

# Games and Sports

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## Abstract

Games and sports are found in early human history and appear to be cultural universals. But types of games and sports are not randomly distributed in the world's cultures. Cross-cultural research has found that type of games and sports vary in some very predictable ways—they are related to social and political complexity, to how children are raised, and aggressive sports are related to warfare.

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Figure 1: Choctaw stickball, a predecessor of modern lacrosse, was a highly physical game known as the “little brother of war” (Carson 1995). George Catlin was inspired to paint the sport after witnessing a game in Indian Territory in 1834. Credit: George Carlin, license-free.

## Games and Sports

Games and sports appear to be universal features of human culture, both past and present. Archaeological investigations have uncovered numerous artifacts from game play in sites around the world. These include implements related to games of physical skill, such as balls and hoops, game boards, board game pieces, and playing cards for games of strategy, and dice, used in games of chance. Boards and pieces for games similar to draughts (checkers in North American English) have been found in the ancient city of Ur in modern day Iraq dating to approximately 3,000 BCE (Oxland 2004) and in Egypt dating to as early as 600 BCE (Masters 1997). Early athletic games, or sports, are well known from archaeological and narrative sources. A variety of art forms, including painting and sculpture, from around the world commonly depict play in games and sports. The Greek historian Herodotus (5th century BCE) described games and other

pastimes in Egypt and Lydia (western present-day Turkey) while the Roman historian Tacitus (55-120 CE) described dice games among Germanic tribes. The remains of the ancient Greek Olympic games, often dated to 776 BCE, are well known and include both the site where games were held but also implements, such as javelins and discuses. In ancient Rome, a variety of sports, some transformed from Greek predecessors, were held, initially in gymnasia and palaestrae and later in large stadia, such as the Circus Maximus, and amphitheaters, such as the Colosseum. Popular sports included chariot racing, held in the Circus Maximus, and gladiatorial combats held in the Colosseum.

The Mesoamerican ballgame, known as *öllamalitzli* in Nahuatl, the language of the Aztecs, is one of the best-known team games of physical skill from the ancient world. It is depicted in frescoes, stone carvings, on painted pottery, and by clay figurines of players found in numerous sites in Mexico and Central America. The oldest of these, at Paso de la Armada, in the western Mexican state of Chiapas, dates to approximately 1400 BCE. Game play often had important symbolic or ritual (sometimes involving human sacrifice) aspects as well as more practical purposes, including dispute resolution, status acquisition, and as a vehicle for gambling. But it was also played purely for recreation and possibly even by women (Whittington 2001). While the exact rules for the game are unknown, a modern version, known as *ulama* is still played in northwestern Mexico, primarily in the states of Sinaloa, Sonora, and Durango (Fox 2012).

More systematic cross-cultural studies have shown that the kinds of games and sports found in societies around the world are not random but, instead, have distinctive characteristics that are related to other aspects of the cultures wherein they are found.

### What defines a game versus a sport?

Definitions by their nature are arbitrary, but many cross-culturalists have adopted the following definitions and distinctions between games and sports:

- Games are recreational activities “characterized by: (1) organized play, (2) competition, (3) two or more sides, (4) criteria for determining the winner, and (5) agreed-upon rules” (Roberts, Arth, and Bush 1959, 597). So defined, games are very likely cultural universals.
- An influential classification of game type comes from Roberts, Arth, and Bush who categorized games based on how their outcome, that is, how winning or losing, was primarily determined. Thus, they distinguished *games of physical skill*, *games of strategy* (not involving physical skill), and *games of chance* (involving neither physical skill or strategy).
- Sports are typically regarded as games wherein outcomes depend primarily on physical skill. Loy and Coakley (2007, 4643), for example, defined sport as “an embodied, structured, goal-oriented, competitive, contest-based, ludic, physical activity.



Figure 2: A boy playing *ulama*, a modern version of the Mesoamerican ballgame, in Sinaloa, Mexico. Credit: Manuel Aguilar-Moreno/CSULA Ulama Project, CC BY 2.5.

Note that these definitions exclude activities that are often referred to as games, both in English and other languages. These include parent-infant activities such as “patty-cake” or forms of play that lack competition, such as top-spinning or making string figures. Roberts, Arth, and Bush (1959) referred to such non-competitive activities as “amusements.”

