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The Social Choice and Welfare Prize 2010: Introduction

It is my pleasure to introduce the recipients of the 2010 Prize in Social Choice and Welfare, which has been awarded to Franz Dietrich and Christian List for their innovative and prolific work on judgment aggregation. I will spend a few minutes introducing their work before giving the floor to them.

The basic biographical information is as follows. Franz received his D. Phil. in mathematics, at Oxford, in 2003. He received his Habilitation in 2009 at the University of Karlsruhe. He has been the Lachmann fellow in economics and philosophy and the LSE for the past year. He is currently professor at the University of Maastricht in the Dept of Quantitative Economics. Christian received his D. Phil. at Oxford in 2001. He has been a visiting fellow at the Laurence Rockefeller Center for Human Values at Princeton during the last year. He is professor of political science and philosophy at the LSE.

To understand better and more fully appreciate the nature of Franz and Christian's contributions, let me say a few words about the fairly new field of judgment aggregation with which many of you may not be familiar. The problem of judgment aggregation can be viewed as a generalization and abstraction of the problem of preference aggregation which we all know and love. The typical paper in judgment aggregation retains from ordinal, Arrowian preference aggregation a focus on the aggregation of individual judgments of binary propositions; that is, on propositions that can take two values, say "true" and "false".

However, in judgment aggregation, these judgments do not need to represent desires or well-being, but can have any content. For example, judgments can also concern factual beliefs or views about ethical or legal norms.

Such judgments are indeed at the center of Christian's signature contribution, his 2002 paper "Aggregating Sets of Judgments: An Impossibility Result" in *Economics and*

Philosophy, written in collaboration with the philosopher Philipp Pettit. This paper itself was inspired by a “doctrinal paradox” or “discursive dilemma” that had been discovered in the law and economics literature by the legal scholars Kornhauser and Sager. The “doctrinal paradox” consists in an inconsistency of the majority opinions of a group of judges on the premises of a verdict with the majority judgment on the verdict itself. In short, a verdict of Innocent may depend upon three premises. A majority of the judges may agree that each premises is true. Yet a majority of the same judges may have decided, based on their own views of the premises, that the defendant is Guilty. The inconsistency in this case derives from the reliance on an agreed-upon legal doctrine on which the truth-value of the verdict is logically determined by the truth-value of its premises. Just like the Condorcet Paradox, the doctrinal paradox is constructed from a profile of opinions involving three propositions and three voters.

Christian’s contribution has been to recognize the broader conceptual scope of this paradox and to define a framework in which both aggregation problems paradoxes can be described and social choice methodology can be applied. In this paper, Christian put forth a basic impossibility result that uses a generalization and abstraction of Arrow’s celebrated independence condition as a key ingredient. The List and Pettit paper is probably the most-cited paper in judgment aggregation to date. Much of the research in judgment aggregation since then (including a fair bit of Christian’s and Franz’s research) has been concerned with proving “Arrovian” possibility or impossibility results for different domains of judgment aggregation problems and different requirements on the aggregation rule.

Another fine example is a solo-authored piece by Franz, “The Possibility of Judgment Aggregation on Agendas with Subjunctive Implications”. In many problems of judgment aggregation, one is interested in aggregating opinions on propositions of the form “if p then q”. These occur naturally in the context of legal norms and the modeling of causal beliefs. For example: if the defendant was negligent, he owes damages to the plaintiff. Franz observes that the standard material implication that is common in mathematical reasoning is inadequate here. Franz thus argues that, in many relevant applications, one needs to model such implications as “strict implications” as studied in

modal logic. Far from being a logical fine point, this creative move changes the nature of the aggregation problem fundamentally, and turns an Arrow-like impossibility into a possibility.

The judgment aggregation literature of the last decade following the seminal paper by List and Pettit has spent much of its time in Arrovian territory. Christian and Franz have been prolific and innovative contributors to this literature. Their energy and entrepreneurship have done much to put the fledging new field on the map, and have amply deserved the 2010 Social Choice and Welfare Prize.