

Beyond Pawns and Meeples

Material Meanings of Analog Game Figures

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As if a damning curse had been cast unto things, they remain asleep like the servants of some enchanted castle. Yet, as soon as they are freed from the spell, they start shuddering, stretching, and muttering. They begin to swarm in all directions, shaking the other human actors, waking them out of their dogmatic sleep.

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INTRODUCTION: WHY ANALOG GAME FIGURES?

We encounter figures in a wide variety of media and arts: They are described in literature, painted in the visual arts, and embodied in theater. In comics, we see them as static; in film, as audiovisual and moving images; in analog and digital games, we are able to control them. In the words of Rainer Leschke, figures can be understood as forms that circulate in the media system,² taking on other shapes and functions under the respective media-specific circumstances. Thus, it is not surprising that they have given rise to intensive research. In game studies, there is

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- 1 Latour, Bruno: *Reassembling the Social. An Introduction to Actor-Network-Theory*, New York: Oxford University Press 2005, p. 73.
 - 2 Cf. Leschke, Rainer: "Einleitung. Zur transmedialen Logik der Figur," in: Leschke, Rainer (ed.), *Formen der Figur. Figurenkonzepte in Künsten und Medien*, Konstanz: UVK 2010, pp. 11-26, here p. 12.

elaborate research on the theory and analysis of game figures, especially avatars.³ In contrast, there are very few approaches as soon as analog game figures come into play, which is due to a general marginalization of analog games by media and cultural studies on the one hand and the fact that the existing analog game research is not that prominent on the other hand.⁴

Because of disciplinary traditions, ethnographic, anthropological, archaeological, and historical approaches dominate the research on analog games. From these perspectives alone, it quickly becomes clear that when dealing with analog games, a preoccupation with game figures is imperative because they turn out to be essential game elements that have been used for millennia in all cultural areas of the world, appearing in remarkable variety.⁵

However, this article will argue for an examination of game figures beyond an exclusively historicizing level since game figures represent—at least in most board and tabletop games—one of the constitutive conditions of play: Without setting, moving, and capturing figures, play cannot take place, and in some cases assembling, modifying or designing figures is also part of the act of playing. Moreover, game figures not only possess ludic qualities, they also represent cultural and ideological meanings, and they enable players to have various aesthetic experiences. In all these aspects, their concrete material dimensions—that is, their substances, their colors and shapes, their auditory, haptic and olfactory, and in some cases even gustatory properties—are essential. Against this background, this article poses the question of what forms, functions, and meanings game figures⁶ can assume for the act of playing and for the players. It quickly becomes clear that the spectrum of game figures is vast, ranging from natural materials like stones or

3 For example, cf. Beil, Benjamin: *Avatarbilder. Zur Bildlichkeit des zeitgenössischen Computerspiels*, Bielefeld: transcript 2012; Schröter, Felix: *Spiel|Figur. Theorie und Ästhetik der Computerspielfigur*, Marburg: Schüren 2021.

4 Best-known are *Board Game Studies*, *Analog Game Studies* and *Boardgame Historian*: <https://sciendo.com/journal/BGS>; <https://analoggamestudies.org>; [https:// bghistorian.hypotheses.org/](https://bghistorian.hypotheses.org/)

5 For a richly illustrated overview, cf. Kobbert, Max J.: *Kulturgut Spiel*, Petersberg: Michael Imhof 2018.

6 While in German the term ‘Spielsteine’ refers to abstract forms, ‘Spielfiguren’ can refer to figural forms but is also used in the sense of an overall category in which abstract and figural forms can be subsumed. In English, the term ‘game pieces’ designates abstract forms and ‘game figures’ designates figurative forms. In this article, in analogy to German, I will speak of ‘game figures,’ and thus include both abstract and concrete-figurative forms.

shells used in ludic contexts to the iconic pawns or meeples of games such as CHINESE CHECKERS or CARCASSONNE (2000), to the miniatures of tabletop games such as the WARHAMMER-series (1983), to all sorts of objects functionalized as game figures: dice (DAS SPIEL, 1979), tea lights (WALDSCHATTENSPIEL, 1985) or ice cubes (COOL RUNNINGS, 2018). Thus, game figures do not exist a priori but are *made* into game figures through their functional use in rule-based ludic systems. This also distinguishes them from toy and action figures, which can be used without the framework of rules.

ACTORS, AGENCY, AFFORDANCES: GAME FIGURES IN LUDIC NETWORKS

In order to develop the necessary theoretical backgrounds, this article will turn to actor-network and affordance theories and combine them with approaches from game studies. Despite its prominence in media studies, actor-network theory (ANT) is rarely chosen as an approach to analyze games.⁷ As is well known, ANT, in recourse to Michael Callon, John Law, or Bruno Latour, assumes that the social world consists of network-like actor constellations. Networks are complex and unfinished assemblies of heterogeneous elements that emerge around a given situation, with said elements assuming actorial status during this process. Networks are thus constituted only through the interaction of their parts, and actors do not exist a priori. They form their identity and agency only within networks.⁸ Network formation is successful when the heterogeneous elements that come together are linked and made coherent,⁹ which occurs when actors take on the roles ascribed to them by other actors. However, networks are not stable; they must be

7 For exceptions, cf. Beil, Benjamin/Hensel, Thomas (eds.), *Navigationen: Game Laboratory Studies* 11/2 (2011); Schumacher, Heidemarie/Korbel, Leonhard: "Game Studies und Agency: Ein Forschungsbericht zu ihrem Verhältnis und ein Vorschlag zu einer neuen Forschungsperspektive," in: Thimm, Caja (ed.), *Das Spiel. Muster und Metapher der Mediengesellschaft*, Wiesbaden: VS 2010, pp. 55-78.

8 Cf. Grapp, Sven: *Medienwissenschaft*, Konstanz/München: UVK 2016, p. 217. It should be emphasized that actors themselves also consist of network-like associations. Their analysis, however, would make it necessary to consider the processes of design and production, the materials and media technologies required, the economic and juridical frameworks, etc. Since this is not feasible in this article, game figures will not be differentiated into further networks.

