# Hansel and Gretel

## Design and Reception of Orientation Cues in Game Space[1]

*Hiloko Kato and René Bauer*

> And when the full moon had risen,
> Hansel took Gretel by the hand.
> The pebbles glittered like newly minted
> silver coins and showed them the way.
> *Brothers Grimm, 2014 [1812]*

## INTRODUCTION: "I AM PROBABLY ON THE RIGHT TRACK"

```
01  NOV:  ((clicks his tongue))
02        SO.=
          right
03        = <<all> was sollen wir denn jetzt hier> (.) TU:N.
          what are we supposed to do here, anyway
04        das spiel heisst JOURney,
          the game is entitled journey
05        REIse?
          journey
06        (2.5)
           \___/
             \
          the camera performs a 360° rotation, heads for the
          hill with the flags
07  NOV:  da O:ben ist irgendwas.
          there is something up there
08        (1.0)
```

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```
09          das_sieht aber COOL aus wie das_wie der sand so weg
            that looks cool though, how the … how the sand is
10   EXP:    das [sah in         ] uncharted zwo auch so toll aus
            oder mit
            dem SCHNE:,
            that looked great as well in Uncharted 2 with the snow
11   NOV:         [<<p> fliegt;>  ]
                      flying off like this
12          ja-
            yes
((...))
13   NOV:   oa jetzt geht_s aber ganz schön beschWERlich hier
            oh now it's quite troublesome to go
            [ho:ch;             ]
             up
14   EXP:   [<<creaky voice>JA:?>]
                         yes
15   NOV:   jetzt kann ich die KAmera nicht mehr drehen.=
            now I can't turn the camera anymore
16          =das ist irgendwie (.) ich bin wohl auf dem richtigen
            WE:G;
                                  \__/
                                     \
                                the  music  of  the  game's  intro
            comes in
             that's somehow (.) I am probably on the right track
17          (-) !HUI:!;
                 whoosh
18          (13.0)
             \___/
                \
               game's intro and cross-fade with change in perspec-
            tive
19   EXP:   °h
20   NOV:   potsTAUsend.
            upon my soul
21          (1.0)
22          wir müssen wohl zu diesem !BE:RG!,
            we probably have to go to this mountain
23          (-) das IST die jOUrney, (-)
                that is the journey
```

The above transcript quotes a *Let's Play* in which two presenters of the YouTube channel *GameTube* play the beginning of the game *Journey* (Sony Computer Entertainment 2012).[2] As a genre, *Let's Play* can be described as a play through of

2 The transcript has been created on the basis of the transcription system GAT2. (cf. Selting et al. 2009) For the transcription conventions of this system or the meaning of individual symbols, please refer to the key at the end of this article. The letter "L" is used to refer to specific lines.

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a game that is made accountable[3] as being performance and entertainment and demanding continual commentary by the player(s).[4] In our example, the presenters act specific parts (cf. GameTube 2012, the transcript begins at 03:03) and Michael refers to himself as a 'novice' and performs as an inexperienced player. His co-commentator, Daniel, has already played through the entire game and acts as the 'expert'; however, he lets Michael explore independently and restrains himself from instructing Michael.[5]

In this example, which is the beginning of, as yet, an unknown game that does not fit into the established schemes of a certain genre (first-person shooter, simulation or sports game), the question immediately arises for the demanded ludic action ("what are we supposed to do here, anyway?" cf. L03 in the transcript). The answer is quickly found thanks to the title of the game ("the game's title is *Journey*" [in German "*Reise*"], L04 and L05) and with the help of the activity of running and visual orientation ("there is something up there", L07). Even if the reasons for choosing this specific hill are not explicitly stated, by the full 360° rotation of the camera executed immediately beforehand (L06), it becomes obvious that the disruption of the monotonously rolling landscape by this "something" (Michael is probably referring to the flags blowing in the wind, cf. Figure 1) "up there" is crucial as an orientation cue. The correct interpretation of the cue is proven when Michael is going up the hill and the game takes over the perspective: "Now I can't turn the camera anymore [...] I am probably on the right track" (L15 and L16). The intro, in the form of a cutscene, is conceived as a reward and, simultaneously, accepted as a prospective instruction: "Upon my soul! We probably have to go to this mountain; that is the journey" (L20, L22 and L23).

3 The term *accountable* is used here in the terminology of ethnomethodology: "I mean observable-and-reportable, i.e. available to members as situated practices of looking-and-telling." (cf. Garfinkel 1967: 1).

4 There are exceptions, where games are played through without any comment.

5 This is thematised as such: Michael: "I don't have the slightest clue what to expect", at 00:14; Daniel: "Actually, you don't need me at all, I could go home", at 05:34.

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*Fig. 1: "What are we supposed to do here, anyway?" Beginning of Journey*

Source: Screenshot (GameTube 2012).

The major points on which we will focus, are raised by the novice, Michael.[6] They provide an enlightening insight into fundamental problems of computer games: on the one hand – from the viewpoint of the recipient and when it comes to beginning a game – one has to grasp the cues given within the design of the game for the purpose of goal-orientated execution, and be able to interpret them in the way they are intended. Only by doing so can the events of a game proceed. We define the general set of such cues as *guiding principles* (in German: *Leitsysteme*). On the other hand – from the viewpoint of the producer or the game designer – the guiding principles are designed as both reasonable and compelling, in such a way that there is a satisfactory balance between the challenge and the player's redemption. Only in this way will the player continue the game. In our example of *Journey*, this balance is successful throughout: not only is the first task, rewarded by a longer cutscene, completed without the help of the expert, but at a linguistic level, the playability and difficulty of the game's guiding principles seem to be reflected in the flow of commentary from the novice,