Below, we summarize cross-cultural comparative research on questions about games and sport. These include (1) Do games provide models of important utilitarian aspects of culture? (2) Are games predicted by child rearing? and (3) Are games, particularly in the guise of sport, related to warfare?

### **Do games provide models of important utilitarian aspects of culture?**



Figure 3: A game of *buzkashi* in Mazar-e-Sharif, Afghanistan. Sometimes in teams, *buzkashi* players fight to drag a goat or calf carcass to the goal. Credit: Staff Sgt. Cecilio Ricardo, license-free.

While games may be cultural universals and may be interesting forms of human activity, why are they of any real importance in human life, given that they are often thought of as non-productive and just for entertainment? While there are professional game players and people who make their livings by playing professional sports, such individuals represent very small percentages of any populations. However, Roberts and his colleagues (e.g., [Roberts, Arth, and Bush](#)

1959; Roberts and Sutton-Smith 1962) attributed much greater importance to games because they regarded them as “expressive models” of typically larger scale, and culturally and socially consequential, real-world activities wherein learning took place that could be applied to those activities. So, games of physical skill are often relatively transparent models of activities such as hunting (e.g., target practice with guns or bows and arrows, trap, skeet, or popinjay shooting) and either individual or group combat (e.g., wrestling, boxing, spear or javelin throwing, rugby, American football). The Afghan game *buzkashi*, for example, provides excellent training for horse-mounted warfare. Many games of strategy, such as chess or *wei qi* (also known as *Go*), clearly model warfare as they involve both the capture of opponents pieces as well as territory. The board game, *Monopoly*, which involves both strategy and chance, models real estate transactions and became popular during the Great Depression of the 1930s. Finally, Roberts, Arth, and Bush (1959) felt that games of chance model human interaction with unpredictable forces of nature, divination, or the quest for supernatural guidance in dealing with life’s exigencies.

A number of findings support the idea that games model real-world activities and provide a means of learning. The study by Roberts, Arth, and Bush (1959) and those of a similar genre that followed indicated that:



Figure 4: Men playing *xiangqi*, or Chinese chess, in Singapore. Credit: Endrjuch, CC BY-SA 3.0.

- Games of physical skill are cultural universals and are present in every society in which games are, or have been, reported. The few instances where games have been reported to be absent are likely examples of deculturation, where societies that once had games subsequently lost them, or instances where ethnographers reported their absence in error (Roberts and Barry 1976).
- Games of strategy are more likely with higher levels of political integration and greater social stratification (Roberts, Arth, and Bush 1959). Games of strategy are particularly likely where political leaders manipulate so-

cial relations and symbols as a form of self-aggrandizement in order to consolidate power (Peregrine 2008).

- Games of chance tend to occur in situations where benevolence and coercion by gods and spirits is perceived to be high and aggression by gods and spirits is perceived to be low (Roberts, Arth, and Bush 1959).

What explains these results? In brief, Roberts and Sutton-Smith (1962) claimed that games represent “a form of buffered learning through which the child can make enculturative step-by-step progress toward adult behavior” (pp. 183-184).

### **Are games related to child training?**

Games are related to a society’s emphasis on child training. Cross-cultural research Roberts and Sutton-Smith (1962) as well as Roberts and Barry (1976) shows that:

- Games of strategy are related to higher obedience training
- Games of chance are related to higher responsibility training, more anxiety over achievement and more severe sex training
- Games of physical skill are related to the higher rewards for achievement and greater frequency of achievement.

Why? The underlying theory (Roberts and Sutton-Smith 1962) is that games not only provide venues for both learning about cultural and social life but they are also a means for assuaging internal conflicts that arise during socialization. So, for example, in societies where children have to obey others, games of strategy may be enjoyed because they provide children and many adults with the ability to manipulate and control during the course of the game, behaviors which they cannot readily exhibit as children or as adults if they don’t have power over others. As for games of chance, they may allow a person playing the game to not have responsibility, while in reality they have considerable responsibility. And while games of physical skill may not seem like obvious outlets for dealing with conflict about achievement pressure, they do allow a child to sometimes win at a game by playing with a player similar in skill.