9 Cf. S. Grapp: *Medienwissenschaft*, p. 224.

consolidated permanently, as not only the relationships between the actors and the different programs of action transform continuously. The actors themselves are also subject to constant change.¹⁰ Actors can be human or non-human—ultimately, in ANT, any entity to which agency can be attributed is considered an actor. This postulate of symmetry decenters an anthropocentric perspective on the world and valorizes non-human (plants, animals), material (technologies, objects), and immaterial entities (laws, natural processes) as actors. In this way, it also undermines the distinction between active subject and passive object positions. This does not mean, however, that people are objectified, or things are anthropomorphized. Nor are asymmetries of power denied: Not every actor has the same relevance in a network—but every actor can influence other actors and thus the entire network.¹¹ For this, at the core of ANT is the notion of actors and agency: Actors are all those elements to which agency can be attributed—and actors have agency when their participation in processes within the network is so strong that it makes a relevant difference:¹² “[A]ny thing that does modify a state of affairs by making a difference is an actor. [...] Thus, the questions to ask about any agent are simply the following: Does it make a difference in the course of some other agent’s action or not?”¹³ Actors make differences when they cause other actors (not) to do something that they would (not) do alone, whereby the actors transform themselves through such entanglement. And this, in turn, generates new forms of agency, meaning that agency is not an inherent characteristic of actors but a variable phenomenon that emerges from interactions with other actors. In this context, non-human actors can influence other non-human actors, but they can also shape the perceptions, behaviors, communications, or (inter-)actions of human actors, which act back in turn on other actors. It should be emphasized in this context that non-human actors do not determine actions but suggest them as possibilities: “[T]hings might authorize, allow, afford, encourage, permit, suggest, influence, block, render possible, forbid, and so on.”¹⁴ This will become important later.

10 Cf. Schulz-Schaeffer, Ingo: “Akteur-Netzwerk-Theorie: Zur Koevolution von Gesellschaft, Natur und Technik,” in: Weyer Johannes (ed.), *Soziale Netzwerke: Konzepte und Methoden der sozialwissenschaftlichen Netzwerkforschung*, München: Oldenbourg 2011, pp. 275-300, here p. 287.

11 Cf. Latour, Bruno: *Reassembling the Social*, p. 69.

12 Cf. S. Grampp: *Medienwissenschaft*, p. 219.

13 B. Latour: *Reassembling the Social*, p. 71.

14 Ibid., p. 72.

What does this mean when transferred to games? The metaphor of play as a *magic circle*, despite all criticism, has been common since Johan Huizinga.¹⁵ But instead of a circle, play(ing) can also be understood as a *ludic network*. This change of perspective constitutes a new topology of play, as it makes clear that in play, human (players) and material as well as immaterial non-human actors (balls, cards, figures, sets of rules, tables, playing fields, etc.) interact with each other. In this context, the condition of the network depends on the people playing, the type of game played, the materials used, the space for playing, etc. These heterogeneous elements, with their different programs of action, are kept coherent by the common purpose of playing, and the ludic network is thus stabilized—even though it can be expanded, interrupted, or destroyed at any time. But what role do game figures have in ludic networks?

First of all, most board and tabletop games cannot be played without game figures. However, inversely, a game does not play itself, which means that game figures must come together with players so that both of them can be given meaning and agency. Play(ing) only comes into being through joint actions, in which players and figures actualize temporary and constantly renewing entanglements, thus becoming hybrid ludic actors who are empowered with ludic agency. At this point, two aspects are important: First, other actors in the game are also involved in the aforementioned entanglements, and second, figures and players do not have the same agency—players can usually deal with figures at will, which is rather improbable the other way around. But nevertheless, game figures can influence players and change their perceptions or ways of acting. Thus, game figures have agency, but this agency can be located on different levels.

A look into game studies is helpful for a differentiation: With regard to video games, Benjamin Beil and Andreas Rauscher, referring to Rune Klevjer, distinguish between *fictional* and *instrumental agency*, which manifests itself in the avatar.¹⁶ Accordingly, the avatar is provided with fictional agency because, perspectivized as a narrative character, it can influence diegetic elements and narrative progressions of the game. The avatar possesses instrumental agency because, understood as the player's tool, it can manipulate the game world within the options for action defined by the rules. This distinction can be transferred to analog game figures. Accordingly, fictional agency refers to the agency of game figures located on the level of the diegetic world—if such a world exists. Here, game figures as

15 Cf. Huizinga, Johan: *Homo Ludens. A Study of the Play-Element in Culture*, London: Routledge & Kegan Paul Ltd. 1949.

16 Cf. Beil, Benjamin/Rauscher, Andreas: "Avatar," in: Beil, Benjamin et al. (eds.), *Game Studies*, Wiesbaden: Springer 2018, pp. 201-217, here p. 207.

fictional characters, in connection with the players' decisions, can interact with elements of the narrated world, e.g., establish relationships with other characters, trigger events in the narration, etc. Instrumental agency, on the other hand, refers to agency localized at the level of game mechanics. Accordingly, game figures, in connection with the players' moves, function as crystallization points of game-mechanical actions, for example, by executing movements on a board, attacking other figures, or the like. Here, however, another form of agency can gain importance. On the one hand, there are games in which the instrumental agency is more independent of the materiality of figures: For example, in *NINE MEN'S MORRIS*, it makes no decisive difference whether one plays with stones, coins, or buttons, as long as one's own figures can be differentiated from those of the other player. On the other hand, specific forms of materiality can facilitate the game (and hence establish the instrumental agency of game figures) in the first place. For example, a game based on the principle of magnetic attraction can only be played with magnetic figures. This form of agency, which is responsible for the formation of the ludic network in the first place, will be referred to as *ludo-material agency*.

Against the backdrop of these different forms of agency, the final question is on what basis game figures and players assemble in order to achieve agency. Here, the concept of *affordance* can be helpful. Although this concept is not only compatible with ANT but is also mentioned by Latour himself,¹⁷ the two theoretical perspectives have rarely been combined.¹⁸

While there are various theories of affordance,¹⁹ the term usually refers to the offerings of material objects in relation to humans or non-human life forms in a given environment: "The *affordances* of the environment are what it *offers* [...], what it *provides* or *furnishes*, either for good or ill."²⁰ However, it must be kept in

17 Cf. B. Latour: *Reassembling the Social*, p. 72.

18 As an exception from a cultural studies perspective, cf. Bareither, Christoph: "Affordanz," in: Heimerdinger, Timo/Tauschek, Markus (eds.), *Kulturtheoretisch argumentieren. Ein Arbeitsbuch*, Münster: Waxmann 2020, pp. 32-55; from a game studies perspective, cf. Clüver, Claudius: "Würfel, Karten und Bretter. Materielle Elemente von Spielen und der Begriff der Spielform," in: GamesCoop (eds.), *Navigationen: Spiel|Material* 20/1 (2020), pp. 35-52, here p. 45.

19 E.g., cf. Gibson, James J.: *The Ecological Approach to Visual Perception*, Hillsdale: Erlbaum 1986; Norman, Don: *The Design of Everyday Things*, New York: Basic Books 2013; Hutchby, Ian: "Technologies, Texts and Affordances," in: *Sociology* 35/2 (2001), pp. 441-456.

