ELSEVIER

Journal of Economic Behavior & Organization
Vol. 60 (2006) 37–54

JOURNAL OF
Economic Behavior
& Organization

www.elsevier.com/locate/econbase

Confusion or fairness in the field? Rejections in the ultimatum game under the strategy method☆

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Received 9 September 2003; accepted 23 July 2004
Available online 1 June 2005

Abstract

Field experiments conducted in two multi-ethnic republics of Russia show that responders employ varied strategies in an "ultimatum game". While many responders choose strategies that are monotonically rational and characteristic of most ultimatum game results (rejecting low offers and accepting high ones), almost as many others display a tendency towards "hyper-fairness" (rejecting offers that are too low and too high). Proposers, in turn, seem to take this into account with an unusually high proportion of 50/50 splits. Drawing on data from the experiments and a related survey, this paper focuses on the variation in responders' strategies, and the factors that account for the differences.

JEL classification: C90; C93; Z13

Keywords: Bargaining; Ultimatum; Strategy method; Experiment

☆ A version of this paper was delivered at the Conference on Field Experiments, Middlebury College, 24–25 April 2003.

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0167-2681/$ – see front matter
doi:10.1016/j.jebo.2004.07.005

1. Introduction

Only recently in experimental economics have experimentalists emerged from laboratories in our own universities and ventured out into the world. Ordinarily the aim of such studies has been to test whether theoretical models stand up to cultural variation. So far the record is mixed (see, for example, papers by Roth et al. (1991), Yamagishi et al. (1998), Ensminger (2000), Henrich (2000), Henrich et al. (2001), Oosterbeek et al. (2004), Buchan et al. (2002), Paciotti and Hadley (2003) and Ashraf et al. (2003)). Sometimes it seems that culture has an impact on behavior, but at other times the strategies played by subjects show remarkably similar patterns across a wide assortment of countries.

Most of these experiments depend on students from foreign universities, and few studies thus far have addressed the issue of heterogeneity within the population.[1] It may be that using homogeneous samples masks key elements of strategic behavior.

The experiment reported here focuses on population heterogeneity. It uses a random sample that allows us to test for effects due to age, income, ethnicity and place of residence. The larger study, of which it is a part, combines a face-to-face mass survey with a series of small-group bargaining games in two multiethnic regions of Russia, Tatarstan and Sakha-Yakutia. The two regions were the site of ethnic revivals by titular nationalities (Tatars and Yakuts) in the late 1980s and 1990s, making ethnicity especially salient. They have also experienced over ten years of Russia's turbulent market transition, with its legacy of heightened uncertainty and growing inequality. They thus offer a particularly good setting for evaluating potential variations in strategic behavior and in norms, and heterogeneity within the population.

We report on results from the ultimatum game. The game is straightforward and lends itself well to less-than-ideal field experimental conditions. Participants are randomly assigned to be proposers or responders; proposers offer an allocation of money to responders, and responders decide whether to accept or reject it. If a responder accepts, then both players get the proposed amount. If a responder declines, neither player gets anything.

The standard form of the ultimatum game allows responders to accept or reject the proposal they are offered, but it does not indicate how responders might react to other possible allocations. It thus gives us only limited purchase on what is driving responders' choices. To address that, we rely on the strategy method where responders indicate whether they will accept or reject each possible allocation. Thus we can evaluate responders' strategies across particular allocations and the degree to which strategies are the same among different segments of the sample.

Results from the experiment allow us to draw several conclusions. First, in a heterogeneous population, proposers overwhelmingly settle on an even split. Among responders we find evidence of two distinct strategies: "monotonically rational", with rejection of very low offers turning to consistent acceptances as offers increase, and "hyper-fair", with rejection of both very low and very high offers. Moreover, responder strategies vary systematically

[1] Recently, a handful of studies have gone into the field to examine heterogenous populations (see the discussion in Henrich et al. (2001), Carpenter et al. (2003), Barr (2003), Eckel et al. (2003) and Cardenas and Carpenter (2003)).