

The role of traditional board games in the strengthening of social interaction. A psychological comparative of Malian's "AWALE" in West Africa and Chinese "WEIQI" in East Asia

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Abstract

The purpose of study is to identify the similarities and the differences between Malian's game (AWALE) and Chinese game (*Wei Qi*). In many countries of Africa from the West, the game of (AWALE) occupies an important place in human relationships, and often in the divinatory art. China is a country of great civilizations or culture occupies a prominent place. The game of (*Wei Qi*) long exists, and all this game is a factor of social cohesion. All research consulted and analyzed in this study have confirms the role of social cohesion sets has these game. The similarities between these two cultures compared to games of society are social cohesion between individuals of the same culture. Although, the differences of the role of traditional game between these two cultures remains the techniques, strategies, and game rules.

Key words: traditional board game, social interaction, Malian's Awale, Chinese Weiqi

Introduction

Historical Background

The Republic of Mali is a landlocked country in West Africa. Mali is bordered by Algeria to the north, Niger to the east, Burkina Faso and Ivory Coats to the south, Guinea to the south west, Senegal and Mauritania to the west. Its size is just over 1,240,000 square kilometers (480,000 sq mi) with a population of 16.5 million. Its capital is Bamako. In the colonial era, Mali fell under the control of the French beginning in the late 1800s. By 1893, the French had appointed a civilian governor of the territory they called French Sudan, but active resistance to French rule continued. By 1905, most of the area was under firm French control. French Sudan was administered as part of the Federation of French West Africa and supplied labor to France's colonies on the coast of West Africa

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Social interactions

Social interactions are the acts, actions, or practices of two or more people mutually oriented towards each other's selves, that is, any behavior that tries to affect or take account of each other's subjective experiences or intentions. This means that the parties to the social interaction must be aware of each other-have each other's self in mind. This does not mean being in sight of or directly behaving towards each other.

Social interaction is not defined by type of physical relation or behavior, or by physical distance. It is a matter of a mutual subjective orientation towards each other. Thus even when no physical behavior is involved, as with two rivals deliberately ignoring each other's professional work, there is social interaction. These definitions of social are close to that of (Weber, 1947). For him behavior was social by virtue of the meaning the actor attaches to it. It takes account of the behavior of others and is therefore oriented in its itinerary.

Board Games

A board game is played by moving pieces on a special board. In a broad sense, the earliest board game could be traced back to ancient times. Early board games usually represented battles. Modern board games became popular again in the early 1900s and still keep the original theme. To beat opposing players in order to get more points or to win positions. Board games contain a specific set of rules that for instance, limit the amount of players that a game can have the number of spaces on a board, the number of possible moves and the limits of what can be done in a particular move.

In China they are everywhere, in the parks, coffee, doorsteps, and even special locations for playing games. The game often seems to be as captivating for the spectators as for the players. They are many varieties of games in China specifically in Wuhan province.

AWALE

A family of board games also called sowing games. These games consist of a set of monochrome seeds and a board containing holes. The game proceeds by picking up the seeds from a hole and then sowing them one at a time in the following holes. Captures are made as a function of the state of board after the end of sowing (or in some games during sowing). The goal is to capture more seeds than the opponent. The game has different names depending on the country where it is played. These include wari, mancana, oware, ayo, ouri, and awari.

It is also an ancient and traditional two player board game that is thousands of years old and played by millions of Africans. It is believed that it was originally used to teach herd boys appreciation for tactical thinking as well as assessing the strategic skills of African chief's advisers. The pieces are placed at the intersections of the lines on the board.

Like other board games, *AWALE* games have led to psychological studies. Retschitzki has studied the cognitive processes used by *AWALE* players. Some of Restchitzki's results on memory and problem solving have recently been simulated by Fernand Gobet with the CHREST computer model. A 2004 review of literature by Fernand Gobet, de Voogt & Retschitzki shows that relatively little scientific research has been carried out on the psychology of Go (Weiqi), compared with other traditional board games such as chess and *AWALE*. But given that a successful game player must learn to control her impulses, follow the rules, and reflect, it makes sense that gaming experience might translate into better performance on academic tasks that require focus and self-control. Moreover, board games a more powerful learning tool if we teach kids that problem-solving ability is like a muscle: It can be strengthened with practice and learning. It made

also for players a good social interaction and increases the communication to both of African players and Chinese players in the society.