20 J. Gibson: *The Ecological Approach to Visual Perception*, p. 127.

mind that possibilities for actions are not only opened up by objects but also restricted. Affordances result from the specific properties of objects such as color, texture, size, weight, shape, material, etc. They do not determine actions, but they do not make them arbitrary, either; instead, affordances “*frame* [...] the possibilities for agentic action in relation to an object.”²¹ Objects thus make certain behaviors more likely than others. However, these possibilities are never located exclusively on the side of the objects but are always related to the users: “An affordance is a *relationship* between the properties of an object and the capabilities of the agent.”²² It is also important to take cultural conventions into account because affordances do not arise solely in the course of subjective perception but in the linkage of object, user, and cultural context.²³ It is only against this background that users can actualize the virtually possible actions afforded by objects. Through this actualization, the objects transform their properties and thus their affordances in turn, which leads to new practices of use, and so on.

These features of affordance theories can be applied well to the previous thoughts on game figures: Affordances exist between game figures and players, which are based on the materialities of the figures as well as on the perceptions of the players, the social conventions of playing and the rules of specific games; in the following, I will limit myself to the first aspect for reasons of clarity. The shape, color, or material of game figures thus afford persons to (inter-)act with them, or more precisely: The superior affordance of game figures is ‘playing,’ they are, following James J. Gibson, ‘play-with-able.’²⁴ This affordance is superior because, depending on the design of the figures, it is accompanied by further fundamental affordances that serve as conditions of play: In the vast majority of cases, this is the affordance of ‘grasping’ in order to interact with the figures, occasionally it is a more specific affordance, like ‘plugging together,’ ‘stacking,’ etc. Either way, playing with game figures generally involves tactile-haptic interaction with them; this will become important later.

21 I. Hutchby, “Technologies, Texts and Affordances,” p. 444, emphasis added.

22 D. Norman: *The Design of Everyday Things*, p. 11, emphasis added.

23 Cf. *ibid.*

24 Cf. J. Gibson: *The Ecological Approach to Visual Perception*, p. 128, where he refers to a chair as “sit-on-able.” Depending on the context, figures can take on other affordances, such as ‘collecting’ or ‘exhibiting’ in museums; cf. Boch, Lukas: “That Belongs to a Museum—moderne analoge Spiele als Exponate in musealen Ausstellungen,” in: Boch, Lukas et al. (eds.), *Mehr als nur Zeitvertreib? Wissenschaftliche Perspektiven auf analoge Spiele. Eine Publikation anlässlich der SPIEL 2021*, Münster: WWU Münster 2022, pp. 207-217.

With regard to a linkage of actor-network and affordance theories, it can be summarized as follows: When figures and persons meet, the former—in conjunction with other objects, cultural conventions, etc.—develop the affordance of ‘playing’ for the latter. When persons actualize this affordance, they firstly become players, and the figures firstly become game figures. In addition, players and game figures become hybrid actors within a ludic network that they produce and maintain by actualizing the affordance of ‘playing.’ In this network, they ascribe different forms of agency to each other and thus influence each other to varying degrees. Thus, the question articulated at the beginning of this article can now be made more precise: In the following, I will describe what materially grounded forms, functions, and meanings are attributed to game figures *in ludic networks* and what *constellations of agency and affordances* can be observed within these processes.

THE STUFF THAT GAMES ARE MADE OF: MATERIALITY AS PREREQUISITE OF PLAY

As mentioned, the instrumental and ludo-material agency of game figures can be more or less interrelated. At one end of this spectrum between autonomy and dependence, figures need to meet only a few conditions to be effective in ludic networks. For instance, historical games such as MANCALA or SENET can be understood as rule systems largely uninfluenced by narration, textuality, or audiovisual traditions,²⁵ and they can be played with different figures. All that matters is that the figures are available, that one’s own figures are distinguishable from those of the other players, that the figures are proportional to the board, and that they can be used with little effort by the players. Therefore, they are mostly small, light objects that are easily available, such as pebbles, shells, bones, etc.²⁶

At the other end of the spectrum, often, the materiality of game figures is not interchangeable but constitutive for various affordances and dimensions of instrumental agency. In many cases, the *shape* of the figure is central to the fact that ludo-material agency can or cannot develop. Looking at ancient games, they often have spherical figures that would make playing impossible on today’s boards. In earlier cultural formations, however, games were often played on areas carved into

25 Cf. Raczkowski, Felix: “Papier und Polygon. Theming und Materialität in Game Studies und Game Design,” in: GamesCoop (eds.), *Navigationen: Spiel|Material* 1/20 (2020), pp. 21-34, here p. 25.

26 Cf. C. Clüver: “Würfel, Karten und Bretter,” p. 44.

the ground or drawn in the sand, where spherical figures could be placed stably.²⁷ But the shape of game figures is often a necessary condition for playing today, too. In FANG DEN HUT (1927), for example, players can, when moving to the same square, ‘trap’ figures by placing their own figure over the opponent’s. The ‘trapping’ is implemented—and made possible at all—by the fact that the figures have the shape of hollow conical cylinders (which symbolize ‘caps,’ cf. Fig. 1).

Figure 1: Shape as a Prerequisite of Play. ‘Caps’ in FANG DEN HUT



Source: FANG DEN HUT (Ravensburger, 1927). Photo by P. Podrez, with friendly support of Deutsches Spielearchiv Nürnberg

In many cases, the *colors* also lead to the formation of ludic networks. In the vast majority of games for several players, it is essential to distinguish the figures. If all of them looked the same, there would be no orderly game. This distinguishability can be constituted by shapes but is more often marked by colors, e.g., in many classic board games like NINE MEN’S MORRIS or CHINESE CHECKERS. Colors can also exhibit different forms of instrumental agency and afford players in different ways. For example, the choice of a color may not only be about the subjective preferences of players but also about the ludic agency assigned to a color,

27 Cf. Kobbert: *Kulturgut Spiel*, p. 15.

which determines entire game strategies, such as the ‘white begins’ paradigms of CHESS or CHECKERS.²⁸

The *size* of game figures can also be important for their ludo-material agency, influencing not only how but also where a game can be played. Small figures allow players to take the game to other places, while large figures make it location-bound. One might think of a travel CHESS set with centimeter-sized figures on the one hand and an outdoor CHESS with figures one meter high, such as can be found in city parks, on the other. From a certain point on—which is different for each player—a scaling of the size leads to a dysfunctionality of the affordance ‘playing.’ This can happen by overriding the affordance ‘grasping’ because figures are too small to interact with them,²⁹ as in the case of micro CHESS editions. But it can also happen when the affordance ‘playing’ requires great strength or endurance for very large figures, which can exclude individuals from the ludic network due to their physical constitution.

