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The costs and benefits of coordinating with a different group

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Abstract

We consider a setup where agents care about i) taking actions that are close to their preferences, and ii) coordinating with others. The preferences of agents in the same group are drawn from the same distribution. Each individual is exogenously matched with other agents randomly selected from the population. Starting from an environment where everyone belongs to the same group, we show that introducing agents from a different group (whose preferences are uncorrelated with those of each of the incumbents) generates costs but may also (surprisingly) generate benefits in the form of enhanced coordination. © 2015 Elsevier Inc. All rights reserved.

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1. Introduction

We consider a setup where individual decision making involves a trade-off between adaptation and coordination.³ Agents care about i) performing actions that are close to their preferences, and ii) coordinating with others. In our running example, we consider managers who decide how to organize and run production within their divisions. This includes deciding how to assign tasks to workers, which technologies to use, how much emphasis to put on meeting deadlines, etc.⁴ Each manager has preferences over the way in which production should be organized in his division. Different divisions must interact in order to complete a project/task. As in Dessein and Santos (2006) and Alonso et al. (2008), we assume that coordination facilitates production and, as a result, managers are concerned with coordinating with those divisions with whom they are matched. Although we focus on production, it is clear that the setup could also be used in other contexts. One is social exchange, as in Kuran and Sandholm (2008); this is affected by personal preferences on how the exchange should occur (dress code, etiquette, etc.) and also by the need to coordinate with others. Another is political activism, as in Dewan and Myatt (2008).⁵ A crucial feature of our setup is that managers suffer from an information problem: their privately observed preferences are made of two components, a group-specific component and an idiosyncratic component, but they are unable to distinguish between the two. We may think of managers in the same group as belonging to the same school of thought (e.g., Quantitative Approach versus Human Relations Approach) or as having similar expertise, although their precise preferences also have an individual component. Starting from a homogeneous environment (where all managers belong to the same group), we consider the effect of introducing in the organization managers belonging to a different group, whose preferences are uncorrelated with those of each of the incumbents.

The model is introduced in Section 2. In Section 3, we consider the benchmark case where all managers in the organization belong to the same group. The key observation here is that manager preferences may differ, even within the same group, because of the presence of idiosyncratic shocks. This translates into within-group heterogeneity of behavior.⁶ Since the environment is characterized by coordination externalities, we show that, from a central planner's perspective, the equilibrium exhibits too little coordination. This arises because managers put too much weight on their personal preferences when selecting how to organize production in their division.

In Section 4, we characterize what happens when some of the firm's divisions are assigned to managers belonging to another group. The presence of managers of another group has two effects. First, incumbent managers move their actions away from the mean preferences of their

 $^{^{3}}$ This trade-off has long been recognized as important, not only within economics but also in other disciplines – see e.g. March (1991) for an early contribution in the management literature.

 $^{^4}$ In this simple example workers are left entirely unmodelled. The way to think about them is as automata that simply follow their division manager's instructions.

 $^{^{5}}$ A further illustration is given by a parent who must instil moral values in his child. He faces a trade-off between the desire to transmit values that reflect his personal preferences and the desire to conform to society at large. E.g., a prudish parent may have a personal preference for instilling a strict moral code in his child, but he may also have to make concessions if other children are raised more liberally, or else his child risks being ostracized by other children. Adriani and Sonderegger (2009) present a model of intergenerational transmission where the coordination concerns of parents arise endogenously.

⁶ The notion that within-group heterogeneity may be pervasive and substantial has been well documented, see e.g. Inglehart (1997) and Hofstede (2001). See also Bednar et al. (2010) for a theoretical model of within-group heterogeneity in which individuals care about coordination and consistency.

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