SOME COGNITIVE BIASES DURING GO-PLAYING

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ABSTRACT One main topic in the psychology and behavioral economics literature from the past 50 years is concerned with heuristics and cognitive biases. As human beings, we have cognitive limitations that often enough and in different contexts stop us from taking the best decision. Heuristics are often useful when taking decisions, but often cognitive biases arise and they lead to less than optimal results. Some of these cognitive biases are due to cognitive limitations, some are due to the fact that we give more importance than necessary to unimportant things (e.g., framing). These phenomena have been noticed in experiments that involved situations that were supposed to reproduce day-to-day decisions, but it's possible that such phenomena could be encountered in many other situations that involve decisions, including during games such as the approximatively 3000 years old Chinese game of go. Looking into such phenomena could be useful for improving one's moves sometimes.

Keywords: cognitive bias; game of go; anchoring; availability; cognitive limitations.

1. INTRODUCTION

Starting from the idea that different types of deviations from the normative behavior have been observed in the context of human behavior (Kahneman 2011), a question that could arise is whether such cognitive biases could be affecting the "standard judgment" of go players during their games. If that's true, then it could lead to a worse result compared to the one which is not affected by this systematical interference.

When playing go, you often hear of "bad habits" and certain pieces of advice given by stronger players to weaker ones are quite common. A part of them could be compared to what the literature about cognitive biases has found. Two such examples will be briefly presented here.

2. SOME BIASES THAT CAN AFFECT PLAYERS DURING GO GAMES

The fact that often "people make estimates by starting from an initial value that is adjusted to yield the final answer" is known under the name of *anchoring* (Tversky & Kahneman 1974). During go games there is a tendency of go players, particularly weaker ones, to automatically play in the area where the opponent played. Instead of reassessing the situation after the new piece of information (i.e. the opponent's last move), the players sometimes take for granted that the opponent's last move is a hint that points out to the most important area on the board, and they get *anchored* by it. Additionally, the opponent's last move also makes that particular area very salient. But often the best move on the board is not at all in the area where the opponent placed his last move. Each new move requires a new reassessment of the situation and finding the best move implies global thinking, not limiting oneself to a small area. Yes, limiting yourself to that particular area is energy and time efficient (i.e. calculating moves in a small area consumes is faster than evaluating a global situation) and the right answer is sometimes located within that area, but other times it simply isn't.

Availability has been defined as "the ease with which relevant instances come to mind" (Tversky & Kahneman 1973). Go players sometimes play certain moves in certain situations because they have a vivid image of what happened during another game in a similar position, e.g., in one of her last games, player A didn't defend her *moyo*[1] and her opponent entered it and because player A didn't answer

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1 Moyo = a potential future big territory

properly, she lost the game. Because that memory is still very present in Player A's mind, during the next game when she will encounter a more or less similar position, she might be influenced by it: This salient memory might make her protect her *moyo* way too early in the game, by increasing her sense of urgency for that particular move. Yes, in some cases it would be indeed the best move, but in some others it would not be.

3. METHODOLOGY
While a more scientific approach is often the ideal choice, for this paper's purpose I chose another form. The paper intends to be mostly an interpretation and translation of some processes met in a certain context (different day-to-day situations involving decision-making) into a new one (decision-making during the game of go). Based on the theory from psychology and behavioral economics, I will exemplify the phenomena with the help of different situations other go players and I have observed.

4. CONCLUSION AND DISCUSSION
In day-to-day life, when it comes to some cognitive biases, being aware of them can reduce or even eliminate their effect. Being aware of the possible existence of such cognitive biases on the go board could sometimes lead to an improvement of one's play.

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