Furthermore, the *weight* of game figures can promote or prevent the formation of ludic networks. For example, figures that are too light are unstable and can lose their place on the board due to movement, wind, or the like. Too heavy figures, on the other hand, can damage other game materials or, as mentioned above, lose their affordance ‘playing’ if they cannot be moved by players. GRAWORIE (2001) shows how the weight of game figures is functionally implemented in a ludic network. The game is based on the players’ visual and haptic memory. The figures are 18 aluminum cubes, six of which have an identical weight, while different symbols are engraved in them. The combination of weight and symbol results in nine pairs that have to be found by sight, touch, and memory. The affordance of the game figures here is thus not only ‘grasping’ but also ‘weighing in the hand.’

Further, game figures are made of various *materials* that can account for their ludo-material agency. Tim Ingold criticizes theories of materiality for often losing themselves in abstraction while neglecting the concrete materials of objects. Ingold, therefore, pleads for a return “from the materiality of objects to the properties of materials,”³⁰ whereby he understands materials as “the stuff that things are made of,”³¹ be it glass, iron, gold, stone, wood, fabric, ivory, plastic, etc. He

28 On the agency of colors, cf. Young, Diana: “The Colours of Things,” in: Tilley, Chris et al. (eds.), *Handbook of Material Culture*, London: SAGE 2006, pp. 173-185.

29 On the anatomy of grasping, cf. Aicher, Otl/Kuhn, Robert: *Greifen und Griffe*, Köln: König 1995, p. 18.

30 Ingold, Tim: “Materials Against Materiality,” in: *Archaeological Dialogues* 14/1 (2007), pp. 1-16, here p. 9.

31 Ibid., p. 1.

ascribes to all of them—although not in the sense of ANT but certainly compatible with it—the ability to “act back,”³² i.e., to influence elements in their environment. This is based on the fact that every material is specific in terms of texture, resilience, elasticity, etc., and it is precisely these properties of the material that can constitute its ludo-material agency. It has been mentioned already that all games based on the principle of magnetic attraction can only be played with magnetic figures; otherwise, no ludic network can be created.

Figure 2: Material as Prerequisite of Play. Ice Cubes in COOL RUNNINGS



Source: COOL RUNNINGS (Ravensburger, 2018). Roy: “Cool Runnings,” in *BoardgameMonkeys*, 24.12.2018, <https://www.boardgamemonkeys.com/2018/12/cool-runnings.html> [edited]

For a more unusual example that connects the ludo-material agency and affordance of the figures with different aggregate states of their material, consider the game COOL RUNNINGS. In it, the game figures are ice cubes that have to be brought over the finish line in colorful ‘transport boxes’ before they melt (cf. Fig. 2). The (low) durability of the material determines the duration of the game and can be influenced by the other players, as action cards activate the ice cube-related affordances ‘rubbing,’ ‘breathing on’ and others, so that the ludic network is

32 Ibid., p. 11.

formed in permanent interaction between the players and the ice cubes, which gradually become puddles of water.

Figure 3: Media Technology as Prerequisite of Play: The Smartphone as Pirate Ship in WORLD OF YO-HO



Source: WORLD OF YO-HO (IELLO/Volumique, 2016), <http://yoho.io/german/index.html> [edited]

Finally, game figures can take on ludo-material agency by incorporating *technological elements* into themselves or even by being (*media*) *technologies* themselves. In this case, the boundaries between materiality and immateriality, mechanics and electronics, analog and digital become blurred. This field is wide and can only be touched upon here, but it includes, for example, those figures that are electrically powered—mostly by batteries—in order to act as random generators (MAGOR DER ZAUBERER, 1993) or to perform movements autonomously from the players (KAKERLAKAK, 2013). In these cases, the affordance of the game figures is not just ‘playing’ or ‘grasping,’ but first and foremost ‘turning on’—the motto is ‘no power, no play.’ Games in which the figures are themselves media technologies also fall into this domain. In HUI SPINNE (1999), this is a small radio in the shape of a spider that broadcasts programs that have to be integrated into the course of the game. But it can also be, in a current variant of “playful hybrid

products,”³³ a smartphone, as in *WORLD OF YO-HO* (2016). In this game with a pirate setting, after installing the accompanying app, the smartphone is used as a game figure, namely as a ship that can be moved on the game board representing a sea chart. The smartphone’s display overlaps with the board (cf. Fig. 3). At the same time, however, the smartphone serves as an interface for commands such as selecting missions, firing cannons, and so on. In this way, it generates different affordances (‘moving,’ ‘operating by touchscreen,’ etc.) and establishes a hybrid ludic network in which analog and digital elements interact synchronously and interdependently.³⁴

THE POLITICS OF MATERIALITY: CULTURAL DIMENSIONS OF GAME FIGURES

In ludic networks, game figures not only merge into functional contexts. Due to their materiality, they also acquire cultural meanings, which are linked in various ways with forms of agency and affordances. This is because materiality is never ideologically neutral but always charged with—culturally and historically dynamic—social, political, economic, etc., discourses. These discourses crystallize in game figures. To take only one example, I will discuss the *ecological discourses* concerning the material.

While plastic figures were celebrated for their variety of designs when they first appeared in the second third of the 20th century, the ecological footprint of plastic today causes ambivalence for many players. The affordance ‘playing’ of plastic figures can, therefore, depending on the ecological attitude of players, become an “anti-affordance.”³⁵ ‘not playing’/‘avoiding.’ In contrast, wooden figures are often seen as more ‘natural’ and sustainable today—regardless of their potentially problematic production conditions. *SPIRIT ISLAND* (2017) reflects these discourses regarding materials on the thematic, narrative, and ludic levels. The game is about the colonization of an idyllic island by human aggressors.³⁶ Players take

33 Tyni, Heikki/Kultima, Annakaisa/Mäyrä, Frans: “Dimensions of Hybrid in Playful Products,” in: Lugmayr, Artur et al. (eds.), *AcademicMindTrek’13 Proceedings of the International Conference on Making Sense of Converging Media*, 2013, pp. 237-244, here p. 237, <https://dl.acm.org/doi/proceedings/10.1145/2523429>

34 On synchronicity and dependence as aspects of hybrid play, cf. *ibid.*

35 D. Norman: *The Design of Everyday Things*, p. 11.

36 On colonialism in board games, cf. Knäble, Philip: “Leere Inseln—Europäische Expansion im modernen Brettspiel,” in: Boch, Lukas et al. (eds.), *Mehr als nur*

control of nature spirits and associated indigenous people to fend off attacks on the ecological balance of the island. The nature spirits manifest themselves on the board as ‘presences’ in the form of round, colorful wooden figures, and they have the instrumental and narrative agency to defend territories on the island. This is also done by the indigenous people, who are represented by round wooden game figures, too (cf. Fig. 4).

