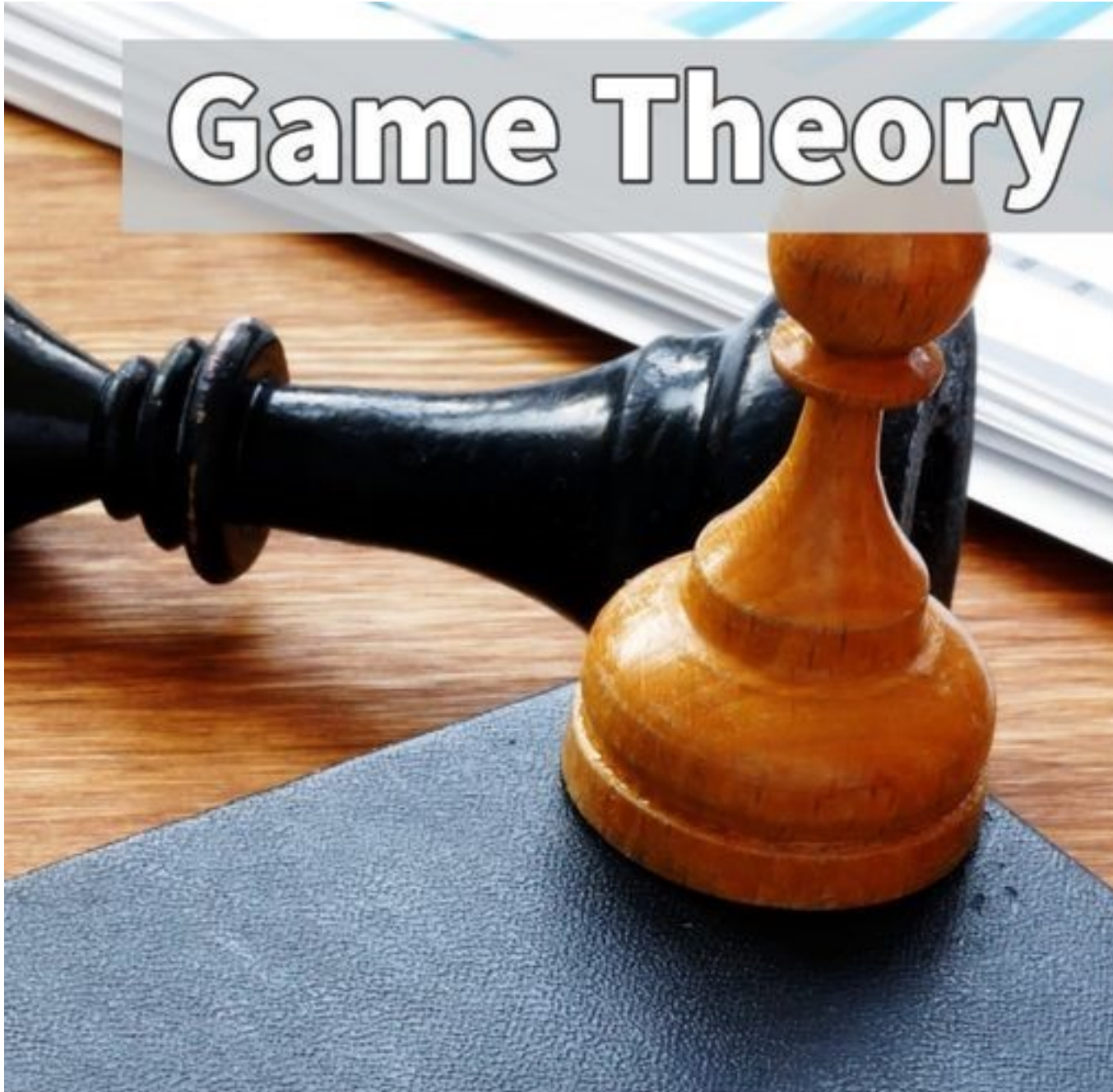


# Game Theory



## Game theory and Taekwondo

People talk in terms like 'tactics' or 'strategy' every day. Most of the time they mean different things using these terms. What all those who use these terms have in common is to express something successful.

A good strategy can bring success. This means that we have prioritised the objectives and instruments at our disposal and know how to use them.

The strategy that a sport will follow. The club seeks to exploit its athletes and potential in combination with the means at their disposal.

