Review of: "What connects entangled photons?"

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The manuscript introduces a novel and intriguing approach to understanding entanglement swapping and quantum teleportation. The paper is concise and well-written, though some statements lack rigor. The proposed model explores the connection between entangled photons, based on four initial assumptions. The results align with Quantum Mechanics predictions, including Bell's inequality violation. Entanglement swapping and teleportation are successfully demonstrated through the model, with agreement seen in measured Bell's States. The conservation of spin angular momentum is suggested as the linking factor for entangled pairs.

The theoretical model is presented clearly, but there are remaining questions from an experimental standpoint. Previous research indicates weak efficiency in the conservation of interaction spin-angular momentum through nonlinear crystals, raising doubts about how photons generated through such a process can achieve high visibility entanglement.

Despite being a local model, it intriguingly yields non-local results predicted by Quantum Mechanics. To enhance and validate the theory, it would be valuable for the author to propose an experimental setup. It's essential to address whether the EPR proposition for hidden parameters can be supported by experimental evidence.

Overall, the manuscript presents a promising approach to entanglement and teleportation, warranting further investigation and experimentation for a comprehensive understanding. The prospect of extending the model to encompass entanglement between pure and mixed states offers an exciting research avenue for the future.