Game (Definition)

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Abstract

Scholars and designers have defined the concept of 'game' in different ways over the decades. Are games an activity or an artifact, a form of art or a series of interesting choices, a mess or socio-material stabilizations? Is there something that all games share or is it all just family resemblances? This article considers different definitions proposed since the 1930s, as well as the idea that there is no special set of features or an essence that all games share.

Content

What do we mean when we use the word 'game'? How do we define 'game' as a concept? While game scholars seem to have a tacit and fruitful understanding of what games are (cf. Potter, 1996), game studies as a field – let alone the larger and disconnected group of scholars studying games in different ways – does not have a single, clear and shared definition of 'game'. Numerous different definitions have been put forward over the years, yet the only thing scholars seem to agree on is that rules are somehow central to games (Stenros, 2017).

This article considers definitions that scholars have proposed since the 1930s. This history of game definitions is roughly structured with different types of conceptualizations. Dictionary, essential, persuasive and cluster definitions are considered here, as well as ostensive defining and the idea that there is nothing shared tying all things called 'game' together.

Dictionary Definitions

Let us start the discussion by examining how dictionaries define the word 'game'. To uncover the lexical definition of a concept, one needs to look at the meaning of the word and how it is used (on definitions and defining, see e.g., Arjoranta, 2014, 2019; Gupta, 2014; Hodgson, 2018; Podsakoff, MacKenzie & Podsakoff, 2016; Swartz, 1997; Tavinor, 2009).

Major English dictionaries recognize numerous meanings for the word 'game'. Depending on the dictionary, the definitions are formulated differently, but the meanings described are relatively similar. A 'game', as a noun, is an "amusement or a pastime" (Dictionary.com, n.d.), as in "children's games", it is "an activity or sport usually involving skill, knowledge, or chance, in which you follow fixed rules and try to win against an opponent or to solve a puzzle" (HarperCollins, n.d.), as in a "wonderful game of football", it is the "equipment for a game, especially a board game or a video game" (Lexico, n.d.), it is "a particular competition, match, or occasion when people play a game" (Cambridge University Press, n.d.), or it is a "division of a larger contest" (Merriam-Webster, n.d.). In addition, the dictionaries recognize that 'game' can also refer to manner or skill in gaming ("I'm trying to improve my game") or the score at a particular moment ("the game was 15-17"). Obviously, 'game' also has meanings that are not relevant for game studies, such as game as wild animals, birds or fish hunted for food – or the flesh of such animals. There are further uses of 'game', such as "having good game" (virtuosity; mastery; confidence), "being game" (willingness to participate; being

attractive) or “being in the game” (participating in a competitive or rule-bound activity such as politics or crime).

The etymology of the contemporary English word ‘game’ can be traced back to *gamen* in Old English, circa 1200, meaning joy and fun, or game and amusement. Similar words can be found in other Germanic languages (e.g., *gaman* in Old Saxon and Old High German meaning “sport, merriment”; Online Etymology Dictionary, n.d.).

It is relevant to note here that different languages conceptualize and delimit ‘game’ as a concept differently. In many languages, the word referring to ‘game’ is both a noun and a verb (e.g., *spielen ein Spiel* in German, *jouer à un jeu* in French, *pelata peliä* in Finnish, تلعب لعبه in Arabic), whereas in English one usually plays a game even if ‘game’ does also exist as a verb with this meaning. For example, delimitations referring to children’s play and performance may shift between languages (see Blom, 2020, pp. 40-41).

Essential Definitions

Essential or real definitions are supposed to capture the essence of the thing being defined. Where dictionary definitions (and to some extent nominal definitions more widely) seek to capture how the concept is used in language, an essential definition aims to discover the phenomenon the concept refers to. To produce an essential definition of a ‘game’, we need to investigate the things denoted by ‘game’. From a nominalist point of view, it can be argued that there are no essential definitions of things, since definitions are just how we use language.

It is noteworthy that while there are dozens of accounts of what games are (Stenros, 2017), many of the conceptualizations of ‘games’ do not position themselves as definitions. It is, for example, rare for definitions of games to explicitly outline necessary and sufficient conditions. That said, we can roughly divide definitions of games into two groups: games as activities governed by negotiated rules, and games as systems and procedural artifacts.