6 Linguistically, this is also shown through prosody: e.g. the key words "to do", "journey", "path", "mountain", and the title of the game, *Journey*, are stressed. Furthermore, the intonation does not rise in the case of a question, but only after the additional information of the title ("*Journey*", "journey", L05).

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which is only punctuated with a few pauses and a sprinkling of small talk from the expert that as such does not disturb the novice's comments or the gameplay.[7]

In our article, we focus on the spatial guiding principles of the orientation cues, whereby we assume that the spatial sign systems of computer games fulfil the exceedingly important task of allowing the play and action to continue running. This focus begins from the general assumption that guiding principles always have to be analysed from both the reception-orientated and game design-orientated perspectives. We act out of conviction that the interplay between the construction and reception of guiding principles displays symbiotic features, especially in commercially successful cases. For this purpose, it is not only games that are being analysed, but also the *Let's Plays*. They are particularly relevant in examining, in detail, the players' understanding and acquisition of the guiding principles predefined by the game designer. The beginning of a game is particularly vital because a veritable acquisition of the game's pattern of specific guiding principles takes place. In the following course of the game, this pattern does not have to be explicitly verbalised anymore, as it is played accordingly without comments on the existing rules.

Below we would like to explain the reception-orientated and game design-orientated perspectives on the guiding principles in general (part 2), and theoretically discuss the idea of the orientation cues in particular (part 3). Subsequently, there are examples of our analysis that lead to a first attempt at piecing together a typology of orientation cues in computer games (part 4). Finally, this typology shall be related to a wider context concerning the constitution of computer games: it shows how guiding principles serve as specific realizations in order to cope with ludic challenges and how they are acquired by playing (part 5).

## *WHAT'S NEXT?* THROUGH *WHERE NEXT?:* GUIDING PRINCIPLES FROM THE PERSPECTIVE OF RECEPTION AND DESIGN

The beginning of a game is of utmost importance, not only from the perspective of the recipient (cf. above) but also from the perspective of game design. In this moment, the entire future course of the game can be condensed, through which a game becomes compelling and makes a name for itself. The question of how

7 Due to the lack of space, not all of the small talk about the *Uncharted* series is reproduced here (suspension marks in the transcript between lines 12 and 13).

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such a game course can be established in the gameplay arises especially for games that either cannot be matched to the established scheme of a genre and its patterns and regularities or refuse to operate with the aid of explicit tutorials at the beginning of the game. In recent times, the question has also arisen for new kinds of games that vary from established game schemes by their hybrid structure (cf. Beil 2012). As a matter of fact, the lack of exemplary cues telling the player what to do at the beginning of a game can have a peculiar appeal – for which *Journey* is a beautiful example. The answer to the question "What has to be done?" is apparently solved by orientation cues ("there is something up there"), which is self-evident because computer games are fundamentally based on space and ultimately depend on motion sequence (cf. below part 3). The meta level inherent in the title, which can also be read as an instruction of travel and orientation certainly renders the solution in *Journey* notably elegant. The coupling, however, of the further course of the game (*What's Next?*) to the question of future orientation (*Where Next?*) is a premise essential for all computer games and therefore entirely independent of genre (cf. below part 4).

The preoccupation with guiding principles reveals a second fundamental aspect of computer games: any freedom promised by a game to the player is illusory. Admittedly, as in our example, an avatar is able to move around more or less freely, but it is never possible, however, to break out of the guiding principles.[8] In the worst case, the player experiences this guidance as inescapable: the camera cannot be turned around anymore and the player moves on predetermined tracks. The fact that the players might not view this circumstance negatively but as in our example, quite positively as a confirmation of being on the right track is due to the subtlety of the game design. Players are able to solve the task of *What's Next?* autonomously and are therefore willing to accept the predetermined tracks as a transition to the following rewarding cutscene.[9] However, in our example, even more factors come into play: with this cutscene being the intro of the game, it is made clear that discerning orientation cues ("there is something up there") leads to the goal of the game ("we probably have to reach this mountain") as fast-paced low-level action. This linkage by game design of short-

8 In this example, whenever the player leads the avatar further on in a 'wrong' direction, a severe wind – which is motivated by the gameplay and is therefore quite an elegant solution as well – blows the avatar back onto the right track.

9 The players very likely come to expect this transition to a cutscene as a common pattern. The timely beginning of the background music (L16) adds to the plausibility of this assumption.

