Review of: "Solving the naming ambiguity of auditory localization mechanisms: HRTF & HRSL, and ILD, ITD, IPD"

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Potential competing interests: No potential competing interests to declare.

In this article, the author introduces the term head-reflected sound localization (HRSL) and stresses the need for distinction to head-related transfer functions, a term typically used in the field of spatial hearing when talking about the acoustic filtering of the listener-specific anatomy.

This claim seems bold to me, given the few references (¾ of which are from proceedings). I do not have the impression that the term HRTFs is used to describe neural mechanisms in literature (see also Majdak, P., Baumgartner, R., & Jenny, C. (2020). Formation of three-dimensional auditory space. *The technology of binaural understanding*, 115-149.). In my experience, HRTFs only describe the acoustic filtering of a listener-specific anatomy - a pure physical process. When HRTFs are used in digital signal processing, their time-domain equivalent, head-related impulse responses (HRIRs), are used as finite impulse response (FIR) filters.

In the introduction, the author claims that the interaural level difference (ILD) “[…] allows to measure the lateralization of sound as a function of the difference in sound intensity between the ears.”, but the ILD is, as HRTFs are, a physical metric, and measurable or calculable; no perceptual attribution has yet been made. There are, however, minimum audible angles (MAA) or just noticeable differences (JNDs) of these physical metrics, describing (frequency-dependent) perceptual thresholds of physical metrics. A similar claim appears in the last paragraph of “ILD, ITD, IPD: physical feature or perceptual mechanism?". The first sentence of the paragraph refers to the literature but does not include any citations. Citing at least three high-impact (journal) publications would definitely support the author's claims.

In “HRTF: two different mechanisms, with the same name”, I do not understand the difference between the two described mechanisms. One describes the “reflection and diffraction on the anatomical structures of the torso and head”, and the other describes the “sound modifications operated by the anatomical structures of the torso and head”.

I also do not understand the two listed advantages of using the term HRSL. How is HRSL maintaining a structure equivalent to the previous name? Is that something that should be strived for when introducing a new term, possibly compromising for ambiguity? Additionally, spatial localization is not only dependent on head reflections, so why would this

term "more appropriately define the nature of the mechanism of spatial localization" than “head-related” transfer function?

I understand the need for clarification in the literature about when to use which technical terms, e.g., head-related transfer function (HRTF) vs. head-related impulse response (HRIR) or vs. directional transfer function (DTF), etc. However, the current state of the work without references that strongly support the suggestion keeps me from recommending this paper to the community.