Figure 4: Ideologies of Wood and Plastic in SPIRIT ISLAND



Source: SPIRIT ISLAND (Pegasus Spiele, 2018). Photo by P. Podrez, with friendly support of Deutsches Spielearchiv Nürnberg

Here, nature, conservation, and wood as a natural and positively connoted material are amalgamated. The colonialists stand in sharp contrast to this. Their figures, which represent soldiers, villages, and cities, are made of gray plastic and have

Zeitvertreib? Wissenschaftliche Perspektiven auf analoge Spiele. Eine Publikation anlässlich der SPIEL 2021, Münster: WWU Münster 2022, pp. 40-50; on (anti-)colonialism in SPIRIT ISLAND, cf. Bassermann, Markus: “Antikolonialer Widerstand und stumme Indigene: Vorstellung und Diskussion von Spirit Island,” in: Boch, Lukas et al. (eds.), Mehr als nur Zeitvertreib? Wissenschaftliche Perspektiven auf analoge Spiele. Eine Publikation anlässlich der SPIEL 2021, Münster: WWU Münster 2022, pp. 51-68.

many jags and edges. Their instrumental and narrative agency consists in covering the island with settlements but also with wasteland, which is symbolized by stone slabs, also made of gray plastic (cf. Fig. 4). Plastic is thus assigned to the sphere of the man-made and artificial, but also of the aggressive, since in *SPIRIT ISLAND* expansion goes hand in hand with the destruction of nature. Nor is the materiality of figures ever ideologically neutral because—again: dynamic—discourses regarding identity politics are inscribed into the design of the figures. Game figures are always symbolic representations of something or someone. Therefore, the classic critical cultural studies questions have to be asked: How do game figures construct gender, ethnicity, class, age, (dis-)ability, species, etc.? What dominant patterns are formed, and what stereotypes are (re-) produced and possibly subverted in this process? However, following the argumentation of this article, it is also important to link such identity constructions with the affordances and forms of agency of the respective game figures.

Figure 5: Anthropocentrism in the Design of Pawns and Meeples



Source: Pawns taken from *HALMA* (Franz Schmidt Nürnberg, unknown); meeples taken from *CARCASSONNE* (Schmidt Spiele, 2005). Photo by P. Podrez, with friendly support of Deutsches Spielearchiv Nürnberg

As far as the *shape* of game figures is concerned, since their historical beginnings, more concrete-figurative or more geometric-abstract designs can be identified,

various transitional forms also being conceivable.³⁷ But even shapes that tend to be abstracted, such as the pawns common in many games, exhibit clear identity attributions. The shape of pawns demonstrates the tendency to *anthropomorphize* game figures—here by a stylized head on a body. In the case of the likewise widespread meeples, the phenomenon becomes even more apparent due to their design that symbolizes a human figure with head and limbs (cf. Fig. 5). This points to the fact that, although figures of real and fantastic non-human species were already used in ancient games,³⁸ game figures have had an inherent anthropocentric tendency for millennia.

This tendency can take on other political meanings and forms of agency through further design strategies. In *BLACKS & WHITES* (1970), this occurs through the use of the eponymous *colors*, which are associated with *ethnic, social, and economic power relations*. Following the principle of *MONOPOLY* (1935), the aim of the game is to acquire real estate and accumulate wealth. However, at the beginning, players must decide whether they want to act as whites or blacks. The representative white and black pawns have different forms of narrative and instrumental agency: Players with white pawns start with \$1,000,000 of capital and may acquire property in any zone of the board. In contrast, players with black figures start with \$10,000 of capital and are, among other things, excluded from the ‘sub-urb’-zone; they also draw from a separate deck of cards, where they encounter events such as: “Draft call. Roll dice. [...] If you roll an even number, you are drafted and sent to Vietnam—sell all properties to highest bidder or to Treasury for half price.” The unequal distribution of agency to figures in the game thus reflects the unequal power relations of people in U.S. society.³⁹ Colors are used to “constitute social relations”⁴⁰ while “producing and reproducing power.”⁴¹

An iconic example of game figures that can be located on the threshold between concretion and abstraction, and in which the connection between *class* and instrumental agency is reflected, are the Staunton *CHES*s figures canonized in Western culture since the 19th century.⁴² A common interpretation of *CHES*s is that

37 Cf. M. Kobbert: *Kulturgut Spiel*, p. 15.

38 Cf. *ibid.*, p. 14.

39 Pointing out that this inequality was not unique to the 1960s/1970s, *BLACKS & WHITES: 50TH ANNIVERSARY EDITION* was released in 2021.

40 D. Young: “The Colours of Things,” p. 173.

41 *Ibid.*, p. 180.

42 Throughout its history, *CHES*s has exhibited a huge range of figures representing various materialities and ideologies. For examples, cf. Mackett-Beeson, Alfred E.J.:

of a battle involving figures from different classes, roughly: peasants, soldiers, clergy, and nobility. When the Staunton figures of one color are lined up next to each other (cf. Fig. 6), it becomes clear that their size already expresses social hierarchies. If one adds to this the frequency of the figures, the picture emerges of many small peasants being drawn into battle to protect the few higher-ranking soldiers, clerics, and nobles. This, in turn, can be linked to assignments of instrumental agency since the pawns have the smallest and most inflexible range of movement in the game; moreover, they are ‘in the front line,’ serve as ‘pawn sacrifices,’ etc. Conversely, the queen, for example, has the greatest ability to move and attack and is therefore usually considered the most powerful figure.

Figure 6: Social Hierarchies in Staunton CHESS Figures



Source: CHESS (Ravensburger, 1983). Photo by P. Podrez, with friendly support of Deutsches Spielearchiv Nürnberg

Representations of identity are found most conspicuously in concretely designed figures, for example, in detailed miniatures. In *TALISMAN: REVISED 4TH EDITION* (2007), players choose their protagonist from 14 different figures in order to find the eponymous artifact in a fantasy world. A brief quantitative analysis is worthwhile here since the patterns that emerge are representative of most analog game figures. First, almost all protagonists, ten in number, are human, which reinforces the aforementioned anthropocentrism of game figures. Second, with regard to gender, eleven figures have male connotations, two have female connotations, and one has no clear gender affiliation. Such a dominance of masculine figures is genre-typical for fantasy but can also (still) be ascertained for analog (board) games per se. Third, two figures can be assigned to an advanced age group, while childlike figures do not exist at all, which is also typical for the dominance of—

Chessmen, London: Weidenfeld & Nicolson 1968; Greygoose, Frank: *Chessmen*, Newton Abbot: David & Charles 1979.

very roughly speaking—middle-aged game figures.⁴³ And fourth, none of the figures shows any physical impairment, which points to a general norm of ableness in analog (board) games.⁴⁴ A closer look at one exemplary figure, the Sorceress, reveals further insights (cf. Fig. 7).

