

## Action

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### Abstract

This essay describes two different phenomena: action games, understood as a genre of games in which the player's sensori-motor skills prevail over his cognitive activity, and a general theory of action-taking in context of the game-playing practice. Through a short history of the main genres and sub-genres traditionally identified with "Action games", and the conclusion that such a categorization pertains to a mode of action rather than a given genre, the properties of action games are identified as involving a standardized repertoire of actions, emphasis on sensori-motor skills, and short-term action sequences.

The term "Action" in the context of game studies refers to two distinct fields of inquiry. In the first, broadest sense, the study of action stems from a variety of fields such as the philosophy of action, cognitive psychology, and interaction design. Paul Ricoeur's *From Text to Action* (1991), to name a single work, breaks down a "conceptual network of action" through five components: goal, agents, motives, circumstances, and cooperation. Accordingly, game studies scholars have examined the general processes, conditions, and modalities that govern the undertaking of actions by video game players. See for instance Aki Järvinen, here adapting Nico Frijda's model of phasic emotions (Frijda 1987):

gameplay consists of phases that are analogous to those of the emotional process; there is recognition of something significant in the game in its present state, followed by the player's appraisal of the situation and what to do. After that, the player proceeds to take

actions within the rules, as action readiness transforms into concrete action (Järvinen, 2009, p. 87-88).

The second and more widespread meaning of “Action” is usually understood as a genre of games, as Thomas Apperley’s short description highlights:

The action genre consists of two major subgenres: first-person shooters and third-person games. [...] Action games in particular are often intensively performative, in a manner distinctly different from other genres of performative games, in that it is action games that will often require the player to engage in extreme nontrivial actions in order to make the ergodic traversal [...]. The abilities possessed by the avatar of the player must be activated by a technical performance by the player (Apperley, 2006, p. 15-16).

This commonplace usage, however, does not translate onto the academic sphere as well as it should. Even taking into account that “there is a curious lack of genre studies” in video game studies (Klevjer 2006), surprisingly little has been written on “action games”. Part of the problem might be that such a categorization is not specific enough, such that any study of a group of games will focus on a given “subgenre”, such as the first-person shooter.

In this sense, video game genre shares some of the essential properties of film genres; this is why Aki Järvinen’s critique of Mark J. P. Wolf’s genre typology (“if we see genre-based categorizations as a means of making sense out of a larger whole, 42 genres ceases to be useful”, in Järvinen, 2002) echoes film scholar Barry K. Grant’s remark that “however defined, generic categories must be useful. Categories such as narrative, documentary and abstract or experimental, while they do cover the range of possible types of filmmaking, are too broad to be very useful for genre criticism” (Grant, 2007, p. 23). This appears to also be the case for the

“action” label, which may suit the needs of general commentary, but whose expansiveness becomes meaningless in a more involved context. Significantly, in many game studies books, journal articles, or papers dealing with formal aspects of games, genre definitions or typologies do not feature an entry for “action games” in their index or abstract (even when they provocatively enough list both “action-adventure” and “adventure”), while scholarly work that does not address specific details of gameplay or categorization (such as studies of psychological effects of games, to name but one example) happily use the term off-handedly.

All in all, it seems that a term like “action game” is more or less taken for granted in commonplace usage, but not precise enough for the needs of specialized study. “Action games” stands, in the words of Tzvetan Todorov (1978), as a historical genre (whose existence can be pointed to in historical reality by referring to paratextual materials such as game reviews, marketing, etc.), without a corresponding widely agreed-upon theoretical genre (an analytical category that can be deduced or conceived, abstracted from any given incarnation). The need for a definition therefore constitutes our first point of inquiry.

### **“Action” as a Super-Genre of Games**

By all accounts, “action games” appears to be something of a higher-level qualifier, and not exactly akin to game genres as we usually know them. To illustrate its self-evident nature, consider that Alexis Blanchet (2010) supplied a succinct definition of “3D action” only in the glossary of his book, intended for the reader who is unfamiliar with video games: “3D Action : video game genre that represents game environments in 3D, and that relies on the player’s reflexes and skill through interactions played out in real time” (Blanchet, 2010, p. 441; my

translation). Laird and van Lent go for a simpler and more subjective, but perhaps more accurate, description: “Action games are one of the most popular game genres, and involve the human player controlling a character in a virtual environment, usually running around frantically using deadly force to save the world from the forces of evil” (Laird & van Lent, 2005, p.205-206).