The conceptualization of games as activities, as something that a player does, is older. Games are usually seen as existing on a continuum of play activities. Indeed, it is not uncommon to see historian Johan Huizinga’s (1955) and sociologist Roger Caillois’ (2001) characterizations of play/game (*spel* in original Dutch; *le jeu* in original French) discussed as definitions of games or gameplay. Caillois identifies six defining features of a game: 1) *free,* not obligatory, 2) *separate* in time and space, 3) *uncertain* and undetermined, 4) *unproductive* and ending in a situation identical to the beginning of the game, 5) *governed by rules* and thus regulated, and 6) *make-believe* or fictive with awareness of this unreality in regard to everyday life. In addition to these, slightly differently formulated, Huizinga (1955) also underline that play “promotes the formation of social groupings”. Caillois, furthermore, famously explicates the continuum of free play, *paidia*, to rule-bound games, *ludus*. It is also noteworthy, that Caillois’ account of games is particularly conservative and normative: he spends many pages explaining the wrong ways one can play games.

Conceiving games as activities was the hegemonic way of accounting for games until the 1980s. There are different kinds of formulations, with different emphases. For example, when Per Maigaard argued for founding a new subsection of sociology to be devoted to the study

of games, he provided an account that is activity-focused – and encompasses not just recreational games but play and even leisure:

> Games in the most extensive sense of the word are all sorts of activities which are not "real work" for livelihood or common physiological functions – e.g. connected with digestion and sexual life. Games are performed from mere desire. But as activities connected with the exceptions mentioned above also may arise from desire, it is difficult to draw a definite borderline. (Maigaard, 1951, p. 364)

Maigaard's conceptualization anticipates the autotelic/paratelic approach to defining play (e.g., Apter, 1991; Csikszentmihalyi, 2000; see also Harviainen & Stenros, 2021). However, his formulation hardly works as a strict definition, nor is it connected to a larger theory. Philosopher Bernards Suits' definition of 'game' is a foundational part of a larger argument he is making in his book *The Grasshopper* (1978; see also Suits, 1967). Every word counts here – and his definition is literally the definition of the act of playing a game:

> to play a game is to attempt to achieve a specific state of affairs (prelusory goal), using only means permitted by the rules (lusory means), where the rules prohibit use of more efficient in favour of less efficient means (constitutive rules), and where the rules are accepted just because they make possible such activity (lusory attitude). (Suits, 1978, p. 34)

His summation of gameplay as "the voluntary attempt to overcome unnecessary obstacles" is perhaps the most concise and elegant definition thus far. Where Huizinga's account of play has been hugely influential generally in the study of play, Suits' work both emerges from and has been influential in studies of sports, specifically the philosophy of sport.

While most accounts saw play and games as connected (e.g., Kelley, 1988, pp. 49-52; Lévi-Strauss, 1962; Maroney, 2001; Mead, 1934, pp. 151-154; Nachmanovitch, 1990, p. 43), there were also activity-focused definitions that set up games as a separate entity. Clark C. Abt's interest went beyond recreational games and into serious games:

> Reduced to its formal essence, a game is an *activity* among two or more independent *decision-makers* seeking to achieve their *objectives* in some *limiting context*. (Abt, 1970, pp. 5-7, emphases in original)

Abt was interested in using games for specific purposes: simulation, instruction, informing and education – and was also drawing on game theory (see below). His notion of 'game' is antithetical to Caillois', who saw harnessing games for telic purposes as corruption. Even so, Abt still saw games primarily as activities.

The idea of games as activities is usually connected to an idea of a bounded space. There are different kinds of formulations, but they echo the concept of a magic circle of play. Such conceptualizations of games see them as little cosmoses (Riezler, 1941), world-building activities (Goffman, 1961) or domains of contrived contingency (Malaby, 2007).

The other way of essentializing games is to see them ultimately as systems. Usually, this means that a game is an artifact with procedural rules. This idea can be traced back to the

field of mathematics, and specifically *game theory*, where 'game' is almost used as a metaphor. It denotes a formal, rule-bound system, where players are abstractions. In the founding text *Theory of Games and Economic Behaviour*, John Von Neumann and Oskar Morgenstern define a game as its rules:

> The rules of the game [...] are absolute commands. If they are ever infringed, then the whole transaction by definition ceases to be the game described by those rules. (von Neumann & Morgenstern, 1944, p. 49)

The idea of games as a system was a good fit for the operational gaming tradition where games are used for systems analysis in behavioral sciences (Ståhl, 1983a). Their circular definition of a game is an "institutional model of a game situation" (Ståhl, 1983b). Operational gaming is much more interested in the playing of a game (gaming) than in the game-as-a-model. While clearly influenced by game theory, their notion of a game differs significantly. Whereas game theory abstracts players and player actions, operational gaming is specifically interested in player behavior while gaming. Furthermore, they recognize that there is both rigid-rule gaming and free-form gaming, depending on if rules are complete and fully known before play starts or if players can supply and interpret rules after play has started.