Figure 7: Stereotyped Femininity in *TALISMAN: REVISED 4TH EDITION*



Source: *TALISMAN: DIE MAGISCHE SUCHE*. 4. EDITION (Various, 2008). Photo by P. Podrez, with friendly support of Deutsches Spielearchiv Nürnberg

The miniatures in *TALISMAN: REVISED 4TH EDITION* are complemented by cards that show an illustration of the respective character and list narrative backgrounds and ludic abilities. Accordingly, the Sorceress has six skill points, which are distributed in a gender-stereotypical manner between low instrumental agency in terms of strength and high instrumental agency in terms of talent (in this case: magic power). At the same time, the Sorceress is classified as a malevolent

43 The exception are children's games, in which kids—and animals—often take on the main roles.

44 A rare exception, also located in the fantasy genre, is the Combat Wheelchair discourse; e.g. cf. Davis, Sally: "Play with Us However You Roll: Combat Wheelchair Rules for D&D 5e," in: *PAXSims* (2020), <https://paxsims.wordpress.com/2020/09/20/play-with-us-however-you-roll-combat-wheelchair-rules-for-dd-5e/>

character coming from a graveyard. Thus, the motif of the evil witch is taken up, though not in the form of an old, physiognomically deformed woman, but in the shape of a youthful and sexualized one. The figure's facial features, especially on the card, are modeled after Western ideals of beauty, as are the flowing hair and slim body, which are also visible on the miniature. The clothing is revealing, emphasizing the figure's breasts and thus fitting into the classical paradigm of objectifying the female body. Or, to put it another way: An affordance of the figure is 'looking at'—with erotic connotations.

These and many other designs of game figures go hand in hand with various (anti-)affordances since players can consciously decide for or against playing with the respective figures precisely because of their ideological dimensions. Thus, a figure charged with sexist, racist, etc., tendencies may lead players to exclude it from the ludic network by banishing it back into the game box. In extreme cases, such anti-affordances of 'not playing' can lead to refusing the entire game or to designing other figures that meet the criteria desired by the players—more on this in a later section. But conversely, a figure may be brought into the ludic network precisely because of its identity representation and/or related narrative and instrumental agency. Either way, game figures can affect the players and their actions through their identity-related design.

WHAT DOES A CHOCOLATE KNIGHT TASTE LIKE? AISTHETIC EXPERIENCES WITH GAME FIGURES

Beyond their functionality and cultural significance, game figures are also relevant on the sensual level. Affordances are always grounded in perceptual processes that are physical and sensorial.⁴⁵ The superior affordance of the game figure 'playing' can thus only be actualized in the context of the embodied perception of the figures on the part of the players. All of a figure's sensual qualities can contribute to this, such as its appearance, its tactile-haptic dimension, its sonic aspects, its smell, or even its taste.

If one follows the etymology of the term *aisthesis*,⁴⁶ which denotes sensual perception, players gather aesthetic experiences when dealing with game figures. In this context, what Erika Fischer-Lichte explains in relation to the subject of a theater play can be transferred to games. According to her, human perception

45 Cf. J. Gibson: *The Ecological Approach to Visual Perception*, p. 79.

46 Cf. Zirfas, Jörg: "Die Künste und die Sinne," in: Bockhorst, Hildegard et al. (eds.): *Handbuch Kulturelle Bildung*, München: Kopaed 2012, pp. 168-173, here p. 168.

constantly oscillates between two levels: a meaning-giving level, on which the specific signs of what is perceived are interpreted in semiotic (analysis) processes, and a sensual level, which turns to the phenomenal ‘being-as-it-is’ of what is perceived and focuses on its concrete appearance and effect from a phenomenological point of view.⁴⁷ Based on this premise, the aesthetic experience of game figures will also be described in the following as oscillating between the poles of meaning and phenomenal ‘being-as-it-is.’ That is, players not only perceive figures in their functional and symbolic dimensions but are also sensually affected by them. This happens with regard to all the classic five senses of the human being: seeing, hearing, touching, smelling, and tasting. These senses are in constant interplay with each other and are treated separately only for a better overview.

Seeing game figures is usually a prerequisite for interacting with them. It can mean observing their (strategically important) distribution on the board or interpreting their visually conveyed ideological messages. But seeing figures can also mean looking at them for their own sake. Their visual attraction may be the result of a singular creation that can give figures a special aura, as Walter Benjamin described regarding works of art,⁴⁸ or it may be the result of strategies deliberately calculated in industrial mass production in order to draw customers.⁴⁹ Either way, the visual attraction can be understood as a reinforcement of the game figures’ affordance ‘looking at,’ as an invitation to the players to let their gaze linger more attentively and longer on the figure.

In the millennia-old tradition of the production of visually attractive game figures, CHESS figures play a particularly prominent role. Here, a 19th-century Chinese king and queen are used as an example (cf. Fig. 8). This makes it clear that the gaze of the players can be directed to a specific cultural symbolism or can try to decipher the techniques of craftsmanship in the production. But it can also lose itself in the abundance of fine details, for example, in the curved patterns of the robes, thus making the viewer feel impressed by their filigree quality; it can perceive a harmonic overall picture due to the predominantly rounded forms; it can let the rich red color scheme take effect on the viewer; etc.

47 Cf. Fischer-Lichte, Erika: *Ästhetische Erfahrung. Das Semiotische und das Performative*, Tübingen: Francke 2001.

48 Cf. Benjamin, Walter: “Das Kunstwerk im Zeitalter seiner technischen Reproduzierbarkeit,” in: Benjamin, Walter: *Gesammelte Schriften*, Bd. 1, Frankfurt a.M.: Suhrkamp 1972, pp. 471-508.

49 Cf. Clüver, Claudius et al.: “Spiel|Material. Zur Einführung,” in: GamesCoop (eds.), *Navigationen: Spiel|Material* 20/1 (2020), pp. 7-20, here p. 9.