One of the more rigorous definitions of the genre appears in Chris Crawford’s seminal *Art of Computer Game Design* (1984). His work toward a taxonomy of computer games was founded on a broad divide in two categories: “Skill-and-action games” and “Strategy games”. While some of the remarks in Crawford’s introductory paragraph on skill-and-action games might appear antiquated and bring a chuckle to the contemporary reader, the definitional points that I emphasized in the citation are still valid, 30 years later:

This is easily the largest and most popular class of computer games. Indeed, most people associate all computer games with skill-and-action games. All arcade games are S&A games and almost all games for the ATARI 2600 are S&A games. *This class of games is characterized by real-time play, heavy emphasis on graphics and sound, and use of joysticks or paddles rather than a keyboard. The primary skills demanded of the player are hand-eye coordination and fast reaction time.* I group skill-and-action games into six categories: combat games, maze games, sports games, paddle games, race games, and miscellaneous games (Crawford, 1984, p. 25-26).

The defining factor of “action” games thus appears to be the importance of the player’s sensori-motor skills (which includes both hand-eye coordination and reaction time) in performing the various actions needed to progress through the game’s challenges. Beyond this very general

requirement, genre labels provide more precise categories for certain subsets of action games, and are usually employed by researchers looking to study a given corpus of games.

It should be noted that genres are historical constructs, brought about by discourses on games rather than by the games themselves (see Arsenault, 2009). Hence, Crawford's six identified "categories" of action games (combat, maze, sports, paddle, race, and miscellaneous) will evidently not conform to the historical reality of the 2000s or 2010s. The kind of reality described by the broader term "action", on the other hand, does not seem subjected to the same historically-restricted existence. Interestingly, Crawford's "miscellaneous" category perfectly describes the role which the "action game" label plays among the landscape of genres in video games:

My taxonomy is flawed; there exist a number of games that do not fit into this taxonomy very well. The first I will mention is DONKEY KONG, (trademark of Nintendo) a game that looks vaguely like a race game with intelligent obstacles. [...] The fact that these games do not fit my taxonomy does not bother me overly much; I certainly don't want to create ad hoc categories for individual games. I am content to wait and see other developments before I create new categories or revise old ones (p.30).

When a game cannot be placed into a specific genre, we fall back on the higher-level term:

*Donkey Kong* (1981) is a "Skill-and-action game" because it can't be assigned to another more specific category (in this case, the "platform" genre that would grow in popularity during the latter half of the 1980s, following the pioneering *Pitfall!* (Activision, 1982) and the influential *Super Mario Bros.* (Nintendo, 1985). This is the kind of situation that prevails for action as a

genre: an action game relies on sensori-motor skills and real-time play, and cannot be more precisely described through a given game genre.

### **On the Origin of Species**

To illustrate the problematic expansiveness we must deal with, it would now be a good time to pause and briefly trace the first directions taken by arcade games that would later grow into the wide variety of genres and landmark titles to be known as “action games”. We will then use the shooting and fighting games as examples of the diversity to be found under every genre label. We might say that action games debuted with the promethean *Spacewar!* (Russell et al., 1962) and its *Computer Space* (Nolan Bushnell & Ted Dabney, 1971) arcade adaptation, but achieved commercial success through three genres: the ball-and-paddle games made famous through *Pong* (Atari, 1972) and *Breakout* (Atari, 1976), the racing games that appeared with the top-down *Space Race* (Atari, 1973) and first-person perspective *Night Driver* (Atari, 1976) and eventually *Pole Position* (Namco, 1982), and the maze games that debuted with *Gotcha!* (Atari, 1973) and reached their apex with the *Pac-Man* (Namco, 1980) phenomenon.

Following *Gun Fight* (Taito, 1975) and the Atari 2600 title *Combat* (Atari, 1977), shooters quickly diversified in many sub-genres, with *Space Invaders* (Taito, 1978) and *Asteroids* (Atari, 1979) as the prototypical fixed-screen shoot’em ups, and *Xevious* (Namco, 1982) introducing the classic scrolling shooter formula seen in *1942* (Capcom, 1984), among others. Shooting galleries also made the move from fairgrounds to televisions, with Nintendo’s 1984 *Wild Gunman* being a classic example. Another genre of action games, rail shooters, could theoretically be described as shooting galleries with a more involved fictional representation that