The system-based approach was also a good fit for the emerging digital games. Game designer Chris Crawford's 1984 book *The Art of Computer Game Design* has greatly influenced later definitions. In the book, he identified four fundamental elements of games: representation, interaction, conflict and safety. Crawford starts his discussion of representation this way:

> First, a game is a closed formal system that subjectively represents a subset of reality. […] By *closed* I mean that the game is complete and self-sufficient as a structure. The model world created by the game is internally complete; no reference need be made to agents outside of the game. (Crawford, 1984, emphases in original)

This formulation of games as systems is probably Crawford's most lasting contribution. However, he does also discuss how "interactiveness" in games is an index of "gaminess", underlines how conflict is central to games while there is safety due to reduced consequences, and how separating the game from the player is artificial and misleading.

The view of games as systems prioritizes rules to the point that sometimes the game is seen as boiling down to the rules. In addition to game theory, this has been put forward by board game researcher David Parlett (1999; see also Ellington, Addinall & Percival, 1982, p. 9): "Every game is its rules". However, it is more common to see games as a more complicated and situated artifact in which the rules are included. Playing is the activity of manipulating the system (or artifacts), which means that playing need not be fun or voluntary – it can just as well be goal-oriented, boring or mandatory.

As these definitions reflect, Maigaard's call for a field of ludology failed at the time. Until the 1970s, the study of play and games were dispersed in relatively disconnected fields. The emergence of multiple academic fields that were interested in games, such as sport philosophy (e.g., Suits, 1973; 1978; 1988) and the simulation & gaming tradition (e.g., Crookall, Oxford & Sanders, 1987), showed that games are conceptualized very differently

depending on the knowledge-constitutive interests and underlying ontological assumptions. That said, there were also attempts at fostering a more general field for the study of games. Elliott M. Avedon and Brian Sutton-Smith's *The Study of Games* (1970) brought together texts from history to psychiatry and from recreational uses to military and education. Their idea of the study of games was thus much broader than Maigaard's call two decades earlier. Avedon and Sutton-Smith were reluctant to offer a definition that would cover all the areas that they draw from, but ultimately do offer a definition of a game:

> an exercise of voluntary control systems in which there is an opposition between forces, confined by a procedure and rules in order to produce a disequilibrial outcome. (Avedon & Sutton-Smith, 1970, p. 7, see also p. 405)

Notice that "an exercise of voluntary control systems" is their definition of 'play'. Thus, their definition is one of those that emphasizes the continuity between play and games. Of course, Avedon & Sutton-Smith were not the last ones to call for a more unified approach to the study of games (for a recent example, see Klabbers, 2018), but while integrative efforts exist and an awareness of the wider field of study in games is valuable, it seems that the plurality of game research is increasing, not decreasing (see Stenros & Kultima, 2018).

Scholars who offer their definitions of play rarely explicate what kind of definition they think they are offering. Thus, these kinds of classifications are not always fair, and should here be treated as open to debate. One interesting exemption to this is David Myers's (2009) game definition, which is explicitly minimalist, foundationalist and essentialist. He sets out to remove external elements, such as players, and identifies four essential characteristics. Games have "prohibitive" rules (as outlined in Suits' definition), goals (most importantly the winning conditions), opposition (antagonism provided by the game rules), and representation or a falseness that is contrary to the real.

