Implementation in Adaptive Better-Response Dynamics: Towards a General Theory of Bounded Rationality in Mechanisms*

Antonio Cabrales† Roberto Serrano‡

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Abstract

We study the classic implementation problem under the behavioral assumption that agents myopically adjust their actions in the direction of better-responses or best-responses within a given institution. We offer results both under complete and incomplete information. First, we show that a necessary condition for recurrent implementation in better-response dynamics (BRD) is a small variation of Maskin monotonicity, which we call quasimonotonicity. We also provide a mechanism for implementation in BRD if the rule is quasimonotonic and excludes worst alternatives –no worst alternative (NWA). Quasimonotonicity and NWA are both necessary and sufficient for absorbing implementation in BRD. Moreover, they characterize implementation in strict Nash equilibria, thereby providing a unifying benchmark for implementation in other approaches that, stemming from bounded rationality considerations, have lent support

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†Departamento de Economía, Universidad Carlos III de Madrid, Madrid 126, 28903 Getafe, Spain, and CEPR; Email: antonio.cabrales@uc3m.es; http://www.eco.uc3m.es/acabrales

‡Department of Economics, Brown University, Providence, RI 02912, USA, and IMDEA-Social Sciences Institute, Madrid, Spain; Email: roberto_serrano@brown.edu; http://www.econ.brown.edu/faculty/serrano