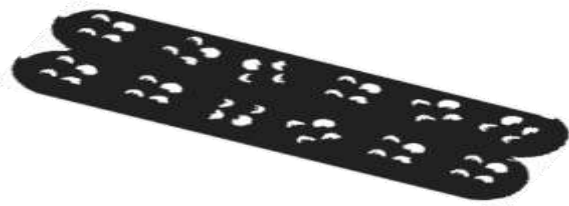


Figure 1: Presentation of the game of AWALE
The rules of to Play the game of AWALE

The goal is very simple: each player must try to capture more seeds than the opponent. Therefore, this is the one that gets more than half of the seeds that will carry the game (25 or more)

Output position

Before to begin, the game still in the standard position with 48 seeds distributed in 12 holes (4seeds by hole). (See Figure 1)

The board consists of two rows of six holes and there are 48 pieces, commonly called seeds. (See Figure 1) Each player owns one row. As in other *AWALE* games, the purpose of the game is to capture as many seeds as possible. A move consists in selecting the contents of one hole on the side of the player and distributing the seeds one by one in subsequent holes counterclockwise, until all seeds have been spread. Captures occur when two conditions are met: the last seed enters a hole on the opponent's row, and there are a total of two or three seeds in the last hole. When the two conditions are met, the seeds in the last hole are captured and taken from the board. If the holes on the opponent's row directly preceding the hole where the capture occurred also contain two or three seeds, these are also captured. Seeds are not spread in the hole from which the sowing originated (this rule applies when a hole contains more than 11 seeds). If a player has no seed, the opponent must play a move that gives her at least one seed. If this is not possible, the game ends, and the opponent adds the remaining seeds (minus one seed that is given to the other player) to the captured seeds. If the only move a player can play would capture all the remaining seeds of the other player, who then could not play, this move is carried out but no seeds are captured.

End of the game

As already mentioned, to overcome the part must capture a minimum of 25 seeds. Between people who play this game there is accustomed to continue the game, even if we already know who, is the winner until it becomes impossible to achieve more taken. The program allows as soon as we arrived at this situation, each player ends the game.

Overview of Chinese Culture

Chinese culture has been influenced for thousands of years by Confucian culture, and “benevolence, duty, courtesy, wisdom, trustworthiness” have become the particular cultural factors associated with Chinese culture. People advocate values like harmony, peaceful coexistence, kindness, order for old and young, politeness, modesty, honesty and sincerity in interpersonal relationships. Due to this kind of traditional culture, people usually have a negative Moreover, the core values embedded throughout modern Chinese culture include: respect for hierarchy; building relationships through *guanxi* (connections, reciprocal obligations); group orientation; and *mian zi* (face) and harmony.

Historical of *Wei Qi* game

Wei Qi is the Chinese name for the classic board game usually known in English as Go (from the Japanese *igo*). The game has a long history in China, certainly predating Chess in any of its versions. It has never been as popular in terms of mass support as *Xiang qi* (Chinese Chess), which continues to be the game particularly of the overseas Chinese; but it was always favoured by the scholar class. In recent years professional players have emerged in China able to challenge the top Japanese masters, and from about 1970 onwards a corresponding public interest in *weiqi* has grown in mainland China; there are also some professionals in Taiwan.

1.8. The rules, Aim and strategies of *Wei Qi* game

The basic rules of *Wei Qi* are charmingly simple, and are easy to learn. The object of the game is to gain control of territory on a board ruled into a 19×19 grid. Two players take it in turn to place pieces on the grid intersections. These pieces, traditionally called "stones", are not moved; but they may be captured, singly or in groups, by surrounding them along the lines. The winner is the player holding more of the board at the end of the game (which comes when both players agree that it is over).

