Moving the Goalposts*

Jeffrey C. Ely [†] Martin Szydlowski [‡] September 29, 2017

Abstract

We study information as an incentive device in a dynamic moral hazard framework. An agent works on a task of uncertain difficulty, modeled as the duration of required effort. The principal knows the task difficulty and can provide information over time with the goal of inducing maximal effort. The optimal mechanism features moving goalposts: an initial disclosure makes the agent sufficiently optimistic that the task is easy in order to induce him to start working. If the task is indeed difficult the agent is told this only after working long enough to put the difficult task within reach. Then the agent completes the difficult task even though he never would have chosen to at the outset. The value of dynamic disclosure implies that principal prefers a random threshold over any deterministic scheme. We consider extensions to two-player pre-emption games and bandits. *Keywords: goalposts, leading him on, information design*.

^{*}This research is supported by grants from the National Science Foundation. We thank Briana Chang, Eddie Dekel, Adriana Lleras-Muney, and David Rahman for valuable discussions.

[†]Department of Economics, Northwestern University. jeffely@northwestern.edu.

[‡]Department of Finance, University of Minnesota szyd1002@umn.edu.