The purpose is to promote the interests of the athletes and those that the club has.

Most believe that strategy is the use of various techniques to win. But the strategy has always been to plan and run the race.

### **"Strategy and philosophers observe the world as it is."**

There is a difference between game theory and game. The theory is based on a logical/mathematical analysis which tries to show which strategy a player who competes based on logic will follow, assuming that his opponent will also react in a logical way.

Logical behavior requires that each player has a set of predetermined objectives and chooses his racing strategy with as few mistakes as possible.

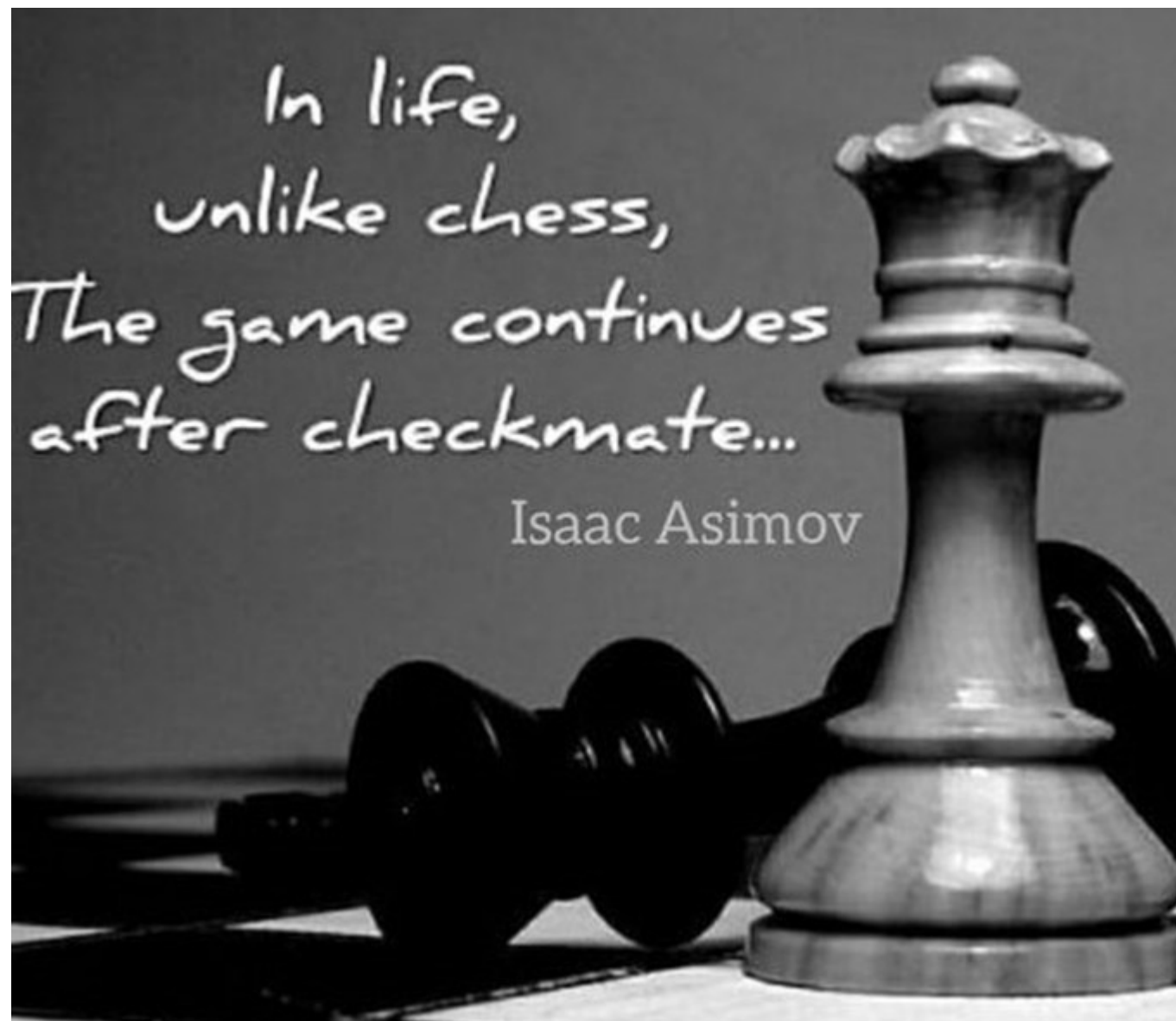
There is a big difference between games played once and games played by more than the same players. Where in each iteration of the game they gain more experience and better understand the thinking of their opponents.