It is generally thought that the equipment for *Wei Qi* a ruled flat surface, and black and white pebbles - was in existence before the game rules were hit upon, for purposes of divination; and that some form of the game has been around for 3000 years. It is also theorized that the geographical origin may well have been in Central Asia. There is no documentary evidence for these ideas. What is certain is that in Confucian period the game was familiar enough to be alluded to casually: "it would be better to be a gambler or *Wei Qi* players than not to use the mind at all and do nothing all day but eat or drink", from *Analects Book XVII*. Later on, in the Three Kingdoms period, it seems that *wei qi* experienced one of its times of high fashion, as usual coinciding with state support. Cao Cao, the anti-hero of the *Romance of the Three Kingdoms*, was reputed to be on a par with the four top players of his time. The game itself is not (as far as I can tell) mentioned in the book, which was of course written up to 1000 years after the epoch in which it is set (about 200 AD), and for a popular audience.

What is interesting is the extent to which *wei qi* was thought to illustrate the concepts of the Chinese military classics, from Sun Zi onwards. One of the first books in English on *weiqi* was "The Protracted Game" by Scott Boorman, purporting to find relevant connections between the game and the military doctrine and practice of Mao Zedong (a *weiqi* player). What seems to be much closer to the case is that Mao was soaked in the *Three Kingdoms*, and imbibed the sort of relationship between *weiqi* and military thought which was a commonplace. For non-players, a simple version of the line of argument starts with the idea that *weiqi* is a campaign game, where all the games of the Chess family simulate a single battle; and goes on to account for proverbial wisdom such as "feint to the left if you want to attack on the right" in *weiqi* terms. Good play in a game with several battles going on at once requires an indirect way of thinking.

In the Sung age, according to Jacques Gernet's *A History of Chinese Civilization*, all things military lost prestige, and "the lettered Chinese was to be a pure intellectual who thought that games of skill and athletic competitions were things for the lower classes". One quite often finds it asserted that poetry, calligraphy; music and *weiqi* were the four classic accomplishments of the scholar. Perhaps at this later era (about the year 1000AD) *weiqi* was losing its linkage to military thought. In any case *the weiqi Classic*, published around 1050, was written by an official of the Northern Sung. The game also crops up in poetry of the time.

Moving forward to the sixteenth and seventeenth centuries, the large amount of surviving material in the form of games and problem positions shows quite clearly that *Wei Qi* was played at a level of proficiency beyond today's amateurs, and with technical insight only to be accumulated by generations of study. Matteo Ricci, the Jesuit missionary, thought the game worth remarking upon in his writings, and it was first made known to the West through them.

Weiqi was taken to Japan before the year 1000, and was cultivated at court and by particular Buddhist sects. In the Tokugawa era (from 1600 on) it received state backing on a scale not seen until the Soviet development of Chess; and the main stream story of *weiqi/Go* then moves to the masters of the four "houses" of that system. Two of this century's outstanding players, Wu Qingyuan (called Go Seigen by the Japanese) and Lin Haifeng (Rin Kaiho), are of Chinese origin but have spent their whole playing career in Japan. The first home-grown Chinese player to come up to world class was Nie Weiping, who broke through in the 1970's. He had to contend with savage attacks on *weiqi* during the Cultural Revolution, because of its connection with traditional Confucian culture. In a book of his recently translated into English it is made clear how much political support he needed to persist. At present Nie is just being displaced as leading Chinese player, by Ma Xiaochun; and there are many younger players coming up through the system. A book by Ma published this year in English is called "The Thirty-six Stratagems Applied to Go", an interesting reflection of what was said above about traditional military thought. Many people expect the future of *weiqi/Go* to be in the hands of the Chinese and Koreans - men

and women. The current Women's World Champion is Feng Yun, who visited Cambridge a couple of years ago.