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term and long-term motivated mechanics during the first few minutes of the game densifies the instruction and supports the sense of play.

The guidance in games is quite often forgotten. This is made especially clear by the popular comparison between conventional texts (e.g. novels) and computer games, in which – in the fashion of naive media criticism – minimal freedom is attributed to the former and maximal freedom to the latter (thus often under the pretext of interactivity).[10] This profoundly shortens the way of seeing the constitution of media in general if, on one side, the non-variability of the medial artefact (printed paper) is put on a level with the coercion of unicursal-linear reading, and on the other side, the moving of avatars or the alleged exertion of influence on the ending of the story of a game is understood as a new kind of independence.[11] The fact that recipients or players do not always immediately perceive the existence of guiding principles is of course the goal of any clever game design.[12] Against this background, it seems important to explicitly examine the point of intersection where designed and received guiding principles meet: from the perspective of game design, it is the matter of the *setting*. It serves as the screen where the implementation of the guiding principles by the game mechanics takes place. From the perspective of the reception of games, this setting is perceived as the *surface* on which the approach to and the interpretation of the cues take place.[13] Setting and surface as well as game design and game reception are therefore two sides of the same coin.

## GUIDING PRINCIPLES AND ORIENTATION CUES – THEORETICAL BACKGROUND

By discussing guiding principles and orientation cues, we focus on the playability of the game world: "Game designers don't simply tell stories; they design

10 On the critique of the inflationary use of the term *interactivity* cf. Landow (2008), Aarseth (1997) or Costikyan (2006 [1994]).

11 Cf. also Aarseth (1997). The book culture indeed offers many examples that defy a unicursal reading, especially in postmodern literature, hyperfiction and/or through the way in which annotations are used (cf. Klappert 2008).

12 Cf. in return the fertilisation of the phenomenon of the hitch in computer games or in game play, e.g. Bojahr (2012).

13 Already in the early 1990s, game designer, Greg Costikyan had discussed the necessity of the proper information exchange between game designer and player: "The interface must provide the player with relevant information. And he must have enough information to be able to make a sensible decision." (Costikyan 2006 [1994]: 201).

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worlds and sculpt spaces" (Jenkins 2006: 674). This statement by Jenkins can be read as an early plea for a fruitful fusion between narratology and ludology. Our example shows beautifully how game action always consists of fast-paced low-level action of the "*What's next?/Where next?*" variety, which functions as a hinge between narratological and game-inherent moments. These situations of low-level action are effective at all times, but they gain importance whenever the required direction of the game action is not easily recognizable by orientation (e.g. an open door at the end of the hallway) or by narrative patterns (e.g. the way out is blocked by a mob of zombies). Thus, in order to be able to answer the questions "*What's next?/Where next?*", the players need to interpret the design of the space and surroundings and to use them according to the objectives of the game. Against this background, the quotation by the cognitive scientist and usability expert Donald Norman reads as a plea for orientation cues or for guiding principles: "The user needs help. Just the right things have to be visible [...] to indicate how the user is to interact with the device" (Norman 2002 [1988]: 8). Norman corroborates his approach to the usability of objects on the theories of affordances by the psychologist James J. Gibson: "Affordances provide strong clues to the operation of things. [...] When affordances are taken advantage of, the user knows what to do just by looking" (ibid: 9). Not surprisingly, this theory of affordances is also perceived in many divergent fields such as game studies, architectural semiotics and text linguistics.[14] No other theory seems more suited

14 Concerning game studies, cf. Meeldgard (2012), who uses Peter Weibel's term of the interactive image – "[t]he picture field became an image system that reacted to the observer's movement" (Weibel 2003: 594) – to connect computer games with the theory of Gibson. Or Neitzel, who is primarily interested in the aspect of strategies of involvement: "games are affordances to act" (Neitzel 2012: 86, our translation). Regarding architectural semiotics, cf. Gleiter (2014: 29, our translation): "architectural signs do not only provide a sense of purpose but also shape a promise of the realization in a specific situation so to speak. With reference to James Gibson this might be called 'affordances' or 'the affordance of architectural signs'" (cf. Gibson 1979). In text linguistics, the textualisation cues or readability cues are analogous with the terminology of Gibson (Hausendorf/Kesselheim/Kato/Breitholz 2017: 58, our translation): "Readability cues explain that and how texts make certain ways of reading and interpretation possible and highly probable. The readability of the text fundamentally resembles the 'affordances' of the artificial and natural environment (Gibson 1979)." Interestingly, Jesper Juul (2011) also refers to the term *affordances*, but – and nicely corresponding to our purposes – in the context of rules of a game: "Rules specify *limitations* and *af-*

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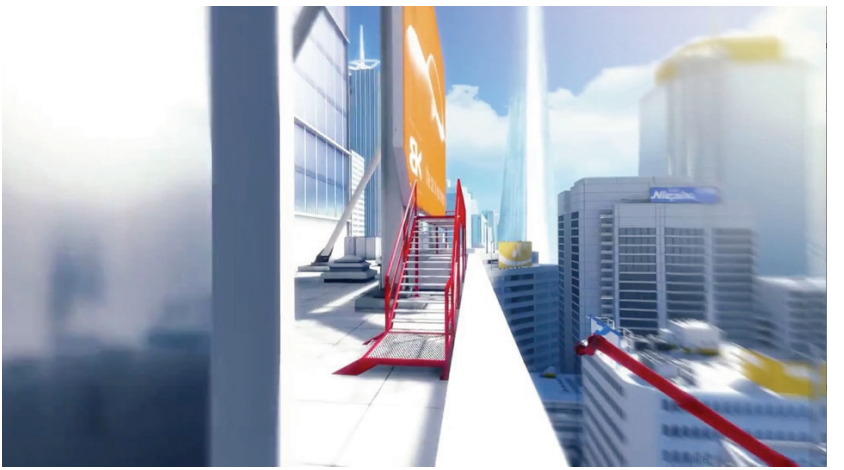
to underlining the fundamental semiotic activity of any perceptual process – whether target-orientated or poetic. In this regard, it is obvious that we clearly understand computer games as a semiotic system analogous with other semiotic domains. (cf. also Gee 2006)

