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On the necessity of Chvátal's hamiltonian degree condition

In 1972, Chvátal gave a well-known sufficient condition for a degree sequence to be forcibly hamiltonian, and showed that in some sense his condition is best possible. In this paper, we conjecture that with probability 1 as $n \rightarrow \infty$, Chvátal's sufficient condition is also necessary. In contrast, we essentially prove that the sufficient condition of Bondy and Boesch for forcible k -connectedness is not necessary in the same way, for every $k \geq 1$.