Opinion formation in a population with stubborn neutrals and zealots

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We consider a simple model of opinion formation in a population with some zealots and stubborn neutrals. In particular, we pay attention to how the stubbornness of the neutrals affects the opinion consensus in the population with zealots. Theoretical prediction is obtained by the analysis of rate equations for the population density, and numerical simulations performed on several complex networks show a good consistency with it.

We find that as neutrals become more stubbornly moderate, fewer zealots are needed to convert the entire population to consensus on their radical position: it becomes easier for the zealots to win, which seems opposite to the intuition. We consider several generalizations of the model, and this interesting behavior is found to hold up well to a certain point under a variety of violations of the simplifying assumptions of our model†.

† "Encouraging moderation: Clues from a simple model of ideological conflict", Seth A. Marvel, Hyunsuk Hong, Anna Papush, and Steven H. Strogatz (in preparation).