Definitions as Language Games

Philosopher Ludwig Wittgenstein has famously argued that games (*Spiel*, see also Lebed, 2020) do not have a common core, and that there is nothing that all games would share with each other. Instead, he uses games as an example of family resemblance:

> §66. Consider for example the proceedings that we call "games". I mean board-games, card-games, ball-games, Olympic games, and so on. What is common to them all? – don't say: "There *must* be something common, or they would not be called 'games'" – but *look and see* whether there is anything common to all. – For if you look at them you will not see something that is common to *all*, but similarities, relationships, and a whole series of them at that. To repeat: don't think, but look! – Look for example at board games, with their multifarious relationships. Now pass to card-games; here you will find many correspondences with the first group, but many common features drop out, and others appear. When we pass next to ball-games, much that is common is retained, but much is lost. – Are they all 'amusing'? Compare chess with noughts and crosses. Or is there always winning and losing, or competition between players? Think of patience. In ball games there is winning and losing; but when a child throws his ball at the wall and catches it again, this feature has disappeared. Look at the parts played by skill and luck; and at the difference between skill in chess and skill in tennis. Think now of games like ring-a-ring-a-roses; here is the element of amusement, but

how many other characteristic features have disappeared! And we can go through the many, many other groups of games in the same way; can see how similarities crop up and disappear. (Wittgenstein, 1958)

Wittgenstein argues that games are something that cannot be precisely defined. However, Wittgenstein's nominalist argument is not about games but language in general, and games are merely an example. Indeed, definitions should be viewed in terms of family resemblance, where similarities are overlapping and crisscrossing but not universal in all members of the group. Instead, Wittgenstein is interested in language-games; how a particular concept is understood by different groups of language users (Arjoranta, 2015).

Jonne Arjoranta (2015) has argued that in the language-game of defining what games are, there are different and competing emphases, such as prioritizing storytelling over abstract games (narrativity), prioritizing abstract games over free-form play (rules), or prioritizing free-form play over storytelling (playfulness). Arjoranta further reminds us that different types of games, like abstract war board games, digital games and live-action role-playing games are discussed with different, if overlapping, language-games, and they are seen as comparable to very different types of analogs (such as war analogs, computer analogs and theatre analogs). Finally, he points out that games are sociocultural phenomena and instead of looking for an essential core, one should define and redefine them in a hermeneutic spiral.

Whether games are considered activities or systems or something else, they are still created by humans. Social science approaches recognize them (and their limits) as social constructs. There is no essential game in nature that exists disconnected from human effort. Even so, many scholars disagree with the idea that there is nothing that games share. Indeed, Suits (1978, pp. ix-x) clearly states that he feels that Wittgenstein did not take his own advice and "look and see whether there is anything common to all" games before starting to explain his definition. But, again, Wittgenstein was not really making an argument about games.

Ostensive Defining

Ostension is the act of pointing, of showing. Ostensive defining happens through example; instead of explaining something through words, ostensive definitions point at examples: "like this". When exploring a new area, or when a landscape keeps shifting, ostensive defining functions like economic shorthand (see Kultima, 2018). One example of this is in the above quotation from Wittgenstein, who begins by pointing at different types of games in order to show that they are dissimilar. Another great example can be found in the book *Characteristics of Games*:

> for us a "game" is whatever is labelled a game in common parlance. […] We exclude the games without formal rules that very small children play (e.g., "playing house" or swinging); we include most sports, even those such as footraces where the label "game" is not generally used, and we include activities like crossword puzzles that we find not fundamentally different from, say, card solitaire or *Minesweeper*. (Elias, Garfield & Gutschera, 2012, p. 6)

The authors give an account of what kinds of games they have in mind for their book, with examples, and point out when their delimitation differs from common understanding. They go on to explicate that they do not consider this a formal definition of a game, but a practical

account for the needs of their book. This is also common for ostensive defining; it is provisional and tentative, usually adopted for practical purposes. When grappling with a new game genre, player practice or another pattern, it is common to delimit the subject through examples.

Another interesting ostensive definition comes from Stephen Nachmanovitch. He is not only defining games by pointing to examples, but also wants to compare games and play:

> Play is the free spirit of exploration, doing and being for its own pure joy. Game is an activity defined by a set of rules, like baseball, sonnet, symphony, diplomacy. Play is an attitude, a spirit, a way of doing things, whereas game is defined activity with rules and a playing field and participants. It is possible to engage in games like baseball or the composing of fugues as play; it is also possible to experience them as *lîla* (divine play), or as drudgery, as bids for social prestige, or even as revenge. (Nachmanovitch, 1990)

Nachmanovitch's conceptualization is a little different, and hence ostension is a good way of pointing towards inclusions that are uncommon (for example, sonnets, symphonies and diplomacy). The comparison to play is also useful; while he sees the two as connected, they are also conceived as distinct. Arjoranta would see these as analogs.

