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Contextuality of reason, contextuality of reality, and the nature of probabilities involved

No-Go theorems in quantum foundations, such as Bell ' s and Kochen-Specker ' s, tell us that fundamental reality is inherently contextual (and nonlocal as a particular case); from a theoretical point of view (e.g., Abramsky-Brandenburger, 2011), contextuality is local consistency plus global inconsistency (of contextual information; e.g., probability distributions on measurement contexts). According to recent research in quantum cognitive science (e.g., Cervantes-Dzhafarov, 2017), Bell-type inequalities may be reformulated so as to be applicable in cognitive science, and they are actually violated in certain cognitive experiments. Does it show that human reason is contextual as well as fundamental reality? If so, in what sense? Put another way, do cognitive systems exhibit the same kind of contextuality as quantum systems? And ultimately, do Bell-type results in cognitive science have such a massive impact on our understanding of the world as those in quantum physics indeed had? There are analogies and disanalogies, both mathematically and philosophically, between contextuality of reality and cotenxtuality of reason. In this talk, we shall explain our recent results on contextuality analysis, and articulate the analogies and disnalogies between contextuality of reality and contextuality of reason, especially in light of the nature of probabilities involved. We argue, in particular, that quantum and cognitive systems exhibit the same kind of contextuality at a mathematical level of statistical correlation (apart from the issue of violation of marginal selectivity), and yet physical contextuality differs from cognitive contextuality in terms of how relevant probabilities are interpreted therein. This disagreement about the nature of probabilities, arguably, makes the meaning of Bell-type theorems in cognitive science depart from that in quantum physics in a significant manner. This would also explicate how science is not just about the analysis of statistical correlation (and how the Chomsky versus Norvig debate on statistical AI may be sorted out).