By focussing on the orientation cues and, at the same time, discussing the essential questions "*What's next/Where next?*" the applicability of the idea of cues shall be proven on a subdomain of the manifold realised semiotic levels. The importance of space for computer games and its constitution as a sphere of action that comes alive is well known: "The defining element in computer games is spatiality. Computer games are essentially concerned with spatial representation and negotiation" (Aarseth 2001: 154). Günzel draws on the terminology of Lefebvre: "[The lived space] only exists through the relation between perceived and conceived space or simply space practice" (Günzel 2012: 87, our translation). Salen and Zimmermann offer this advice to all players (2006: 67): "[l]earn to read the space of a game".[15]

*Fig. 2: Extremely explicit orientation cues marked in red: Mirror's Edge*



Source: Screenshot (Drachenbursche/Drabu 2012).

It is often necessary to make correct decisions regarding direction far in advance. Here, cues aimed at visual orientation are best suited as computer games func-

*fordances*. [...] they also add meaning to the allowed actions and this *affords* players meaningful actions that were not otherwise available" (ibid: 58).

15 *Readability* is again the umbrella term for semiotic processes, cf. annotation 14.

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tion primarily on a visual level. An example that incorporates evaluation at a very early stage as the ideal strategy in the gameplay, as well as employing visual cues very boldly, is *Mirror's Edge* (Electronic Arts, 2008): the Parkour to be completed is marked by elements in the architecture turning red in good time (cf. the stairs and the crane in Figure 2).[16] A *Let's Play* example of *Mirror's Edge*, this time by the YouTube channel *drachenbursche* (now *Drabu*), shows how players identify the required direction: "You really have to go up there?" – "The ladder is red, the beam is red, therefore I need to go up there" (drachenbursche/Drabu 2012, at 08:40). The scarcity of information in this short dialogue between drachenbursche and JJOOEEKKEEZZ underlines the fascinating explicitness and simplicity of the orientation cues that *Mirror's Edge* relies on. Additionally, the dialogue demonstrates the significance of the point of intersection between production and reception (cf. above part 2): of vital importance for the orientation is the interpretability of the signs on the surface of the setting, which – as an abstract game such as *Mirror's Edge* shows to its advantage – is often more important than the succession of a narration. In *Mirror's Edge*, the plot takes place 'beneath' the surface of the Parkour consisting of rooftops and facades.

## CASES: REALIZATIONS OF CUES

Each computer game applies its own appropriate system of orientation cues; the possibilities of their realization are manifold. In the following sub-chapters, we present five main characteristics with which we shall approach the diversity of the realised cues and attempt to bundle them into useful categories, thus hoping to obtain a, certain – although presumably illusory – exhaustiveness.

### Implementation: Ingame/intradiegetic vs Hud/Blending in

Whenever there is talk of cues conducive to orientation, one might automatically think of breadcrumbs and pebbles, or of signposts – thus, specific affordances are embedded intradiegetically in the game world, for example the signpost to Hook Island in *The Secret of Monkey Island* (Lucasfilm Games, 1990). The wide range of these prototypical realizations of cues is further differentiated in the following sub-chapters concerning the questions regarding which perception chan-

16 The explicit coloring is explained in the logic of the game plot: the special kind of perception is a specific skill of the protagonists – the so-called *runner vision.*

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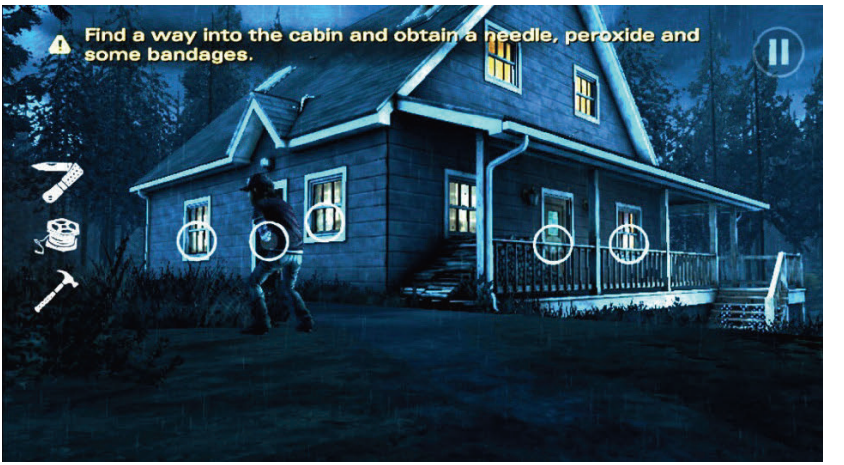
nel is applied (4.2) or how salient the cues are that are revealed (4.3). However, orientation cues do not necessarily have to be realised intradiegetically: they can be implemented in the head-up display (HUD) as well. These realizations are characterised by blending in over or on the scene of the depicted world, even 'covering' avatars, as the example of the curls in *The Walking Dead* (Telltale Games, 2012) shows (cf. Figure 3), flagging interactive objects in the game world.

*Fig. 3: Implementations in the HUD: The Walking Dead (Roshan 2014).*




Source: Screenshot (Roshan 2014).

The illustrations of the tools on the left side of the screen make clear that the implementation in the HUD may contain other realizations of cues as well. Similar to the iconic illustration of the controllers (cf. picture 4) or the display of control buttons in quick-time events, the depicted tools are something like cues of action. This revelation of the HUD becomes a crucial endeavour whenever the emergent illusion of the game world is broken because it makes visible a level of gameplay between the player and the intradiegetic game world. This is primarily the case if written words or conventionalised symbols are called into action.[17] A clever combination between implementation in the HUD and the intradiegetic realization is again shown in an example of *Journey* (cf. Figure 4).

17 Cf. the criticism concerning *Beyond – Two Souls* (Sony Computer Entertainment, 2013) as being merely a series of quick-time events and cutscenes.

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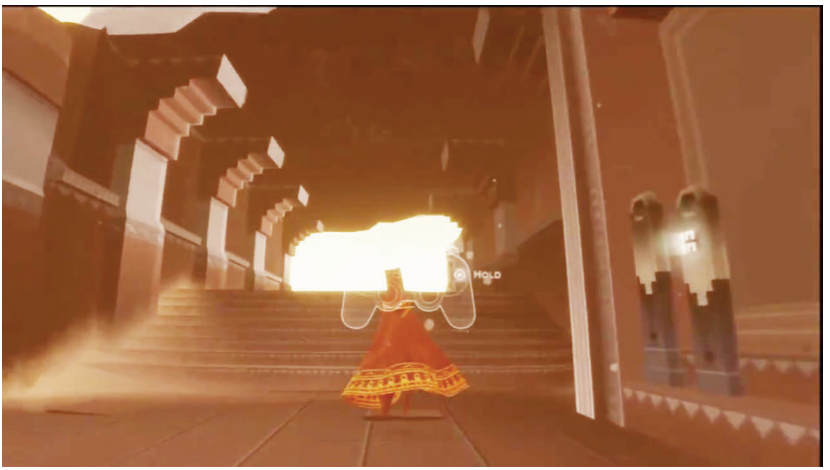
*Fig. 4: Combination of a cue realized both in the HUD and intradiegetically/ ingame: Journey.*




Source: Screenshot (GameTube 2012).

In the *GameTube Let's Play*, novice Daniel runs past the spot at which the cue in the HUD is activated: it consists of the illustration of a controller – with a clearly highlighted hold button – together with the intradiegetic cue of a symbol lighting up on a stela, which signals that there is still something to do here. Daniel's reaction is instantaneous: he turns around and verbally marks the re-orientation ("Oh, what's here?") (GameTube 2012, at 06:55). The lighting up on the stela alone would probably have been a sufficient cue signalling that something has been forgotten here, but it is precisely the combination of the extradiegetic and intradiegetic cues that helps to answer the question of "What's next/Where next?" (push the hold button right in front of the stela).