### **Are sports related to warfare and other forms of aggression?**

Social scientists have long debated the relationship between one form of aggression and another. One theory called the “culture pattern model” asserts that aggression is largely learned behavior; if so, all forms of aggression are likely to co-occur. Alternatively, another theory suggests that letting off steam in one arena of aggression, such as sports, reduces other forms of aggression. If the first theory were correct, aggressive or combative sports would be expected to predict more aggression in other aspects of life. If the second theory were correct, more aggressive sports would be expected to less of other kinds of aggression, such as war. What do the cross-cultural findings tell us?



Figure 5: Boys playing a game of chess in Santiago de Cuba, Cuba. Credit: Adam Jones, CC BY-SA 3.0.

- Combative sports, including simulated weapons and simulated humans, do predict more warfare (Sipes 1973; generally replicated in a larger study by Chick, Loy, and Miracle 1997)
  - Although not technically games, “sham combats,” or combat-like activities are particularly likely to predict higher frequencies of warfare
  - Team combative sports are associated with more warfare, but individual combative sports are not.
- Combative sports, both individual (e.g., boxing, wrestling) and group (e.g., rugby, American football), predict higher societal levels of homicide and assault by both individuals and socially organized groups (Chick and Loy 1997).
- Individual combative sports, team combative sports, and sham combat, predict some aspects of masculinist and hypermasculinist ideology and behavior. (Chick and Loy 1997)
  - Sham combat is related to cultural ideologies valuing male aggressiveness and toughness, and to the view that women are inferior as well as to sexual violence toward women.
  - Team combative sports are also related to a cultural ideology valuing male toughness, but not to the view that women are inferior or to sexual violence toward women.
  - The presence of individual combative sports is unrelated to cultural ideologies valuing male aggressiveness or toughness and to the view that women are inferior or to sexual violence toward women.

### Are there gender differences in games and sports?

- Many more games and sports are available across cultures for men than for women (Schlegel and Barry 1989; Deaner and Smith 2013).
- Combative sports and those that model hunting are almost exclusively male activities (Deaner and Smith 2013).
- Female participation in sport is greater in nonpatriarchal than patriarchal societies (Deaner and Smith 2013).

### Directions for Future Research

Predictions regarding games based explicitly on biological evolutionary theory, in terms of natural and sexual selection, have only recently been applied to games and sports (e.g., Deaner and Smith 2013; de Block and Dewitte 2009; Lombardo 2012; Schulte-Hostedde, Eys, and Johnson 2008). This perspective may offer a paradigmatic boost to research on games and sports, especially since this theoretical perspective is prominent in play research on both animals (e.g.,

Burghardt 2005) and humans, including both children (e.g., Pellegrini and Smith 2005) and adults (e.g., Chick 2001; Chick, Yarnal, and Purrington 2012). In particular, evolutionary theory suggests that participation in games and sports may provide reliable signals of mate quality to the opposite sex (Chick 2001; Chick, Yarnal, and Purrington 2012; Deaner and Smith 2013) and may incubate both mental and physical skills needed for warfare, hunting, and other physically demanding activities (e.g., Deaner and Smith 2013; Lombardo 2012). Another direction is to see if play with computer-based games adheres to any of the cross-cultural findings of traditional games.

Some new questions that might be explored with eHRAF World Cultures are:

- Other than sham combat being associated with warfare, do the games most prevalent in a society reflect the importance of other real world activities? For example, in societies more dependent on hunting, are games more likely to mimic hunting skills such as archery in a society that hunts with bows and arrows?
- We know that societies with more political hierarchy and more social stratification are more likely to have games of strategy, but we don't know much about the content of the games themselves. Do more socially stratified societies also model unequal statuses and roles in the games that they play (as in chess with kings, queens, bishops, knights, and pawns)? If games help children provide mastery, are higher status roles or positions more often modelled in games?
- In many societies children play in unstructured ways such as “playing house” or “playing grownup.” Are they more likely to play like this when they are assigned a lot of chores at a young age or when they have few task assignments?

