

## Introduction

# Implementation in Iterated Elimination of Weakly Dominated Strategies

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### 1. What is the question (of the paper)?

We investigate when and how a social choice function is implementable when asymmetrically informed agents are rational and “cautious” and that is common weak assumption, i.e., the agents are in the states of “rationality and common weak assumption of rationality”(henceforth, RCWAR) (Yang, 2015), which is an epistemic characterization of iterated elimination of weakly dominated strategies (IEWDS).

### 2. Why should we care about it?

There are two important limitations of implementation theory in the literature: (1) the common prior assumption is implausible and (2) the revelation principle can't be used and, hence, our analysis is to overcome these two limitations.

### 3. What is your (or the author's) answer?

We then show, even when dynamic mechanisms are not feasible, as long as agents in our static mechanism are in RCWAR, our static mechanism can “robustly virtually implement” a SCF, too.

### 4. How did you (or the author) get there?

In this project, we follow closely BM's (2009b) robust virtually implementation approach and further investigate when and how a social choice function is robustly virtually implementable in our environment of cautious agents.

Notations :

Iterated elimination of weakly dominated strategies (IEWDS)

Social choice function (SCF)

Rationality and common weak assumption of rationality (RCWAR)

Iteratively eliminating strictly dominated strategies (IESDS)

Ex post incentive compatibility (EPIC)

Extensive-form rationalizability (EFR)

Rationality and common strong belief in rationality (RCSBR)