## Perception channel: Visibility, Audibility and Palpability

Another characteristic is made clear by this example of *Journey* when the player is not only alerted by the flashing up of intradiegetic or HUD-implemented cues, but he also gets support by a particular sound on an additional auditory level. Thus, we can broaden the ways of perception for orientation cues in computer

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games: visual, auditory and – although they are rather rare – palpable cues can also be conducive to orientation.[18]

Starting with the latter case: examples of orientation cues made palpable with the aid of vibrating controllers are found in the *Gran Turismo* series from the fifth release onwards (Sony Computer Entertainment, 2010-2017). In these games, the swing off the lane is notified by vibration. *Shadow of the Colossus* (Sony Computer Entertainment, 2005-2006) is another example where the vibration indicates the distance of the avatar to the colossus (cf. Immersion Corporation 2010). The search for good examples reveals that palpable cues are often connected to other non-spatial guiding principles as indications of vital functions (e.g. when the beating of the heart is simulated by vibration in order to display the level of vital energy and, in doing so, generate tension), or rhythmic or temporal guidelines (e.g. in *Rez* [Sega 2001] where correct action in time is rewarded with vibration).

Such observations of visual cues (cf. above part 4.1) apply to auditory orientation cues: sounds, noises and spoken language can intradiegetically be part of the ingame world, but they can be located outside of it as well. Clear categorisation is often difficult, as the example in *Journey* shows (cf. ibid.): the sound effect is chosen in such a way that it matches the flashing up of the stela. A special case is certainly the *voice over*, for which clear and simple attribution to either intra- or extradiegesis cannot always be given.

We would like to add two further observations regarding auditory cues: on the one hand, there is the issue of mediation of the cues and attachment to the cues (cf. below part 4.3). While certain characters can be directly heard as a source of orientation, other characters indirectly indicate the next relevant point of orientation. On the other hand, there is the issue of how orientation cues are activated. While some are automatically triggered, other cues have to be explicitly activated (cf. below part 4.4).

### Attachment of Cues: direct (noticeable vs unobtrusive) vs indirect (mediated)

In prototypical cases, orientation cues are directly attached to the visual or auditory affordances – as in *Journey*, where the mountain becomes visible as the

18 Although Gibson developed the theoretical insights on affordances (cf. part 3 above) with respect to visual perception in his major publication (Gibson 1979), he considered all "five modes of external attention" (Gibson 1983 [1966]: 49) in detail in his earlier publications.

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primary goal on the horizon. In the introduction, the mountain is explicitly designated as a noticeable cue – and is recognized as such by the player (cf. above part 1) – and differs greatly from those cues put in place unobtrusively. The quest of finding these 'hidden' cues is part of the special appeal of point-and-click adventures. As in the depicted example of *Machinarium* (Amanita Design, 2009), the solution of the riddles demands the deciphering of various guiding principles combined together (cf. Figure 5):[19] the conspicuousness of the carnivorous plant and the possibility of reaching one of its blossoms by using the ladder makes this partial solution to the main goal – which is to open the metal door – quite plausible.[20]

*Fig. 5: Direct attachment of cues, but unobtrusive: Machinarium.*

Source: our Screenshot.

The direct attachment of the cue is coupled to the implementation in the intradiegetic game world. But also the second category of the indirect, and therefore

19 In addition to the orientation cues, cues of utility are especially important in point-and-click adventures. They provide information on things that can be combined.

20 There is a magnifying glass to be found in the blossom. This object has to be combined with the projector in order to make the slides visible. One of them reveals the combination of the door code.

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mediated, attachment of the cue can take place ingame. In the example of *The Last of Us* (Sony Computer Entertainment, 2013), once the guide, Tess, indicates where the player has to move next by her posture and gaze turned to the right, she becomes the mediating orientation cue (cf. Figure 6). Her call of "Boost me up" can also be understood as an indirect cue. In the *Let's Play* of VintageBeef, this merely mediated orientation is explicitly thematised by the player: "Where? Here?" he asks while coming very close to Tess with his avatar, Joel, and following her gaze (cf. VintageBeef 2013, at 03:50).

*Fig. 6: "Boost me up!": Indirectly mediated orientation cue in The Last of Us.*

Source: Screenshot (VintageBeef 2013).

## Activation of Cues: triggered, explicitly activated vs permanent

The example of *Last of Us* clearly shows the diverging types of activations to which cues are bound. Some of them are executed, as in this example, automatically – in any case, Tess is going to position herself at this very spot at this very moment, urging the player to boost her up and looking up to the relevant locus, thus acting as a mediating guide. In other words: there is no way around this spot and the activation of the cue is a given constituent of the procedure of solution. A further rather crude example is the automatically triggered tracking shot revealing the path the player has to take (e.g. *Brothers: A Tale of Two Sons* [505 Games, 2013]). Other cues, however, are only activated if the player comes near the cue – this is often the case in games offering multiple solutions (e.g. *The Walking Dead*). There are also orientation cues that have to be activated explicit-

