

Heart Beats and Economic Decisions: Observing Mental Stress of Proposers and Responders in the Ultimatum Bargaining Game.

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Abstract:

One aim of experimental economics is to better understand economic decision making of humans. Early research of the ultimatum bargaining game (Gueth, Schmittberger, & Schwarze, 1982) revealed that other motives than pure monetary reward seeking play a role. Neuro-economic research has identified areas of the brain that are activated when responders receive relatively low offers. Neuro-scientific research shows that activation of these areas is correlated to indicators of Heart Rate Variability (HRV) analysis.

In this article we introduce HRV measuring technology to study the behaviour and physiological reactions of proposers and responders in the ultimatum bargaining game. Since this technology is small and non-intrusive, we are able to run the experiment in a standard experimental economic set-up. We show that low offers of a proposer cause high ratios of low to high frequency activity in the HRV spectrum, a sign of mental stress, in both the proposer and the responder.