

Contract Theory with Non-Standard Preferences and Bounded Rationality

NES Research Project Proposal for 2017-2018

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It is difficult to overestimate the importance of the contract theory in modern economics. It is enough to say that in the last three years two Nobel prizes were given for it (to Jean Tirole in 2014 and to Olivert Hart and Bengt Holmström in 2016).¹

By now, this is a large field with many handy models (“building blocks”) and deep insights. The idea of this project is to introduce various kinds of non-standard preferences and limited rationality into otherwise standard contract theory models. By “non-standard” preferences we mean preferences that do not come from the maximization of expected utility (for example, loss aversion, ambiguity aversion) and/or when the agent does not maximize his “selfish” utility (various forms of other-regarding preferences, concerns for status, altruism, public sector motivation, favouring certain groups, etc), etc. “Limited” or “bounded” rationality refers to situations when agents are not aware of all the details of the environment, have computational costs, have some particular beliefs about others (as in level-k models), etc.

These and other departures from the canonical model of individual have been widely documented by empirical and experimental research and they are gradually being incorporated into theoretical models, yet, more is to be done. Below some topics are singled out; their range reflects how important and versatile the contract theory (and economics of information more generally) has become.

While most papers in this project are expected to be theoretical, empirical papers are definitely possible.

¹The Nobel prizes of 2001 (George Akerlof, Michael Spence and Joseph Stiglitz) and 2007 (Leonid Hurwicz, Eric Maskin and Roger Myerson) are also very much related, being for asymmetric information and mechanism design, respectively.

For a background information on contract theory, look at your Micro-4 course that you had last year and references there. A good place to start reading about “Behavioral Contract Theory” is a recent survey by [Kőszegi \(2014\)](#).

1 “Pure contract theory”

The most straightforward and the most theoretical approach is to introduce a non-standard assumption into otherwise standard model.

See, for example, [Prendergast and Topel \(1996\)](#), [Desiraju and Sappington \(2007\)](#), [Dur and Glazer \(2008\)](#), [Englmaier and Wambach \(2010\)](#), [Herweg, Müller and Weinschenk \(2010\)](#) for non-standard preferences and [Bolton and Faure-Grimaud \(2010\)](#) and [Von Thadden and Zhao \(2012\)](#) for limited rationality.

2 Public sector and design of the bureaucracies

Bureaucrats are often found to be motivated to work in the public sector or to have their own agenda. What are the implications for the organizational design in the public sector?

See, for example, [Francois \(2007\)](#), [Prendergast \(2007\)](#) and [Drugov \(2015\)](#).

3 Implications for organizational design and labour market

An important topic in the organizational design of firms is the consequences of various forms of inter-personal comparisons (concerns for status, inequality aversion, etc). See, for example, [Auriol and Renault \(2008\)](#) and [Bartling and von Siemens \(2010\)](#).

Sorting in the labour market across different firms and sectors coupled with equilibrium contracts is another important topic, see [Besley and Ghatak \(2005\)](#), [Macchiavello \(2008\)](#), [Kosfeld and von Siemens \(2011\)](#) and [Bénabou and Tirole \(2016\)](#).

4 Behavioral Industrial Organization

How do “behavioral” consumers interact in the market with “rational” firms? Do firms “exploit” such consumers? Does competition protect them? This is now a hot area in IO.

See the book by [Spiegler \(2011\)](#) (there are two copies in the library) and surveys by [Ellison \(2007\)](#) and [Grubb \(2015\)](#).

5 Self-Management

A very different recent area is the study of self-management issues. Why do people prefer to be overconfident about their abilities? How can a self-imposed rule, say, a diet, constrain future behaviour? An important ingredient of many models in this strain is hyperbolic discounting. See [Bénabou and Tirole \(2002\)](#) and [Bénabou and Tirole \(2004\)](#) for early and well known papers.

Another related and famous paper is [Bénabou and Tirole \(2003\)](#).

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