Persuasive Definitions

The goal of persuasive definitions is not to describe how a concept is used or to capture the essential meaning of the phenomenon the concept refers to, but to influence opinions and attitudes. The goal is to change how we use a concept, or to shift what we think about the phenomenon. Persuasive definitions are also often highly quotable and on social media they might be called "hot takes".

The value of good persuasive definitions lies in their capability to frame and reframe discussions. Obviously, persuasive definitions are often employed to obscure, politicize and carnivalize discussions, but that does not mean that they cannot be used as critical tools as well.

Game designers have used persuasive definitions to communicate their knowledge and wisdom in a concise, attention-grabbing manner. The most famous such definition probably comes from Sid Meier:

> A game is a series of interesting choices. (Meier, quoted in Rollings & Morris, 2004, p. 61)

Although this statement takes the form of a definition, it is more of a crystallization of what Meier considers good game design. Play designer Bernard De Koven (1978) has similarly given an account of what a good game is, or a *well-played game* in his own words, but he did not formulate a concise, elegant and quotable definition.

Of course, branding a definition as persuasive can also be used to discredit said definition. The understanding of what a game is also shifts over time, and thus a definition that once looked like it was persuasive can start to look like a descriptive definition. Designer-researcher Greg Costikyan offers an interesting example of this:

> A game is a form of art in which participants, termed players, make decisions in order to manage resources through game tokens in the pursuit of a goal. (Costikyan, 1994)

When Costikyan's essay "I Have No Words and I Must Design" appeared in 1994 in the second issue of a magazine devoted to analyzing "role-playing and story-making systems", stating that games are a form of art was a bold claim. This was in line with the magazine's stated project (see Rilstone, 1994), but it was not accepted by player or designer communities or the general public, nor aligned with contemporary hegemonic art theory. However, the statement is much less contested today in all three domains.

Games are also used in persuasive definitions relating to other domains. When, for example, the psychology of human motivation (Berne, 1964), the seduction and harassment tactics of the pick-up artist community (Strauss, 2005) or the theology of life (Carse, 1986) is called a game, this is in line with the nominal definition of games as participating in rule-bound activity, but these can also be viewed as metaphoric and persuasive reframings of using the concept of games.

Cluster Accounts

In game studies, the most cited definitions of games come from Jesper Juul, Katie Salen Tekinbaş, and Eric Zimmerman. After the turn of the millennium, during the formative years of game studies, they reviewed a selection of existing definitions of games and offered their own syntheses:

> A game is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome. (Salen Tekinbaş & Zimmerman, 2004, p. 81)

> A game is a rule-based system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels emotionally attached to the outcome, and the consequences of the activity are negotiable. (Juul, 2005, p. 36)

These definitions foreground games as systems, but do not leave out players and the act of playing either. These definitions are presented as essential definitions. However, essential definitions usually offer a stricter line of demarcation between a game and a not-game, whereas these scholars also discuss borderline cases and gray areas. For example, open-ended games that do not have quantifiable outcomes are a borderline case according to both of these definitions. Thus, these definitions can be understood as *cluster accounts*. Cluster accounts offer a list of criteria and the more of these criteria that apply to a thing, the more likely it is that this thing qualifies as whatever it is that is being defined, in this case a 'game' (see Gaut, 2005).

According to philosopher Rudolf Carnap (1950, p. 7), a good exact concept, *explicans*, is similar to the *explicandum* (pre-scientific concept), it is as exact as possible, it is fruitful and as simple as possible. These two definitions are easy to understand while being concise and elegant. They have certainly proven to be fruitful in both serving as working definitions of games in numerous scholarly works, and in generating discussion about the definition of games. They

are not overly exact, leaving room to gray areas, but that has been part of why they have been so fruitful. Of course, some of the discussion has been on whether they are similar enough to the explicandum.

Other game definitions that can be understood as cluster accounts have been offered by, for example, Marc Prensky (2001), who lists rules, goals or objectives, outcomes and feedback, conflict/competition/challenge/opposition, interaction and representation or story as the features of games, and Nicola Whitton (2009), who boils games down to competition, challenge, exploration, fantasy, goals, interaction, outcomes, people, rules and safety. Cluster accounts can be quite practical; they can take the form of essential definitions, but allowing for borderline cases, or they can be based on a Wittgensteinian approach where "an exact classification is not necessary to be able to study games effectively" (Whitton, 2009, p. 20).

