

**Adaptation Dynamics in Individual and Strategic Behavior**  
**An Experimental Analysis**

**- Summary-**

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This dissertation focuses, in four chapters, on adaptation dynamics and experience in strategic games and individual decision games. In particular, the role of experience through time that helps agents to improve their performances in accordance with their preferences.

The first paper explores gender differences in "make-up" and "suspicion" in a bargaining game in which the privately informed seller of a company sends a value message to the uninformed potential buyer who then proposes a price for the company. "Make-up" is measured by how much the true value is overstated, "suspicion" by how much the price offer differs from the value message. We run different computerized treatments varying in information about the gender (constellation) and in embeddedness of gender information. The asymmetry of the game and of information allows for a robust assessment of gender (constellation) effects. We report here the results from just one shot round decision since we expect such effects to be more pronounced for inexperienced participants. We mainly find an effect of gender constellation: when female sellers are aware to confront a female buyer, they overstate more, i.e. there is more "make-up". However, we cannot confirm gender (constellation) effects for suspicion.

The second paper focuses the incentive scheme selected in an experiment. This paper is an attempt to screen the strategies adopted by agents in a bargaining game when buyer and seller have partly conflicting interests and are asymmetrically informed. We allow participants to choose the incentive scheme through which they will be paid at the end of the experiment controlling for past experience and individual characteristics. It is well known that payment method is highly correlated to the risk preferences shown by individuals, but little research is devoted to the analysis of the behavior induced by Random lottery Incentive scheme (RLI for short) and Cumulative Scheme payment (CS for short) both on individual and social results. This paper aims to fill the gap.

In the third paper we suggest an elicitation method for exploring the motivation of participants when contributing to a public good in the role of "leader" or "follower". In the Hybrid Public Good experiment each of two interacting contributors chooses an independent contribution level as well as three adjusted contribution levels when (s)he, as the only adjusting player, learns that the other's independent contribution is smaller, equal or larger than the own one. To approximate the border cases of simultaneous contributing as well as sequential contributions we systematically vary the probability that one player can adjust, based on such qualitative information, but maintain that no adaptation at all and adaptation by only one occurs with positive probability. Adaptation is framed in two ways, once by additively changing the own independent contribution and once by stating

new contribution levels. Surprisingly, the framing effect becomes stronger with experience. Reacting to coinciding independent contributions implies impressive conformity in contributing. Reacting to higher, respectively lower independent contributions implies average upward, and, more strongly, downward adaptation.

Finally, last paper discuss near-miss outcomes, real-life situations which increase the perceived probability of the occurrence of future successes. The Almost-Winning (AW) bias is the well-known cognitive bias that makes individuals unable to distinguish between situations in which near misses signal ability and situations in which near misses are completely meaningless, in the sense of being unrelated to future (likelihood of) winning. The empirical and neurological evidence shows that a near-miss increases gamblers willingness to play: AW triggers a dopamine response similar to winning, in spite of no actual reward. Therefore, in a chance game, a sequence of AW outcomes easily generates an irrational willingness to continue playing, and might become a key factor in the development and maintenance of certain betting habits. We implement an experimental setting aimed at checking the relevance of the AW bias among ordinary students on order to evaluate its potential strength in absence of gambling pathologies. Two treatments are implemented in two different frames, an investment game (IG) and a slot machine game (SM), which try to avoid persistence at gaming.