depicts events through the continuous first-person perspective of automated spatial movements; Atari's seminal 1983 *Star Wars* arcade game, for instance, affords the player control on shooting while his X-Wing starfighter pilots itself towards the end goal. The early 1980s also saw the rise of the humanoid player-character, allowing for different gameplay opportunities within the action genre such as the already-mentioned platform game, but also the "run and gun" subgenre, which emphasizes movement as much as aiming and shooting. The *Sheriff* (Nintendo, 1979) arcade game introduced the top-down variety, further popularized by *Berzerk* (Stern Electronics, 1980), *Robotron: 2084* (Vid Kidz, 1982) and *Commando* (Capcom, 1985), while *Contra* (Konami, 1987) hybridized the run and gun form with the side-scrolling platform game.

With continuous graphical improvements, characters could be depicted with greater detail and smoother animation, which opened the opportunity for the fighting game to emerge. Depending on one's perspective, its roots can be traced back to either *Karate Champ* (Technos, 1984) or *Yie Ar Kung-Fu* (Konami, 1985); while both games cemented hand-to-hand combat as a "duel between equals" characteristic of Roger Caillois' (1961) *agôn* game structure, *Karate Champ* can be said to be closer to a simulation of karate than *Yie Ar Kung-Fu* (namely through the latter's usage of the health bar). In this respect, *Karate Champ* is perhaps best envisioned as being in line with *Warrior* (Tim Skelly, 1979), a one-on-one swordplay fight simulator in which players control their characters' motion through the realistic mapping and fine manipulation of vector-based graphics rather than fast-paced button mashing. Regardless of the chosen root, no one can argue that the tree of fighting games only sprang fully-grown through the success of *Street Fighter II* (Capcom, 1991) and *Mortal Kombat* (Midway, 1992). A related but different sub-genre can be found in the beat'em up, whose formula had been prefigured by *Kung-Fu*

*Master* (Irem, 1984) and established by *Double Dragon* (Technos, 1987), in which the player advances through levels while battering down scores of weak enemies in hand-to-hand combat.

While this short survey can never be completed in the space allotted here, it helps frame the discussion, at least historically. Covering the 1990s and 2000s would probably require twice as much space, if only because of the much higher count of games produced during these decades. We can still make a broad sweeping statement to highlight the strong grip which the first-person shooter exerted on action games during this period, from id Software's *Wolfenstein 3D* (1992) and *DOOM* (1993) to the latest entries in the *Unreal* (Epic MegaGames & Digital Extremes, 1998), *Halo* (Bungie Studios, 2001), and *Call of Duty* (Infinity Ward, 2003) franchises. The cornerstones of "Action" gameplay also entered other genres through hybridization practices, leading to the real-time strategy game with *Dune II: The Building of a Dynasty* (Westwood Studios, 1992) and *Warcraft: Orcs & Humans* (Blizzard Entertainment, 1994), to give two examples. Cross-pollination with the role-playing game and the adventure game led to the widespread emergence of the action-RPG and, most famously, the action-adventure game, to which we will return later. These cases also indicate that the more history unfolds, the less "action" functions as a stand-alone usable term for describing games.

Our definitional ambition is both stirred and marred by the wide range of games highlighted here. Our definition of "action" would need to account for all games directly labeled as such, but also to capture the essence of that gameplay component when it is referred to as part of a hybrid construct. In accordance with prototype theory (Rosch & Lloyd, 1978), a cognitive model based on "typicality gradients" as a more appropriate way of modeling the human mind's behavior through activities of classification, we would say that the "real-time" and "sensorimotor skills" traits form the nucleus of "action games", while some secondary features have a



clustering tendency and can appear closer or farther away from that prototypical core, depending on specific subgenres and titles. To name a few of these secondary properties, however, will require us to take a detour through theoretical work conducted on “game actions”, the reverse side of “action games”, as alluded to in the opening of this essay.

### **Action as a Mode of Gameplay**

An appropriate way of conceptualizing the label “action” might be to move away from genre, and to understand it from a modal point of view. Through this frame, “action” refers to a certain manner in which players must interact with a game to overcome the challenges and progress through the game structure. Gregersen and Grodal (2009) separate the in-game actions, usually performed through the relay of a player-character or avatar, from the gamer’s own physical actions in the real environment (such as pressing a button on a controller), which they term primitive actions or P-actions: “we perform a wide variety of game actions *by performing P-actions in relation to control interfaces: The resulting state changes in the controller are mapped to the virtual environment*” (Gregersen & Grodal, 2009, p. 70). Subsequent work by Gregersen has focused on “interaction modes”, as in specific ways in which players may perform their P-actions: “the interaction mode identifies *generic structures of physical activity when interacting with the total game system*. Players need to move their bodies in specific ways to affect the game system and interaction modes are thus integral to defining games as finite provinces of embodied interaction” (Gregersen, 2011, p. 101). If we are to qualify “action games” according to this framework, we might say that those games make important demands on the gamer’s embodied interactions and P-actions.