Messy Definitions

Definitions aim to be concise and precise, they function to cut through uncertainty and to bring about clarity. However, in practice, games are complicated and unruly, porous and ambiguous, they are heterogeneous and contextual. Numerous researchers have objected to overtly formalistic accounts of games. For example, T.L. Taylor has argued for a more holistic understanding of 'game':

> Games, and their play, are constituted by the interrelations between (to name just a few) technological systems and software (including the imagined player embedded in them), the material world (including our bodies at the keyboard), the online space of the game (if any), game genre, and its histories, the social worlds that infuse the game and situate us outside of it, the emergent practices of communities, our interior lives, personal histories, and aesthetic experience, institutional structures that shape the game and our activity as players, legal structures, and indeed the broader culture around us with its conceptual frames and tropes. (Taylor, 2009)

Taylor is arguing that games can be understood through the concept of *assemblage*, the combination of the human and the non-human. She is not the only one calling for a situated, historical and nuanced understanding of games. Constance Steinkuehler (2006) has discussed games as a "mangle of play" and Ian Bogost (2009) argues that they are a mess. (Such situated understandings of 'games' are quite similar to the Wittgensteinian nominalist position.) However, all three scholars were mainly drawing from digital games. Sebastian Deterding has offered a more general take on games, which similarly considers the historical social reality of a game:

> [F]ormal games are socio-material stabilisations and institutionalisations involving player communities, game equipment, and formalized representations of the constitutive rules of a game. Playing any formalized game means to align oneself in a mutually intelligible manner both with the specific constitutive rules of the game, and the general constitutive rules of 'playing a game'. They continue to be reproduced-and-changed as people continue to bring together people, inscriptions, and game equipment in framing a situated encounter of doings, sayings, events and experiences as 'playing game X'. (Deterding, 2013, p. 177; see also p. 237)

These longer and messier definitions are rooted in social sciences (aside from Bogost's). They are not straightforward and elegant, but they can still be quite fruitful. Here, the goal is not to construct definitions of games as a stepping-stone to something else but as attempts at unpacking and understanding games as social processes.

Conclusions

In the process of defining a concept, we identify and make visible a process, a phenomenon, a thing or a dynamic. The end result, the definition, can have many functions. Usually, it is a tool that will help bring about clarity by condensing knowledge, a thing-to-think-with that can prove to be fruitful in further scholarly work if using it leads to new knowledge. However, the process of defining can be illuminating in itself, even if the resulting definitions would not be novel. Of course, a definition can also be used as a barrier. Definitions are not just logical entities; they contain value judgments (Popkin, 1943). The field of game studies is organized around the concept of 'game', and depending on what definition is used, we can determine not only what counts as games studies and what does not, but also what lies in the center and what lies in the periphery.

Over the years, 'game' has been defined and accounted for in many ways. These different conceptualizations of 'game' are usually understandable in their historical and scholarly context. Usually, the definitions are, in practice, meant for a subset of all those things that can be called games. Indeed, it would be interesting to find out what are the things the definers of games consider as neighboring phenomena. Are games related to sports, puzzles, toys, simulations, gambling or maybe playgrounds? Are they a subset of activities, recreations, narratives, commodities, technology, media, play, products, practices, traditions, learning aids, rituals or tools of control? It might be easier to define a subgroup of games, such as video games, sports, role-playing games, gambling games or serious games, since the hegemonic assumptions relating to these narrower domains are also more uniform. For the moment, it seems that the definitions that demarcate the field of game studies are the cluster definitions supplied by Juul, Salen Tekinbaş & Zimmerman. However, specific inquiry into games and theoretical elaborations thereof use a wider set of definitions.

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References

Abt, C. C. (1970). *Serious games*. The Viking Press.

Apter, M. J. (1991). A structural-phenomenology of play. In J. H. Kerr & M. J. Apter (eds.), *Adult Play: A Reversal Theory Approach*. Swets & Zeitlinger.

Arjoranta, J. (2014). Game Definitions: A Wittgensteinian Approach. *Game Studies*, *14*(1).