Figure 8: Seeing Game Figures: King and Queen in CHINESE CHESS Set as Visual Attractions



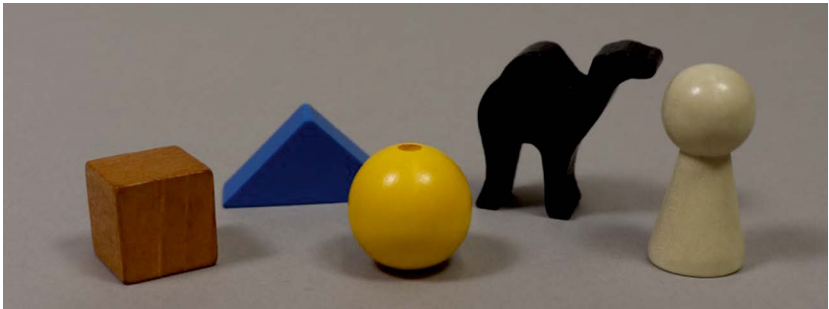
Source: CHES (unknown, early 19th century). Grey-
goose: *Chessmen*, Newton Abbot: David & Charles
1979, p. 112

Hearing game figures is rarely relevant from a ludic-functional point of view, but nevertheless, there are examples in which one of the affordances of figures is ‘listening to.’ In ZAPP ZERAPP (2000), whose story is about the journey to an enchanted mountain, players link rolling the dice with auditory interactions. At the center of the board, there are painted wooden containers semanticized as ‘barrels’ and filled with varying numbers of metal beads. The rolled number must be matched with the number of beads in a ‘barrel’ in order to make a move. To achieve this, the players must shake the barrels and listen to their sounds. In the sense of ludic progress, the act of listening can focus on guessing the correct number of beads. But players can also perceive the rattling in its phenomenal ‘being-as-it-is,’ find it pleasant or unpleasant due to its pitch, try to influence its volume and frequency by shaking the barrels more vigorously or faster, etc. All in all, games like ZAPP ZERAPP are exceptions. But beyond such rule-based functionalizations of the sense of hearing, players can hear figures in almost all games and

almost all actions in the ludic network: Every time figures are placed and moved on the board, every time they are hit, the clacking of wood on wood, the shuffling of plastic on felt and many other sounds occur. Even if these are not consciously perceived, on the one hand, they refer to the character of the material, and on the other hand, they can be sensed as quiet, intrusive, and so on.

In today's Western culture, the 'distant senses' of seeing and hearing are considered superior, while the 'near senses' of touching, smelling, and tasting are considered subordinate.⁵⁰ This hierarchy, which has developed over the course of cultural history,⁵¹ is somewhat reversed with regard to game figures because, on the one hand, hearing figures recedes into the background, and on the other hand, *touching*—along with seeing—becomes a central sense in the formation of ludic networks. As already emphasized, a fundamental affordance of game figures is 'grasping,' which means that players and figures generally only come together through the act of touching.

Figure 9: Touching Game Figures: Shapes to Be Felt in DSCHAMÁL



Source: DSCHAMÁL (Zoch, 2005). Photo by P. Podrez, with friendly support of Deutsches Spielearchiv Nürnberg

Touching and grasping are thus indispensable for almost all processes of play(ing), but besides their pure—usually unconsciously perceived—functionality, they can also become central for their own sake. Then, figures can be explored haptically in terms of their sense and sensuality. 'Touch games' focus on the first dimension. In DSCHAMÁL (2005), for example, the players have to draw matching figures out

50 Cf. Howes, David: "Scent, Sound and Synaesthesia. Intersensoriality and Material Culture Theory," in: Tilley, Chris et al. (eds.), *Handbook of Material Culture*, London: SAGE 2006, pp. 161-172, here p. 164.

51 Cf. J. Zirfas: "Die Künste und die Sinne," p. 169.

of a small bag. In doing so, they need to distinguish different shapes by means of touch, including triangles, cubes, spheres, pawns, but also a camel (cf. Fig. 9). Beyond the recognition of shapes, the touching of figures—in DSCHAMÁL as in all other games—can also concentrate on their phenomenal ‘being-as-it-is.’ Then, the weight, contours, or texture of plastic, glass, cardboard, or wood can be perceived as heavy or light, round or angular, rough or smooth, warm or cool, etc.

In contrast to touching, *smelling* game figures is rarely important in a ludic network. One unusual example is SMELLORY (1984), in which pairs consisting of a motif card on the one hand and the scent from a flacon, which functions as a game figure, on the other hand, must be found according to the memory principle. The cylindrical yellow flacons contain fragrance stones impregnated with 32 (artificial) aromas, including eucalyptus, spruce, almond, vanilla, lemon, etc. Players can direct their olfactory perception toward identifying the respective scent. But they may also perceive the specific characteristics of the scent in their phenomenal ‘being-as-it-is:’ floral, spicy, tart, fruity, etc. Besides, since the fragrances are chemically produced, irritation can be experienced through odors perceived as penetrating, or an allergic reaction may even occur, which the game instructions themselves warn against. The example of SMELLORY is exceptional; usually, the ‘smellability’ of figures is hardly linked to their ludo-material agency. Nevertheless, the affordance of ‘smelling’ does exist casually in the context of game figures because some materials have olfactory qualities that are intensified or even actualized by the touch of the players. This is the case with iron, for example; its smell is the result of a chemical-physical process that only takes place when an iron object comes into contact with human skin, which leads to the typical ‘iron smell’ that many people find unpleasant.⁵²

The sense most rarely used in connection with game figures is *tasting*. If it does not have to be used in a rule-based manner in the ludic network, it is not usually used at all because probably only very few players who have outgrown the oral (toddler) phase put figures in their mouths to explore their taste. However, the number of game figures that operationalize the sense of taste ludically is also small. This is the case with drinking games, for example, which consist of filling figures in the form of (shot) glasses with—mostly alcoholic—beverages and emptying them as a reward or punishment. Or it is the case with edible variants of well-known games, in which the board is usually made of non-consumable material, while the figures, imitating the familiar shapes, are made of edible material; one example are chocolate versions of CHESS, e.g., by the German confectionery

52 Cf. Than, Kher: “Coins Don’t Smell, You Do,” in *Live Science* (2006), <https://www.livescience.com/4233-coins-smell.html>

manufacturer Hüssel. This can be dismissed as a mere marketing gag of the food industry, shifting the affordance of the figures from ‘playing’ to ‘eating.’ However, the affordances can also be combined with the instrumental agency of the figures, namely playing in order to eat. In the case of CHESS, for instance, a rule negotiated between the players may be that figures that have been captured can (or must) be eaten. But the phenomenal ‘being-as-it-is’ of the figures in the act of eating can also play a role if the taste of the figures conventionally consisting of white and dark chocolate is perceived as (too) sweet, (too) tart, or the like.

DESTRUCTIONS AND CREATIONS: TRANSFORMATIONS OF GAME FIGURES

Although game figures in all my previous considerations provided for various constellations of ludic networks in a dynamic way, they themselves appeared to be comparatively static. In fact, however, they are highly transformative entities—not only in the sense that the status of characters can evolve in the course of a narrative or figures can accumulate points, thereby changing their fictional or instrumental agency, but also in terms of their materiality.⁵³ This materiality is in constant flux on various levels, actualizing new affordances and forms of agency.

