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A drift to more extreme but balanced attitudes: Attitudes with multiple dimensions and hierarchical bounded confidence

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Abstract:

Attitude theory considers attitudes as summary evaluations of psychological objects. They are composed of beliefs that associate an object with relevant attributes and evaluations of these attributes. With some exceptions, this single attitude's multidimensionality is not considered in models of opinion and attitude dynamics that approach the opinion formation process in a group of interacting individuals. The influence coming across by other agents is moderated by the interaction partners' heterophily and their selective attention. Both phenomena, in models of opinion dynamics often summarized by the concept of bounded confidence, cause agents to be less influenced by agents with a strongly differing attitude. However, such models applied to multidimensional models require a complex interaction to identify how much one differs from somebody else. We present a model of social attitude formation processes that incorporates multi-dimensionality of a single attitude and bounded confidence at the overall attitude but also at the attributes' level. We show analytically and by a numerical approach that this hierarchical bounded confidence model based on a multi-dimensional model of attitudes can promote a drift to extreme attitudes but also an attitude balancing principle, such that attributes associated with the same object tend to be evaluated similarly. The drift to extremes appears without assuming that more extreme individuals update their opinions differently.