

Quantum-like models: From information laser to color revolutions, Brexit and Donald Trump

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The recent quantum information revolution has tremendous consequences not only for development of novel physical technologies, but even social ones. We know well about successes in quantum physical technologies related to quantum computing, cryptography, teleportation, and recently quantum stimulator: from philosophizing (Einstein-Podolsky-Rosen paradox, 1933) to real quantum technological projects (the recent EU call for 1 billion Euro). We want to point out to similar success in development of novel social technologies based, in fact, on quantum informational principles. These technologies exhibited they power in a series of color revolutions and recently in Brexit and the election of Donald Trump as the USA president.

The main consequence of the quantum information revolution is that nowadays quantum systems are treated as carriers and processors of information. Nowadays quantum mechanics has a few purely information and probabilistic interpretations (Zeilinger and Bruckner, D'Ariano et al., Fuchs et al. - QBism, Khrennikov - the Växjö interpretation). In a series of works , see, e.g., the monograph [1] the author demonstrated that, in fact, the essence of quantum information processing is in sensitivity of systems to changes of surrounding contexts, adaptivity to environment. These studies led to formulation of the Quantum-like Paradigm (Khrennikov [1]): "The mathematical formalism of quantum information and probability theories can be used to model behavior not only of genuine quantum systems, but all context-sensitive systems, e.g., humans."

Starting with the quantum-like paradigm on application of quantum information and probability outside of physics we proceed to the information laser model describing Stimulated Amplification of Social Actions (SASA). The basic components of social laser are the quantum information field carrying information excitations and the human gain medium. The aim of this note is to analyze constraints on these components making possible SASA. The information laser model can be used to explain the recent wave of color revolutions as well as such "unpredictable events" as Brexit and election of Donald Trump as the president of the United States of America. The presented quantum-like model is not only descriptive. We shall list explicitly conditions for creation of "social laser" [2].

[1] A. Khrennikov, Ubiquitous quantum structure: from psychology to finances, Springer, Berlin-Heidelberg-New York, 2010.

[2] A. Khrennikov, Entropy 17 (2015) 6969.