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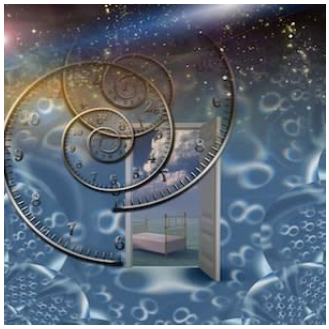
Is Our Heart a Timekeeper?



According to a new study by Cornell University researchers, the length of the present moment depends on an individual's heartbeat. Study researchers found that a human being's perception of time is not constant but stretches or shrinks with each heartbeat. This provides evidence that the heart is one of the brain's crucial timekeepers.

This idea has been contemplated since ancient times. The study is published in *Psychophysiology* and demonstrates that the perception of time perception could be synchronised with the length of a heartbeat.

Previous studies have tested time perception over longer intervals, revealing that thoughts and emotions can alter our sense of time. However, this new research investigated our direct experience of time in the present moment and its relation to physiological rhythms, specifically the natural variability in heart rates.

The study monitored 45 participants using electrocardiography to measure heart electrical activity and linked this data to a computer to trigger brief tones lasting 80-180 milliseconds by heartbeats. Participants reported whether the tones were longer or shorter relative to others. The results showed that the length of the preceding heartbeat influenced the perception of the duration of the tone.

The study also revealed that the brain could influence the heart, with participants' heart rates changing after hearing tones due to their attention being focused on the sounds. This suggests that our momentary perception of time is rooted in bioenergetics, helping the brain manage effort and resources based on changing body states, including heart rate.

These findings provide insight into the fluctuating nature of our sense of time, even at moment-to-moment intervals too brief for conscious thoughts or feelings. The heartbeat regulates our experience of the present, creating a sense of time that is constantly contracting and expanding.

Source: Cornell University

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