Coarse Communication and Institution Design * (*Job Market Paper*)†

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Abstract

Many institutions aggregate information for a common objective via coarse communication. Coarseness gives rise to interesting institution design problems which would otherwise be trivial. The paper first elaborates on this point with an analysis of the optimal binary voting systems for the Condorcet Jury Problem, then proposes a unified framework for modeling a general class of information-aggregating institutions. Within this class, it is shown that institution A outperforms institution B for *any* common objective if and only if the underlying communication infrastructure of A can be obtained from that of B by a sequence of elementary operations. Each operation either removes redundant communication instruments from B or introduces effective ones to it. The general analysis is applied to two specific problems. In the first application, it is shown that an optimal generalized voting system has a sequential procedure and a dictatorship-like rule. In the second application, it is shown that data overload can be avoided for an organization with limited data-processing capacity.

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†For the latest version, please visit my website at `sites.lsa.umich.edu/wqg`

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