Arjoranta, J. (2019). How to Define Games and Why We Need to. *The Computer Games Journal*, *8*, 109–120. doi:10.1007/s40869-019-00080-6

Avedon, E. M., & Sutton-Smith, B. (Eds.). (1971). *The study of games*. New York, NY: John Wiley.

Berne, E. (1964). *Games people play*. London, England: Penguin Books.

Blom, J. (2020). *The Dynamic Game Character: Definition, Construction, and Challenges in a Character Ecology*. Doctoral dissertation. IT University of Copenhagen.
Bogost, I. (2009). Videogames are a mess. *Keynote at DiGRA 2009*. Brunel University. http://www.bogost.com/writing/videogames_are_a_mess.shtml
Caillois, R. (2001). Man, play and games. Chicago, IL: University of Illinois Press.
Cambridge University Press (n.d.). Game. *Cambridge Dictionary*. https://dictionary.cambridge.org/dictionary/english/game
Carnap, R. (1950). *Logical Foundations of Probability*. Chicago: The University of Chicago Press.
Carse, J. P. (1986). *Finite and infinite games*. New York, NY: Random House.
Costikyan, G. (1994). I have no words and I must design. *Interactive Fantasy*, *2*, 22–38.
Crawford, C. (1983). *The art of computer game design*. Berkeley, CA: Osborne/McGraw-Hill.
Crookall, D., Oxford, R., & Saunders, D. (1987). Towards a reconceptualization of simulation: From representation to reality. *Simulation/Games for Learning*, *17*, 147–171.
Csikszentmihalyi, M. (2000). *Beyond Boredom and Anxiety: Experiencing Flow in Work and Play*. 25th Anniversary Edition. Jossey-Bass.
De Koven, B. (1978). *The well-played game. A player's philosophy*. Garden City, England: Anchor Press/Doubleday.
Deterding, S. (2013). *Modes of play. A frame analytic account of video game play*. Doctoral dissertation. University of Hamburg.
Dictionary.com (n.d.). Game. *Dictionary.com*. https://www.dictionary.com/browse/game
Elias, G. S., Garfield, R., & Gutschera, K. R. (2012). *Characteristics of games*. Cambridge, England: The MIT Press.
Ellington, H., Addinall, E., & Percival, F. (1982). *A handbook of game design*. London, England: Kogan Page.
Gaut, B. (2005). The Cluster Account of Art Defended. *British Journal of Aesthetics*, *45*(3).
Goffman, E. (1961). *Encounters: Two studies in the sociology of interaction*. Indianapolis, IN: Bobbs-Merrill.
Gupta, A. (2014). Definitions. In E. N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy (Fall 2014 Edition)*. http://plato.stanford.edu/archives/fall2014/entries/definitions/
HarperCollins (n.d.). Game. *Collins Dictionary*. https://www.collinsdictionary.com/dictionary/english/game
Harviainen, J. T., & Stenros, J. (2021). Central Theories of Play and Games. In M. Vesa (Ed.), *Organizational Gamification. Theories and Practices of Ludified Work in Late Modernity*. Routledge.
Hodgson, G. (2019). Taxonomic definitions in social science, with firms, markets and institutions as case studies. *Journal of Institutional Economics*, *15*(2), 207-233. doi:10.1017/S1744137418000334
Huizinga, J. (1955). *Homo Ludens: A study of play element in culture*. Boston, MA: Beacon Press.
Juul, J. (2005). *Half-Real: Video games between real rules and fictional worlds*. Cambridge, MA: MIT Press.
Kelley, D. (1988). *The art of reasoning*. Referred from the 1998 Third Edition. New York, NY: W.W. Norton.
Klabbers, J. H. G. (2018). On the architecture of game science. *Simulation & Gaming*, *49*(3), 207–245. doi:10.1177/1046878118762534
Kultima, A. (2018). *Game Design Praxiology*. Doctoral dissertation. University of Tampere.