Many people believe that the above theory is not true. They base this mainly on the fact that:

- A) Players through ignorance, negligence or weakness often fall into mistakes.
- B) In difficult circumstances they may react irrationally, so their actions cannot be predicted or explained logically.
- C) The hierarchy of objectives is not always fixed and immutable.
- D) Proper knowledge and prioritization of goals is needed. Of course, this is very easy to calculate in advance because each player uses the objectives differently.

Those who support the theory argue as follows:

- A) In whatever case and situation occurs, rational behavior is the most likely reaction, but also the only one that can be predicted and analyzed. This is based on the fact that man is a rational being and acts rationally and not irrationally.
- B) It is natural for athletes in a race to follow a logical procedure until they come up with a tactical race that will increase their advantages while at the same time limiting those of their opponents. Of course, he knows from the beginning that the opponent thinks the same way.
- C) In the final analysis, the above theory is nothing more than a different process of logical analysis of data in order to behave smarter than the opponent and deceive him.



### Identification of basic forms of games

Conditions that characterize the basic forms of games.

1. Between 2 athletes where everyone tries to secure the maximum possible advantage from the race.
2. The 'interest' as everyone understands it, which does not have the same value for both players due to the difference in their value system.
3. Adherence to the rules of the game.
4. How to inform about the tactics that the opponent will follow.
5. Knowledge of the place and environment where the race will take place.

6. Interaction of movements. The movement of one affects the other and modifies his movements.

The outcome of the race will be decided:

- A) The determination of the athlete to use all available techniques that he knows well.
- B) How capable he is of pretending to the opponent that he is not "bluffing".
- C) How able he is to cope with the fatigue and fatigue of the race along with his losses.

History is full of examples of victories where the cost was too high. In a match the only sensible strategy is one where each player tries to maximize the minimum profit he would make and at the same time minimize the greatest loss he could suffer.

The above applies to opponents who play a reasonable match. If one of the two is an irrational person or his psychology is not balanced, then we do not apply the above theory. But it applies to more than one game or one game under the rules.



### How to prioritise objectives and priorities in the strategy

First of all, it is necessary to distinguish between strategy and tactics.

**Strategic** strategy is a choice of different combinations of techniques to achieve the best result. **Tactics** are choosing how to use a punch or kick to achieve success at a given goal.

To define a tactical or strategic problem we need to know:

- A) What techniques and strikes we know well.
- B) What or what will be our goal in at least a rudimentary order.
- C) What is the sequence of strikes that will follow to achieve our specific goals.
- D) The benefit-cost ratio. From this we can optimize any result we seek.

After all, tactics and strategy are nothing but a problem of maximizing our profit from the struggle. This is something we achieve by achieving our goal with less fatigue, fewer losses on us and having increased our benefit.

**Tactics are a goal, a tool. The strategy is many goals, a combination of tools.**

When we develop our tactics, there must be a hierarchy of goals. That is, to determine the goal-tool relationship, otherwise for a target we will use many blows and we will have a cost to our forces.

In the field of strategy there is also the element of 'feedback'. In other words, in addition to prioritizing, we also need prioritization. That is, to know each time the series of intermediate objectives that is necessary for the success of our strategic plan. This is where reversal of priorities often occurs. That is, intermediate goals should become final goals and those that were final goals should be reduced to intermediate ones.

A strategic plan can be sound in its design and be destroyed in its execution due to a reversal of priorities.

It is possible for opponents to exit the match in better shape than before. This will depend on the race, whether it will be until the final drop or whether they will seek to implement strategy. Because in the first case they risk losing everything through an otherwise impressive race, while in the second we will have a seemingly mediocre race with elements of high strategy.



In the field of high strategy, the concepts of defense or attack are not antagonistic but instead are connected and combined. Many people teach the offensive strategy to their students and mean "fire and movement". The offensive strategy is not only that, but also taking initiative in terms of pitch and duration.

Now, as far as the term defensive strategy is concerned, no one has ever taught that it is to wait fatalistically for the opponent's attack, which may even be fatal for us. Historically, whoever implemented this was a loser.

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