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arXiv.org > q-bio > arXiv:1204.4559 All papers Go! Ŧ Quantitative Biology > Neurons and Cognition Download: PDF Violation of the Leggett-Garg Other formats inequality in cognitive processes Current browse context: a-bio.NC < prev | next > F.T. Arecchi, A. Farini, N. Megna new | recent | 1204 (Submitted on 20 Apr 2012) Change to browse by: q-bio The Leggett and Garg Inequality (LGI) is a test of the classical behaviour of quant-ph an observed system, in the case of a single measurement channel monitored at different times. Here we report LGI violation in cognitive tasks consisting in **References & Citations** the identification of mutually incompatible words with negligible semantic NASA ADS content; the violation is maximal at an inter-measurement time {\tau}LG around 2 sec, close to, but consistently lower than, the characteristic times Bookmark(what is this?) associated with other, semantically rich, linguistic endeavors. The LGI 📃 💿 X 🔽 🖬 in 🚽 🔛 💇 violation persists over a time window of 1 sec around {\tau}LG; outside this Science window LGI is recovered. Subjects: Neurons and Cognition (q-bio.NC); Quantum Physics (quant-ph)

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