Presentation procedures in measuring emotion laterality via the auditory modality

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For more than three decades cognitive neuroscientists have debated the lateralisation of emotion. Currently there are two theories in contention: the right hemisphere hypothesis and the valence hypothesis. The right hemisphere hypothesis is that all emotional are predominantly processed in the right cerebral hemisphere of the human brain while the valence hypothesis is that positive (or approach-related) and negative (or withdrawal-related) emotions are processing in the left and right cerebral hemispheres respectively. In general listening studies aimed to measure the lateralisation of emotion have employed disparate presentation procedures resulting in inconsistent findings. The current study investigated the affective judgment of simple classes of auditory stimuli (e.g. tonal/atonal melodies) via three presentation procedures: monoaural (i.e. target with no competition), binaural (i.e. target with competing noise), and dichotic (i.e. target with competing melody). Overall, presentation procedure had a direct influence on observed asymmetry highlighting the need for consistency in listening studies aimed to measure the lateralisation of emotion.