Away from the question of embodiment that lies at the heart of Gregersen and Grodal's work, Perron, Arsenault, Picard, and Therrien came up with a model of "actional modalities" (Perron *et al.*, 2008) which identified four modes that pertain to player action in video games, from the player's perspective on the sequences of actions that he or she must perform and the type of skills that are necessary for their deployment: Execution, Resolution, Strategy, and Improvisation. "Execution relies on the gamer's sensori-motor skills" (Perron *et al.*, 2008, p. 248), the goal of these games being to successfully implement the correct actions using manual dexterity and fast reaction time. As is readily apparent, this is the actional modality on which action games (understood as a genre or branch of games) heavily rely on. An additional specification made by the model is that the gamer has access, through his player-character, to a certain repertoire of moves which he must deploy accordingly.

Through contrast with the other actional modalities, we can infer the properties of the Execution actional modality, and a number of prototypical secondary properties of action games. Execution differs from the second mode, Resolution, which is chiefly concerned with problem-solving using the player's cognitive skills, and does not hinge on a finite, standardized set of possibilities which the player must learn to master: "Each situation must be resolved individually, and the gamer is not told in advance exactly which actions her character can perform. The same action of clicking on the screen can yield a variety of developments such as entering a conversation, jumping over a pit, stealing an object, or punching someone." (Perron *et al.*, 2008, p. 248) Resolution is the hallmark of the adventure game in its puzzle-solving dimension, as by definition, to puzzle someone means to confuse them with a problem whose solution is not readily apparent. The third actional modality, Strategy, is marked by reliance on cognitive rather than sensori-motor skills, but differs from Resolution in that it implies a long-

term vision that extends beyond a particular given situation, and a kind of systemic coherence that many adventure games lack. It is traditionally found dominant in strategy games, but also in role-playing games. The fourth modality, Improvisation, will be left out of this analysis, since it is occasionally found in games, but more often appears in other interactive practices such as hypertext literature and new media art. Improvisation poses no particular challenge (and thus involves no specific skillset), the interactor freely experimenting with possibilities in mostly haphazard fashion.

It is worth taking a single situation to exemplify the three actional modalities. An archetypal example would be the need for the player to defeat a particular enemy guarding a door. In the Execution modality, the player coordinates his fighting moves, dodging and blocking mechanics, special powers and combos, etc., to attack and defeat the enemy through real-time skillful interaction. In the Resolution modality, the player may need to open his inventory and drag a soap that he picked up earlier, drop it on a predetermined ceramic floor tile, and then click on a mop and water bucket that is conveniently lying around to cause a cut-scene to play out, in which the enemy slides on the soap and spins out of the room (and perhaps into a pit). In the Strategy modality, the player may need to gauge his resources of health, endurance, physical strength and attack power, and make a good series of decisions to make the most out of them. Figure 1 below illustrates the core traits of each modality (in parentheses) as the vertices of a triangle; each core trait is flanked by secondary traits (in bold italics) that run along the two connecting edges; each modality also has an incompatible trait that appears on the edge opposite its vertice, and atypical secondary traits in the form of the other vertices of the triangle (as, quite plainly, if a given game were to show such secondary traits, it would be said to mix two actional modalities).