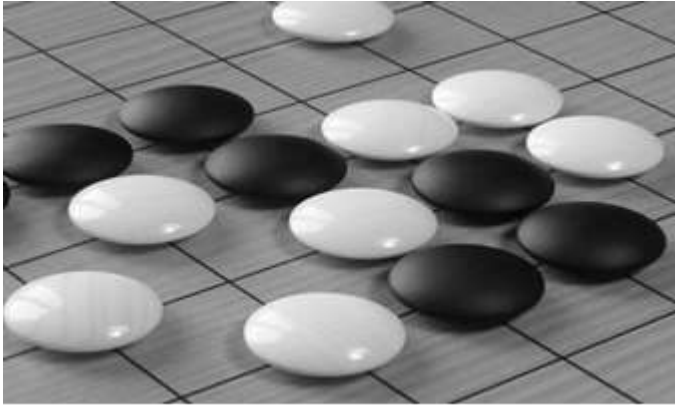


Figure 2. Presentation of *Wei Qi*

Review of literature

Psychological game theory

A 2004 review of literature by [Fernand Gobet](#), de Voogt & Retschitzki (2004) shows that relatively little scientific research has been carried out on the [psychology](#) of Go, compared with other traditional board games such as chess and [Mancala](#). Computer Go research has shown that given the large search tree, knowledge and pattern recognition are more important in Go than in other strategy games, such as chess Masunaga, H; Horn, J. (2001). A study of the effects of age on Go-playing Masunaga, H; Horn, J. (2001) has shown that mental decline is milder with strong players than with weaker players. According to the review of Gobet and colleagues, the pattern of brain activity observed with techniques such as [PET](#) and [fMRI](#) does not show large differences between Go and chess. On the other hand, a study by Xiangchuan Chen et al. (2003) showed greater activation in the right hemisphere among Go players than among chess players. There is some evidence to suggest a correlation between playing board games and reduced risk of [Alzheimer's disease](#) and [dementia](#). Verghese; et al. (2003)

The literature of experimental gaming (reviewed by Colman 1995a; Kagel & Roth 1995; Pruitt & Kimmel 1977) testifies to the fruitfulness of empirical research within a broadly game-theoretic framework. Some important phenomena, such as the clash between individual and collective rationality, cannot even be formulated clearly without the conceptual framework of game theory.

The arguments and evidence discussed above seem to imply that orthodox game theory cannot explain strategic interaction in widely disparate games. To deal with similar problems, Camerer (1997) proposed the label *behavioral game theory* for an approach that replaces descriptively inaccurate aspects of game theory with plausible explanations providing better predictions of empirical (especially experimental) observations. One of

Camerer's examples of behavioral game theory is Rabin's (1993) *fairness equilibrium*, based on payoff transformations. According to this approach, a player's payoff increases by a fixed proportion α of a co-player's payoff if the co-player acts kindly or helpfully and decreases by β of the co-player's payoff if the coplayer acts meanly or unhelpfully. In the Prisoner's Dilemma game (Fig. 4), for example, if $\alpha = 1/2$, so that each player's payoff increases by a half that of the co-player when the co-player cooperates, and decreases by half that of the co-player when the co-player defects, then joint cooperation (CC) emerges as a new equilibrium point, called a fairness equilibrium, with transformed payoffs of $4Z/x$ to each player. According to Camerer, this may help to explain cooperation in the Prisoner's Dilemma game. Psychological game theory, as described in the following subsections, overlaps behavioral game theory but focuses specifically on nonstandard reasoning processes rather than other revisions of orthodox game theory such as payoff transformations. Psychological game theory seeks to modify the orthodox theory by introducing formal principles of reasoning that may help to explain empirical observations and widely shared intuitions that are left unexplained by the orthodox theory. An important forerunner is the work of Geanakoplos et al. (1989) on psychological games in which payoffs depend not only on players' actions, but also on their expectations. The forms of psychological game theory that will be discussed are team reasoning, Stackelberg reasoning, and epistemic and non-monotonic reasoning. Like behavioral game theory, psychological game theory is primarily descriptive or positive rather than normative, and it amounts to nothing more than a collection of tentative and ad hoc suggestions for solving the heterogeneous problems that have been highlighted in earlier sections-

2.2. Game theory

The necessary assumptions are provided by game theory, the framework within which interactive decisions are modeled. This is a mathematical theory applicable to any social interaction involving two or more decision makers (*players*), each with two or more ways of acting (*strategies*), so that the outcome depends on the strategy choices of all the players, each player having well-defined preferences among the possible outcomes, enabling corresponding von Neumann-Morgenstern utilities (*payoffs*) to be assigned. The definition is inclusive, embracing as it does a wide range of social interactions.