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ly, for which *The Legend of Zelda – Twilight Princess* (Nintendo 2006) provides a very good example: only by turning him/herself into the wolf will the odour trail leading to the next target be revealed to the player. Permanently visible cues can be on the cards as well, but examples are not easy to find. That certainly has to do with the sequentiality and the short-termed tasks in games. An interesting orientation cue that often is permanently visible is the reticule: it defines the point of view for the player/avatar and thus makes it possible for him/her to orientate 'on-screen'. In the case of *Unfinished Swan* (Sony Computer Entertainment 2012), the reticule in fact helps the player to grasp the fundamental gameplay by indicating "to shoot somewhere".[21] Lastly, the state of a cue is able to change, e.g. if the triggered cue becomes a permanent one. An example would be the mission target in one of the first missions in *Far Cry 4* (Ubisoft 2014): The tower only becomes permanently visible when the first smaller tasks are completed and the player approaches it to finish this level.

### Relevance of Cues: rewarding, punishing vs irrelevant

The last categorisation concerns the relevance of the cue: Is its perception just an optional possibility – nice to have, as with collecting objects with the aim of completeness (e.g. the collecting of coins in *Super Mario Bros.* [Nintendo 1985])? Or is the perception of the cue mandatory for the completion of the game, as with the discovery of the fabric strips in *Journey* from which the kinetic energy is gained whilst at the same time they indicate the right track to follow similar to pebbles? Either way, both cases can be assigned to a rewarding principle – in contrast to when the player is punished: In those instances, pursuit of the cues can lead the player astray and signify an abandoned match in the worst case scenario, as shown in the trailer entitled "Alien: Isolation – Misdirection Trailer" in *Alien: Isolation* (Sega 2014).[22] Leading the player astray, however, is not a common idea or rather it is a style of play very much linked to specific genres (e.g. for survival horror games or self-ironic games such as the works of Lucas Arts). Being led astray is often attributed to simple programming errors, which

21 In terms of its categorisation, the reticule implementation in *Unfinished Swan* might have an indefinable position: as such, it belongs more to the extradiegetic level, as paintbrushes do not have reticules, therefore revealing its origin as a cue for the gaming principle. But it still keeps an intradiegetic moment for being in the game world, carrying the "point of view" and "point of action" message.

22 The stimulated assumption that the alien seems to retreat turns out to be fatally wrong (cf. PS4-Magazin 2014).

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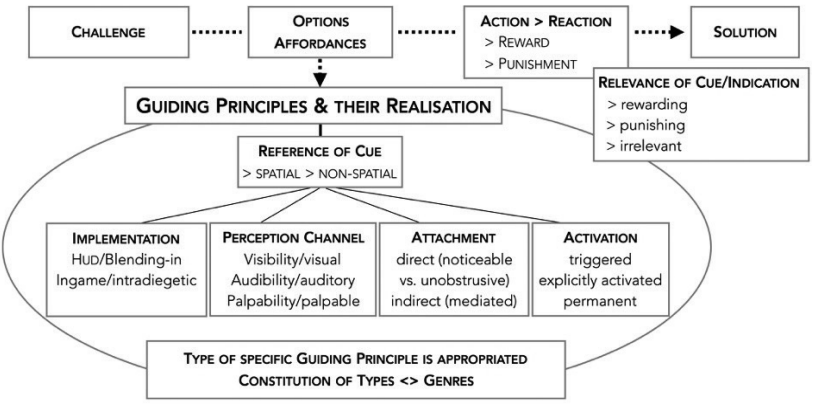
can drive a player like VintageBeef in his *Let's Play* on *Ryse: Son of Rome* (Microsoft Studios 2013) to downright desperation (cf. VintageBeef 2014, at 00:52). Cues that prove to be irrelevant for getting further in the game are interesting. A famous example is *Deus Ex* (Eidos Interactive, 2000-2003) where the player has the possibility of visiting the ladies' room: In a strict sense, it allows the male protagonist to ignore the socially controlled orientation cue for which he is admonished, but does not entail serious consequences (cf. machmuelltonne 2011).

## REALIZATION OF CUES AS POINTS OF INTERSECTION BETWEEN PLAYER AND GAME – FORMATION OF PATTERNS

The latter category regarding the relevance of cues has already introduced an issue that concerns the connection between the realization of cues and the constitution of computer games as a system/framework. By this system/framework, the player is faced with challenges offering reward in the event of success or threatening punishment when there's failure (cf. Figure 7). In this general structure, guiding principles and their realization of cues are the point of intersection between player and computer game: They are made available by the game design as utilisable affordances – the player interprets them in order to meet the challenge. This is why irrelevant cues are seldom implemented; they undermine this structure; they even reduce the structure to absurdity.

*Fig. 7: Guiding principles and their realizations of cues relating to the game system.*




Source: Bauer/Kato

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Perceiving challenges and taking appropriate action – in our sphere of focus: *What's next?/Where next?* – is made possible by the realization of cues created with individual design and unique disposition for each game. It has to be ensured that the player is able to acquire a game's own system of rules in reasonable time and without being stretched to the limits of frustration (not too difficult, but not too obvious either). Therefore, it comes to a formation of patterns of the particular guiding principles at the beginning of a game, where the player explicitly learns the actual procedure or repetitively acquires it by frequently encountering similar situations. This formation of patterns of cues very much depends on the genre. In many established genres, such as the first-person shooter, this acquisition is no longer required; however, ever-new and elaborate weapons and combat techniques have to be mastered initially.

Observing the formation of patterns in *Let's Plays*, it is especially interesting to choose computer games that do not match the usual mainstream structure or can be attributed to the novel hybrid genre. Instead of referring once again to *Journey*, we would like to glance at the *Let's Play* of VintageBeef on *The Last of Us*. VintageBeef is known for being a decidedly explorative player who likes to examine and discover as much as possible, a fact that he also thematises (L01, VintageBeef 2013, at 07:10).

