

Almost quantum correlations

Tue, 2016-06-07 13:02 - [Jordi Tura](#) [1] **Date:** 2014-06-20 - 2015-02-20

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Reference:

Nature Communications 6, Article number: 6288

URL:

<http://dx.doi.org/10.1038/ncomms7288> [2]

Quantum theory is not only successfully tested in laboratories every day but also constitutes a robust theoretical framework: small variations usually lead to implausible consequences, such as faster-than-light communication. It has even been argued that quantum theory may be special among possible theories. Here we report that, at the level of correlations among different systems, quantum theory is not so special. We define a set of correlations, dubbed ‘almost quantum’, and prove that it strictly contains the set of quantum correlations but satisfies all-but-one of the proposed principles to capture quantum correlations. We present numerical evidence that the remaining principle is satisfied too.

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