

The effect of 'contrarians' on the emergence of collective intelligence in human groups

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A large number of numerical models have been proposed by researchers in order to investigate the effect of contrarian on opinion formation in groups. In this work we extend the Decision-Making Model (DMM), previously developed by the same authors, to show that under specific conditions the presence of 'contrarians', i.e. of anti-consensus social interactions, may increase the efficacy of human groups in solving complex tasks. We investigate how the fraction of anti-consensus interactions moderates the effect of the strength of social consensus-interactions and the level of self-confidence on the long-term response of the decision process in terms of fitness values (V_∞), thus providing a clear indication of the influence of 'contrarians' in determining the emergence of collective intelligence in groups.

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