Bounded response and Arrow's impossibility

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Abstract

We propose a new axiom called *bounded response*, which says that the smallest change in an agent's preference leads to the smallest or no change in the aggregated preference in the society. This axiom is weaker than *independence of irrelevant alternatives* à la Arrow. We show that *bounded response* together with a weak axiom imply dictatorship whenever there are four or more alternatives. Our result offers a new perspective on Arrow's theorem: neither independence property nor informational efficiency in independence of irrelevant alternatives is necessary for the impossibility. A new technique is employed in the proof.