Liars Intent: A Multidimensional Recurrence Quantification Analysis Approach to Deception Detection

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Abstract

The current study utilizes dynamical systems and embodiment theory to better understand how movement dynamics impact deception detection. While research has consistently revealed humans are often no better than chance at discriminating a truth from a lie, individuals may reveal more than they know through the dynamic movement of the face and the body beyond discrete gestures traditionally examined in deception detection research (e.g., rise of a brow). As expected, the present study found that the dynamic stabilities of facial and body movements were significantly influenced by deceptive intent such that untruthful statements elicited less stability in both the face and upper body. Moreover, despite detection levels no greater than chance, the accuracy of observers to detect deceptive intent covaried with these dynamic stabilities. The research presented provides another piece to the illusive puzzle of deception detection, affording researchers and practitioners a possible tool to tap into deceptive intent.