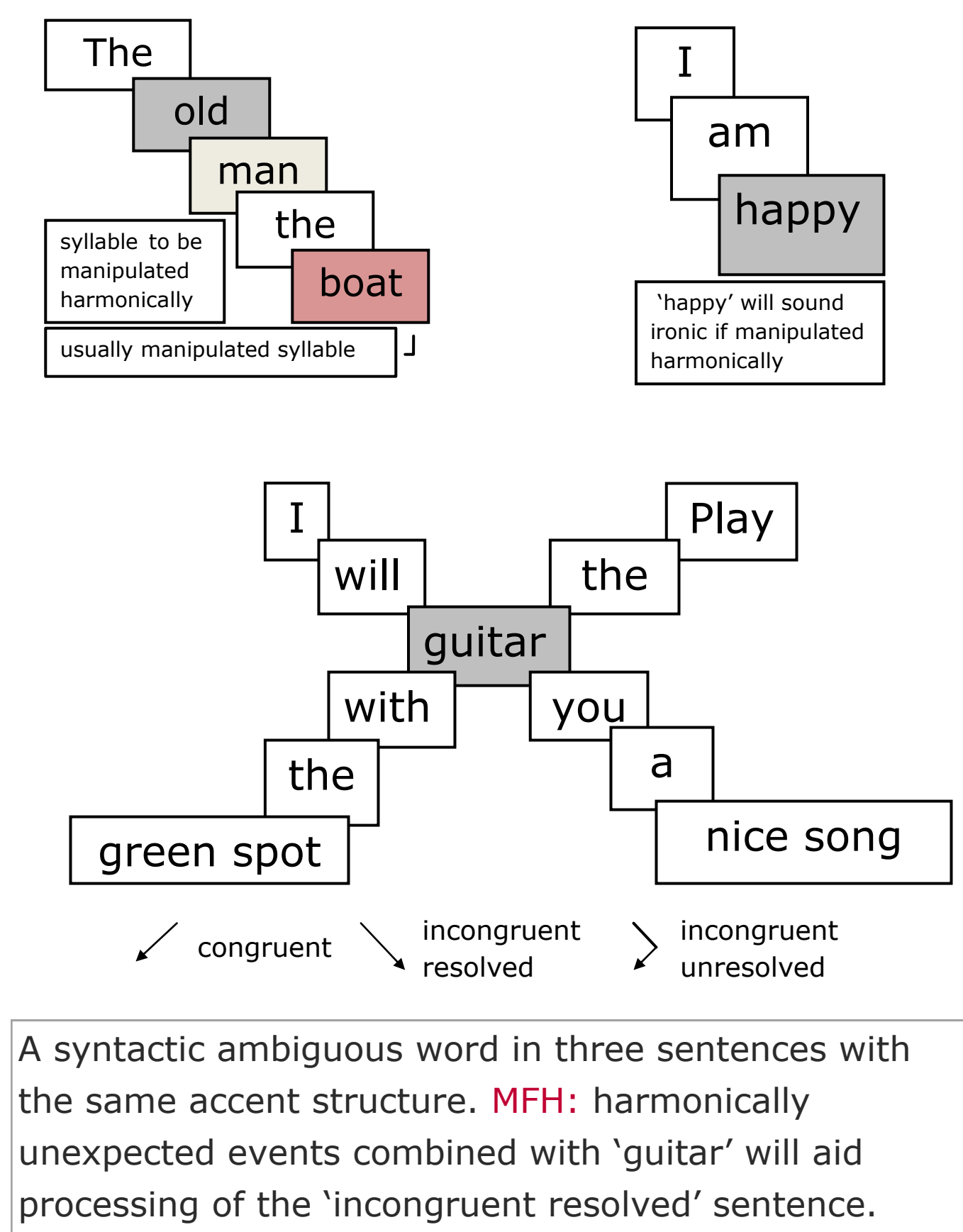
Lyrical content can further affect tension and boredom by adding new information to the song or not. This can be illustrated by the illustration below, based on Pattison's description of the three different versions of the song *Unanswered prayers*⁶⁽⁷¹⁻⁷⁵⁾. Here the third verse lacks really new information.



* Music will be interpreted, if possible, as linguistic prosody

* Processing of both musical and linguistic syntax affect each other^{7, 8}.
* Experiments showing this interaction usually do not show probable beneficial effects.
* In these experiments harmonically unexpected musical events are combined with certain syllables.

MFH: to support comprehension other syllables have to be manipulated harmonically. These syllables ought to be the syllables that would also be accentuated in speech to further comprehension. Below, a few examples.



Acknowledgements

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References

- * 1. Miall, D. & Kuiken, D. (1994). Foregrounding, Defamiliarization, and Affect Response to Literary Stories. *Poetics*, 22, 389-407.
- * 2. Schotanus, Y. P. (2015). The musical foregrounding hypothesis: How Music Influences the Perception of Sung Language. *Proceedings of the Ninth Triennial Congress of the European Society of the Cognitive Sciences of Music*, Manchester.
- * 3. Margulis, E. H. (2014). *On repeat: How Music Plays the Mind*. New York, Oxford University Press.
- * 4. Huron, D. (2013). A Psychological Approach to Musical Form: The Habituation-Fluency Theory of Repetition. *Current Musicology*, 96, 7-35.
- * 5. Rolison, J. & Edworthy, J. (2013). The Whole Song Is Greater Than the Sum of Its Parts: Local and Structural Features in Music Listening. *Psychomusicology: Music, Mind, and Brain*, 23(1), 33-48.
- * 6. Pattison, P. (2009). *Writing better lyrics: the essential guide to powerful songwriting*. Cincinnati: Writer's Digest Books.
- * 7. Patel, A. D. (2003). Language, music, syntax and the brain. *Nature Neuroscience* 6(7):674-681.
- * 8. Kunert, R., Willems, R. W., Casasanto, D., Patel, A. D., Hagoort, P. (2014). Music and language interact in Broca's area: an fMRI study. *Poster presented at the Society for the Neurobiology of Language Conference*, Amsterdam, 27/8/2014 - 29/8/2014.

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