2.3. Interdependence theory

Interdependence theory may be characterized by at least three qualities. First, using games and related conceptual tools, interdependence theory provides a taxonomy of interaction situations, which can be analyzed in terms of several dimensions, such as degree and mutuality of dependence, basis for dependence, corresponding versus conflicting interest, temporal structure, and information availability (Kelley et al. 2003; Rusbult & Van Lange 2003). This taxonomy allows one to characterize interaction situations. For example, a social dilemma would be characterized as one involving relatively high levels of interdependence, based on unilateral actions of the partner, and also characterized by a fairly strong conflict of interest; and social dilemmas may differ in terms of temporal structure (e.g., single trial vs. iterated) and information availability (e.g., complete or incomplete information regarding one another's preferences).

Second, interdependence theory assumes that the outcomes in any interaction situation ("the given preferences") may be psychologically *transformed* into a subjective situation representing effective preferences, which are assumed to guide behavior and ultimately social interaction. Examples of transformation rules are interaction goals such as enhancement of both one's own and other's outcomes (MaxJoint), equality in outcomes (MinDiff), other's outcomes (MaxOther), or relative advantage over other's outcomes

(MaxRel). Although transformations may be a product of careful reasoning and thought, they may also occur in a fairly automatic manner, involving very little thought or deliberation. As such, transformations deviate not only from self-interest, but also from rationality, in that individuals are not assumed to obey criteria of strict rationality. More importantly, transformations are assumed to accompany cognitive and affective processes in guiding behavior and shaping interaction (see Kelley et al. 2003; Rusbult & Van Lange 2003).

Finally, interdependence theory focuses on both individual and collective levels of analyses, in that it explicitly seeks to understand *social interaction*, which is conceptualized as a product of two individuals (with their basic preferences and transformational tendencies) and the interaction situation. Social interactions are also assumed to shape relatively stable embodiments of transformations, at the intrapersonal level (i.e., dispositions such as social value orientation), at the relationship level (i.e., partner-specific orientations, such as commitment), and at the cultural level (i.e., broad rules for conduct, such as social norms; see Rusbult & Van Lange 2003; Van Lange et al. 1997).

Methodology of the study

The present paper aims to provide a comprehensive review of the empirical studies conducted, to show the differences and the similarities which exist across cultures.

As Bouma and Atkinson (1997) argue, there are three different basic techniques in social and behavioral science for measuring the variables. The first is observation, the second is interview and the third is examining records and documents. For the present study, data was collected through focus group. A focus group is qualitative research because it asks participants for open-ended responses conveying thoughts or feelings. With qualitative research, researchers seek more open and complete perspectives on the brand or product. However, more general interpretations and uses of the research are necessary, since you cannot as easily break down the research into facts. But for focus group you are analyzing the collected data for the all the group. Two majors' questions were prepared for the focus groups. These two mains questions are open-ended questions and aimed at finding the finding the attitudes of participants for board game. Some of questions are as follows: "what is the role of board game for you?", "Does board game has any impact on your social life?"

A focus group is generally more useful when outcomes of research are very unpredictable and the researcher is looking for more open feedback, as opposed to comparisons of potential results as in a quantified research method. A focus group also allows consumers to express clear ideas and share feelings that do not typically come out in a quantified survey or paper test. Because of the open conversation among group members, topics and discussion are more free-flowing and members can use comments from others to stimulate recall.

In this study, the researcher used a qualitative approach. The most instruments used to assess the similarities and the differences were participative observation of players on the streets, and some places of Wuhan around Central China Normal University. The results found, that both of the two social games shared something in common, and some differences in the strategies of the players. Additionally, some photos were presented, to show African players and Chinese players on the game.