```
01  VB:   sorry i am expLORing a little bit-
02        (2.5)
          \___/
            \
          walks through the room, looks at everything
03        there_s no rush RIGHT?
04        (1.5)
05        <<p> robert_robert_s WAIting.>
06        <<p> but he can_he can wait LONger,>
07        (4.0)
          \___/
            \
          a dull sound, and a small circular cue appears in the
          dark
08        <<whispers> u: what_s THIS;>
09        (4.5)
          \___/
            \
          opens the drawer, it is empty
```

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```
10        ^!NOTH!ing.
11        okAY;
          \___/
            \
           the next circle appears, VB opens the drawer
12        !O!u?
13        can i TAKE that?
14        <<reads> parts to upgrade your WEApon.>
15        !AWE!^some-
16        (3.0)
          \___/
            \
           another dull sound, the focus is on Tess, who is
          waiting
17        <<ff> you_re WATching me,>=
18        =<<ff> yeah just a SEcond.>
```

At this very moment in the course of the game, the player acquires the following two exemplary realizations of cues (L07 and L08): On the one hand, it is the pattern of a visual cue implemented on the HUD as a symbolic curl. This cue appears whenever a drawer can be opened. On the other hand, it is the pattern of an auditory cue realised as a dull sound. This cue signals the necessity to increase attention to detect the visual cue – therefore it can be described as a sort of meta-cue. VintageBeef's reaction is, in this respect, interesting as he responds twice to the meta-cue (L17 and L18), but only verbalises recognition of the basal visual cue: "Uh, what's this?" (L08). The way in which the game design stages the acquisition of the pattern is worth detailed analysis: The first of the drawers 'furnished' with the curl is empty. Accordingly, VintageBeef is both flabbergasted and resigned to the fact: "Nothing!" (L10).[23] He accepts this fact ("Okay" L11), but that does not discourage him from opening the second marked drawer. Here, he is rewarded: There are parts to be found with which weapons can be upgraded (L14). Two things are made clear: If the second drawer had been empty as well, it would have been a strong signal that the opening of drawers is not worth the time or, more specifically, that the player is cautioned about the misleading game design. In this binary way, though, the following is made apparent: One