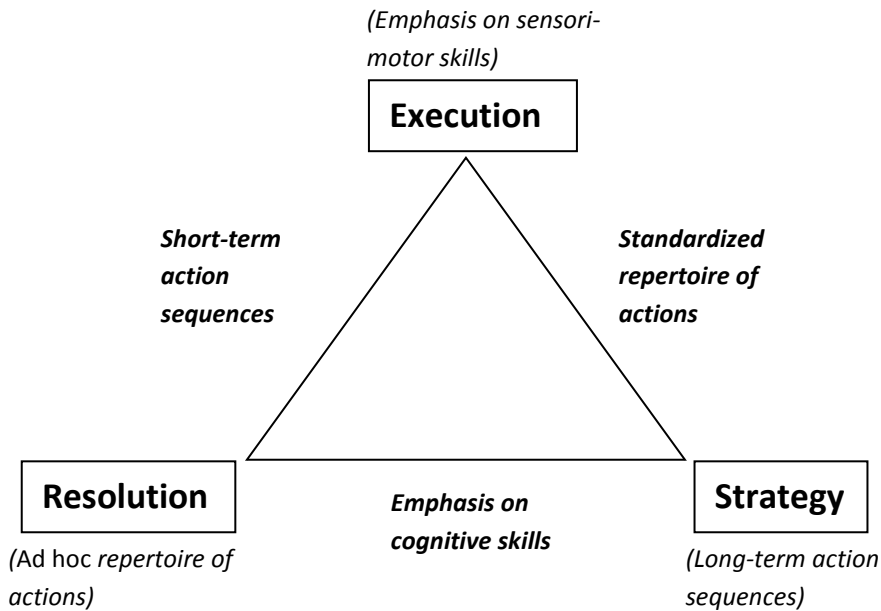


Fig. 1: General properties that define the three actional modalities of Execution, Resolution and Strategy, according to what they share and are opposed to.

Our definition of action games now has some solid foundations: action games favor the Execution actional modality, which means they typically rely on short-term action sequences carried out in-game through a standardized repertoire of actions, themselves implemented by the gamer through an interaction mode that prioritizes hand-eye coordination and sensori-motor skills for fine-tuned P-actions. While action games, unlike adventure games, may present the player with a coherent and fixed repertoire of actions, we must substantiate such a divide with firmer theoretical grounds if we are to tackle the popular action-adventure hybrid.

### **The Action-Adventure Paradox**

In recent years, Action has increasingly been replaced by “Action-Adventure”, the catchall term *par excellence* for third-person video games in which the player must navigate a

player-character through space, fight enemies, pick up objects, solve puzzles, and talk to other non-player characters. As Action games and Adventure games can act as polar opposites on the questions of player skills (sensori-motor/cognitive) and player-character skills (standardized/undefined), this loose definition has important internal tensions, which can be resolved in many ways. One of them, as John Feil explains, is to let the game's narrative act as a balancing mechanism:

One genre that can't be placed in the action bucket is the adventure game.

Adventure games, focusing on puzzles and story, rarely use action to entertain their audiences. Action-adventure games thus combine elements of both genres into one. While generally focusing on physical movement, they steal gameplay from the adventure genre to serve the needs of the story of the game (Feil, 2009, p.29).

While the increasing attention given to game stories may partially explain the success of action-adventure games, it does not account for everything. Going back to the historical roots of action games, the technical constraints posed by the memory limitations, among others, should not be overlooked. Action games provided a good way of maximizing gameplay situations with a minimum of graphical assets and implementation, contrary to puzzles, which must be hand-designed and articulated independently. The action-adventure turned out to be a meaningful combination, providing a good way to mix the action gameplay logic of repetition with a progression logic of constant renewal that creates interest for the player.

While the integration of a modicum of adventure into action games may feel like a welcome change of pace and help players gather and conserve a kind of forward momentum – that is, a feeling that the action is going someplace interesting rather than being a string of

disconnected challenges – the reverse is often met with outcry from adventure gamers: the integration of action-based challenges into adventure games typically has them going into fits of rage. The reason may be that the divide between sensori-motor and cognitive skills is not wholly symmetrical, as most action games still require players to figure out the one correct method required to defeat a level boss. This act requires cognitive skills to be exercised, even if the player's sensori-motor skills still play an important role in the implementation of the method. By contrast, adventure games typically do not pose any sensori-motor challenge at all.

As this essay has shown, there is room for more substantial work on the action game as a genre (or super-genre) of video games. Notably, there are methodological issues that stem from the somewhat trans-historical nature of “action” as a descriptive label for video games: many of the sub-genres that constituted early action games have went out of use, and many of the contemporary action game subgenres cannot be integrated into a unified framework or general overview comprising the games from the 1970s. These facts get all the more problematic with the increasing computational power and digital distribution models available to modern game developers: the paradigm of mobile gaming and its new platforms with smaller form factors and smaller engagement time windows, as well as the rise of independent games, have resulted in a sort of “back to basics” attitude that brought the return of traditional “action games”. There is, more than ever, a need for sustained theoretical work on game actions and action games if we are to fully account for the diversity of game forms and structures, for both the past and future.

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