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Good signals gone bad: Dynamic signalling with switched effort levels

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## Good signals gone bad: dynamic signalling with switched effort levels

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#### Abstract

This paper examines signalling when the sender exerts effort and receives benefits over time. Receivers only observe a noisy public signal about the effort, which has no intrinsic value.

The modelling of signalling in a dynamic context gives rise to novel equilibrium outcomes. In some equilibria, a sender with a higher cost of effort exerts strictly more effort than his low-cost counterpart. The low-cost type can compensate later for initial low effort, but this is not worthwhile for a high-cost type. The interpretation of a given signal switches endogenously over time, depending on which type the receivers expect to send it.

JEL classification: D82, D83, C73.

Keywords: Dynamic games, signalling, incomplete information

#### 1. Introduction

In many signalling situations, the sender exerts effort over time, and the observation of that effort is noisy. For example, a politician may be (relatively) benevolent or selfish, and can signal benevolence by following the law to the letter (paying taxes in full, refraining from speeding and bribe-taking). The cost of obeying the law is forgoing profitable graft and tax evasion, minus the expected punishment and psychological distress from being dishonest. The psychological factor makes the cost lower for the benevolent type.

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