23 His whispered statement in L08 is already suspense packed. In L10, the special prosody stands out (a heavily rising–falling movement in pitch on the first syllable of "nothing").

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can be rewarded, but this is not always the case. Hence, a certain positive tension mounts and the player is committed to interpreting the curl as an orientation cue: further in the game, VintageBeef is going to try to open each single drawer, whether Tess is waiting (L17) or not.

In this article, we undertook a detailed examination of the most important guiding principles of the orientation cues, but the analysis and application of the concept of cues would be productive for other, non-spatial, domains as well. Furthermore, the study of other deviant conceptions within computer games would be interesting (e.g. *Portal*, cf. Bauer/Kato, in this volume).

## KEY TO GAT2 TRANSCRIPTIONS

(The list below only contains the conventions relevant to this article)

| | |
|---|---|
| `[ ]` | overlaps and speaking simultaneously |
| `[ ]` | |
| `°h` | breathing in |
| `(.)` | micro pause, estimate, up to approx. 0.2 seconds |
| `(-)` | brief pause, estimate, approx. 0.2 to 0.5 seconds |
| `(--)` | medium-length pause, estimate, approx. 0.5 to 0.8 seconds |
| `(1.0)` | timed pauses |
| `robert_s` | words joined together within units |
| `((coughs))` | para- and extralingustic actions and events |
| `<<whispers>>` | para- and extralingustic actions, events accompanying speech |
| `((...))` | gap in transcript |
| `=` | fast, immediate follow-on contribution by speaker |
| `:` | extending, lenghtening by approx. 0.2 to 0.5 seconds |
| `acCENT` | focal stress, accentuation |
| `accEnt` | secondary stress |
| `ac!CENT!` | pronounced stress |

Fluctuations in pitch at the end of intonational phrases:

| | |
|---|---|
| `?` | steep rise |
| `,` | medium rise |
| – | even level |
| `;` | medium drop |
| `.` | steep drop |

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Intralinear notation of fluctuations in stress and pitch

| | |
|---|---|
| `^SO` | rising-falling |

Changes in volume and pace of speech:

| | |
|---|---|
| `<<ff> >` | fortissimo, very loud |
| `<<p> >` | piano, quiet |
| `<<acc> >` | accelerando, becoming faster |

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