4.0. Results and Discussion

4.1. Similarities

In a board game, players usually place, remove/move counters or pieces (mostly paper-based) on a pre-marked board according to a set of rules. The rules can be really simple, but players are expected to be alert to any verbal/non-verbal hints and use various strategies accordingly during the game. The number of players for each round of the game varies from two to five. The more players collaborate or compete with each other strategically, the more fascinating the game will be.

4.2. Playing the Games

Only two players are moving the pieces for both (Awalé and Weiqi), but there are many others surrounding them giving advice. Usually get together with friends in clubs from different places after work for a simple leisure – playing board games.

- a) No matter your age
- b) For keeping the kids entertained and active in the winter vacation
- c) Creation of social interaction between players and passion to spend the time
- d) Men players are more than women (Both of Africa and China)
- e) Increase the social interaction between players;
- f) Develop their thinking skills.
- g) All of these games are pure strategy. No luck involved--not if you play them right.

5. Differences between the two games

1- AWALE	2- WEIQI
a) Rapid Decision Making in Awalé	a) Chinese characters and symbols
b) An interesting feature of awalé is that even competitive games are played very rapidly,	b) skill, strategy, calculation, and a degree of chance
c) An entire game rarely lasts more than 10 minutes.	c) An entire game lasts more than 45 minutes.
d) Not enough time for extensive look-ahead search and that a fair amount of the moves are chosen by pattern recognition	d) Go is a game of skill and intellectual challenges to player's
e) players find good moves rapidly without analyzing many moves ahead	e) Need more analytical skills, judgment, concentration, memory and creation, etc.
f) The average branching factor (number of legal moves in a position) is 3.5 moves in awalé which is smaller than weiqi.	f) The average branching factor (number legal moves in a position) is (250 moves).
g) Smaller	g) Bigger
h) Simple to play	h) Complex to play

6. Implications for practice in learning context and social interaction

6.1. Learning context

In learning context, teachers could use the strategy, for example encourage kids to: consider the concept of rules, practice following rules, reason about moral problems. When kids play with older role models they can learn something else, too: How to win, and how to lose with grace and good manners (Gobet et al 2004).

Hence, Then there are the possible intellectual benefits. Also Many board game--including the classics, like chess, go, and various [mancala games](#), encourage players to detect patterns, plan ahead, predict the outcome of alternative moves, learn from experience.

6.2. Social interaction

Unlike facing computer screens and chatting with friends via the Internet, board games require face-to-face communication. Therefore, it is also called the “unplugged” game. Xiao jue, a white collar worker in Guangzhou, expressed his opinion on board games “one thing good about playing board games is that people can leave computer desks and sit around a real table with friends, chatting and laughing, which is “more intimate and cozy,”. Board games are opportunities for families to play together. In addition, social scientists have argued that games teach lessons about getting along with others (Kamii and DeVries 1980; Zan and Hildebrandt 2005).

7. Conclusion and Implications

This paper has introduced the concept of social adaptability in games, which we argue is focus on the cross-cultural aspect and the value of social in different social context (Africa and China). Social board game is a very important characteristic of games that take place in social environments where players are likely to meet non players during their play. It also helps us to guide children, to learn the rule and account in the school. However the most important point in this research is that social game is cultural and brings us social interaction, and stimulate players to create a communication in their environment. Both, the two social games shared in common a lot of points and have some differences.

8. Implications for Arithmetic Learning

The present findings suggest a different perspective on the processes involved in arithmetic learning than the typical one. Learning of answers to arithmetic problems has usually been viewed as a simple associative process (e.g., Campbell, 1991; Zbrodoff & Logan, 2005). Within some models, arithmetic performance depends on the frequency of past problem presentation, which is viewed as determining the strength of association between each problem and its correct answer (e.g., Ashcraft, 1992; Ashcraft & Christy, 1995). Within other models, the answers that learners generated, in past efforts to solve a problem determine the associative strength between the problem and, both correct and, incorrect answers (Siegler & Shipley, 1995; Siegler & Shrager, 1984). Yet, other models emphasize priming of associations between problems and answers, interference between problems that share operands, and associations between pairs of operands and answers to other arithmetic operations (Campbell, 1987, 1991; Campbell & Graham, 1985).

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