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## References

- Block, Andreas de, and Siegfried Dewitte. 2009. "Darwinism and the Cultural Evolution of Sports." *Perspectives in Biology and Medicine* 52 (1): 1–16. <https://doi.org/10.1353/pbm.0.0063>.
- Burghardt, George R. 2005. *The Genesis of Animal Play: Testing the Limits*. Cambridge, MA: MIT Press.
- Carson, James Taylor. 1995. "Horses and the Economy and Culture of the Choctaw Indians, 1690-1840." *Ethnohistory* 42 (3): 495–513. <https://doi.org/10.2307/483216>.
- Chick, Gary. 2001. "What Is Play For? Sexual Selection and the Evolution of Play." *Play and Culture Studies* 3: 3–25.
- Chick, Gary, and John W. Loy. 1997. "Making Men of Them: Male Socialization for Warfare and Combative Sports." *World Cultures* 12 (1).
- Chick, Gary, John W. Loy, and Andrew W. Miracle. 1997. "Combative Sport and Warfare: A Reappraisal of the Spillover and Catharsis Hypotheses." *Cross-Cultural Research* 31 (2): 249–67. <https://doi.org/10.1177/106939719703100304>.
- Chick, Gary, Careen Yarnal, and Andrew Purrington. 2012. "Play and Mate Preference: Testing the Signal Theory of Adult Playfulness." *American Journal of Play* 4: 407–40.
- Deaner, Robert O., and Brandt A. Smith. 2013. "Sex Differences in Sports Across 50 Societies." *Cross-Cultural Research* 47 (3): 268–309. <https://doi.org/10.1177/1069397112463687>.
- Fox, John. 2012. *The Ball: Discovering the Object of the Game*. New York, NY: Harper.
- Lombardo, Michael P. 2012. "On the Evolution of Sport." *Evolutionary Psychology* 10 (1): 1–28. <https://doi.org/10.1177/147470491201000101>.
- Loy, John W., and Jay Coakley. 2007. "Sport." In *The Blackwell Encyclopedia of Sociology*, edited by George Ritzer, 9:4643–53. Oxford: Blackwell Publishing.

- Masters, James. 1997. "The Online Guide to Traditional Games." 1997. <http://www.tradgames.org.uk/games/Draughts.htm>.
- Oxland, Kevin. 2004. *Gameplay and Design*. Pearson Education.
- Pellegrini, Anthony D., and Peter K. Smith. 2005. *The Nature of Play: Great Apes and Humans*. Edited by Anthony D. Pellegrini and Peter K. Smith. New York, NY: The Guilford Press.
- Peregrine, Peter N. 2008. "Political Strategy and Cross-Cultural Variation in Games." *Cross-Cultural Research* 42 (4): 386–93. <https://doi.org/10.1177/1069397108321895>.
- Roberts, John M., Malcolm J. Arth, and Robert R. Bush. 1959. "Games in Culture." *American Anthropologist* 61 (4): 597–605. <https://doi.org/10.1525/aa.1959.61.4.02a00050>.
- Roberts, John M., and Herbert Barry III. 1976. "Inculcated Traits and Game-Type Combinations." In *The Humanistic and Mental Health Aspects of Sports, Exercise, and Recreation*, edited by Timothy T. Craig, 5–11. Chicago, IL: American Medical Association.
- Roberts, John M., and Brian Sutton-Smith. 1962. "Child Training and Game Involvement." *Ethnology* 1 (2): 165–85. <https://doi.org/10.2307/3772873>.
- Schlegel, Alice, and Herbert Barry III. 1989. "Adolescents at Play." In *The Concept of Culture: Constants and Variants*, edited by Ralph Bolton. New Haven, CT: Human Relations Area Files.
- Schulte-Hostedde, Albrecht I., Mark A. Eys, and Krista Johnson. 2008. "Female Mate Choice Is Influenced by Male Sport Participation." *Evolutionary Psychology* 6 (1): 113–24. <https://doi.org/10.1177/147470490800600113>.
- Sipes, Richard G. 1973. "War, Sports and Aggression: An Empirical Test of Two Rival Theories." *American Anthropologist* 75 (1): 64–86. <https://doi.org/10.1525/aa.1973.75.1.02a00040>.
- Whittington, E. Michael. 2001. *The Sport of Life and Death: The Mesoamerican Ballgame*. London: Thames and Hudson.