Lebed, F. (2020). Play and Spiel are not the Same: Anti-Wittgensteinian Arguments and Consideration of Game as a Kind of Human Play. *Games and Culture*, *16*(6). doi:10.1177/1555412020973104
Lévi-Strauss, C. (1966). *The savage mind*. Chicago, IL: University of Chicago Press.
Lexico (n.d.). Game. *Lexico English Dictionary*. https://www.lexico.com/definition/game
Maigaard, P. (1951). About ludology. *14th International Congress of Sociology*, 362–373. Rome, Italy.
Malaby, T. (2007). Beyond play: A new approach to games. *Games and Culture*, *2*, 95–113.
Maroney, K. (2001, May). My entire waking life. *The Games Journal*. www.thegamesjournal.com/articles/MyEntireWakingLife.shtml
Mead, G. H. (1934). *Mind, self & society from the standpoint of a social behaviorist*. Chicago, IL: The University of Chicago Press.
Merriam-Webster (n.d.). Game. *Merriam-Webster*. https://www.merriam-webster.com/dictionary/game
Myers, D. (2009). In search of a minimalist game. *Proceedings of the 2009 DiGRA International Conference: Breaking New Ground: Innovation in Games, Play, Practice and Theory*. West London, UK.
Nachmanovitch, S. (1990). *Free play. Improvisation in life and art*. New York, NY: Jeremy P. Tarcher/Putnam.
Online Etymology Dictionary (n.d.) Game. *Online Etymology Dictionary*. https://www.etymonline.com/word/game
Parlett, D. (1999). *The Oxford history of board games*. Oxford, England: Oxford University Press.
Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2016). Recommendations for Creating Better Concept Definitions in the Organizational, Behavioral, and Social Sciences. *Organizational Research Methods*, *19*(2). doi:10.1177/1094428115624965
Popkin, R. (1943). The Function of Definitions in Social Science. *The Journal of Philosophy*, *40*(18).
Potter, W. J. (1996). *An analysis of thinking and research about qualitative methods*. Mahwah, NJ: Lawrence Erlbaum.
Prensky, M. (2001). *Digital game-based learning*. New York, NY: McGraw Hill.
Riezler, K. (1941). Play and seriousness. *The Journal of Philosophy*, *38*, 505–517.
Rilstone, A. (1994). Editorial. *Inter*Action*, *1*, 3–7.
Rollings, A., & Morris, D. (2004). *Game architecture and design*. Berkeley, CA: New Riders.
Salen, K., & Zimmerman, E. (2004). *Rules of play*. Cambridge, MA: MIT Press.
Steinkuehler, C. (2006). The mangle of play. *Games and Culture*, *1*, 199–213.
Stenros, J. (2017). The Game Definition Game: A Review. *Games and Culture*, *12*(6).
Stenros, J., & Kultima, A. (2018). On the Expanding Ludosphere. *Simulation & Gaming*, *49*(3), 338–355. doi:10.1177/1046878118779640
Strauss, N. (2005). *The game. Penetrating the secret society of pickup artists*. New York, NY: Regan.
Ståhl, I. (Ed.). (1983a). *Operational gaming. An international approach*. Oxford, England: Pergamon Press.
Ståhl, I. (1983b). What is operational gaming? In S. Ingolf (Ed.), *Operational gaming. An international approach* (pp. 25–39). Oxford, England: Pergamon Press.
Suits, B. (1967). What Is a Game? *Philosophy of Science*, *34*(2), 146–148.

Suits, B. (1973). The elements of sport. In O. Robert (Ed.), *The philosophy of sport: A collection of essays*. Quoted from Morgan, W. J., & Meier, K. V. (eds.). (1995). *Philosophical inquiry in sport* (2nd ed., 8–15). Human Kinetics.
Suits, B. (1978). *The grasshopper. Games, life and utopia*. Toronto, Canada: Broadview Press.
Suits, B. (1988). Tricky triad: Games, play, and sport. *Journal of the Philosophy of Sport*, *XV*. Quoted from Morgan, W. J., & Meier, K. V. (eds.). (1995). *Philosophical inquiry in sport* (2nd ed., 16–22). Champaign, IL: Human Kinetics.
Swartz, N. (1997). Definitions, Dictionaries, and Meaning. http://www.sfu.ca/~swartz/definitions.htm
Tavinor, G. (2009). *The Art of Videogames*. Wiley-Blackwell.
Taylor, T. L. (2009). The assemblage of play. *Games and Culture*, *4*, 331–339.
Von Neumann, J., & Morgenstern, O. (1944). *Theory of games and economic behavior*. Princeton, NJ: Princeton University Press.
Whitton, N. (2009). *Learning with digital games. A practical guide to engaging students in higher education*. New York, NY: Routledge.
Wittgenstein, L. (1958). *Philosophical Investigations*. Basil Blackwell.

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