Occasionally, after acquiring a new game, the game figures need to be brought into a ludic functional form before the first round is played. If they do not have to be created from scratch, as in cases like COOL RUNNINGS, they often exist initially as sets of elements that need to be plugged together, glued on, etc. The affordance of such ‘not-yet-figures’ is thus ‘making,’ or more precisely: ‘assembling.’ The act of assembling is usually governed by instructions,⁵⁴ as in SPACE CRUSADE (1990, cf. Fig. 10). The example makes clear that different figures can be assembled by equipping the basic models with various weapons. It also makes clear that the act of assembling, which varies in complexity depending on the kit, can assume precarious status. Significantly, the instructions repeatedly use the phrase “carefully:” “Carefully twist the Space Marines from the red, yellow and blue sprues [...] Carefully twist the Chaos Space Marines from the dark blue sprue [...]” After all, fragile plastic parts can break off, which may disturb the players’

53 On the dynamics of material, cf. T. Ingold: “Materials Against Materiality.”

54 Of course, there are possibilities to design the models in other ways, e.g. by using components differently or not at all, which does not necessarily detract from the ludic functionality of the figures.

aesthetic feelings, but can also lead to ludic dysfunctionality if the figure can no longer be used properly afterward.

This means that the assembly of a figure can satisfy the players' aesthetic needs, for example, in many tabletop games with complex figure construction sets. But the assembly of the figures can also relate to the game rules, as in *SPACE CRUSADE*: Once the figures have been put together, parts such as the base or the backpack usually remain constant; the weapons, though, remain changeable, depending on the players' preferred strategy, because they have different ludic specifications: "The dice you must roll [for firing] will depend upon which weapon you are using."⁵⁵ This way, different figures with different forms of instrumental agency can be assembled in each round.

In other cases, the whole game principle is based on the constant transformation of the figures. *GET BIT!* (2007) is about saving swimming pirates⁵⁶ from a shark. By discarding cards, the pirates overtake each other as they flee, so the figures are placed in different orders. The shark snaps once in each round and bites off a body part from the last pirate. This is realized not only symbolically but also materially because the pirate figures, which are made of plastic parts, can have their hands, arms, feet, and legs removed (cf. Fig. 11). A figure with arms and legs bitten off is no longer able to 'swim' and is eliminated from the game. Firstly, therefore, the materiality of the figures serves the bloodless execution of a symbolically communicated brutal action; secondly, it functions as an affordance to the players ('removing body part'), and thirdly it deprives the affected figure of instrumental agency with each loss, which simultaneously indicates the progress of the game.

The abovementioned transformations of the game figures have been intentional. However, materiality is always involved in processes of "dematerialization:"⁵⁷ "Plaster can crumble and ink can fade. Experienced as degradation, corrosion or wear and tear [...] these changes [...] are typically attributed to the phase of use [...] [N]o object lasts forever."⁵⁸ The manifestations and speeds of these changes depend very much on the type of material. Precious metals or glass, for example, are more durable than cardboard, but over longer periods of time, even such materials are subject to processes of transformation through decay.

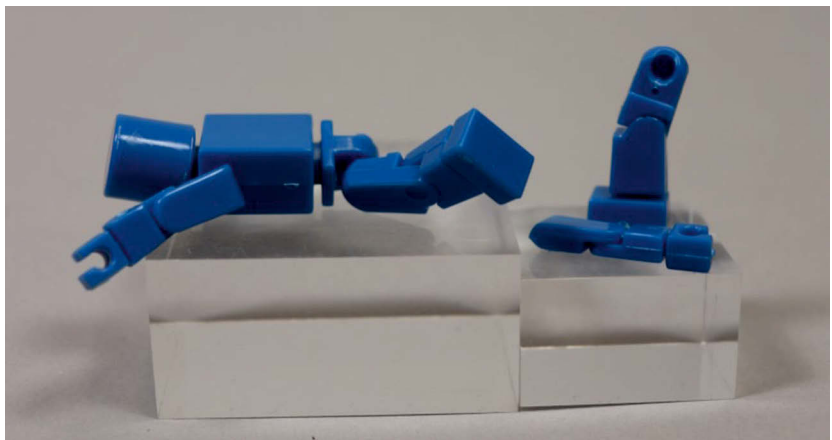
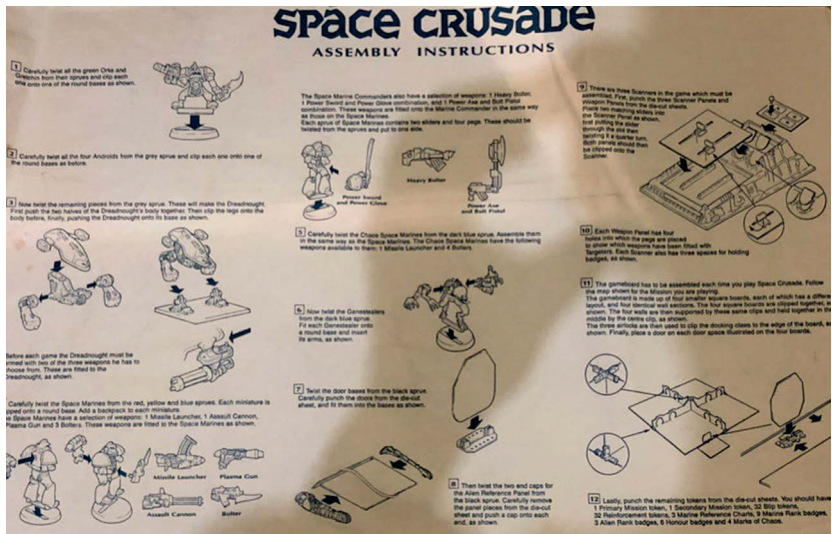
55 *SPACE CRUSADE Rule Book*, <https://i.4pcdn.org/tg/1436188627543.pdf>, p. 10.

56 These initially appear as 'doll figures' and can be pasted with stickers before the first game to construct figures with concrete genders, ethnicities, etc.

57 T. Ingold: "Materials Against Materiality," p. 9.

58 Ibid.

Figures 10 and 11: Assembly Instructions for Game Figures in *SPACE CRUSADE*; Game Figure with Removable Body Parts in *GET BIT!*



Sources: *SPACE CRUSADE* (unknown). Cayde6sBeautifulBeautifulHorn: “40k Nostalgia Goodness. Feat Space Crusade,” in: *imgur* (2018), <https://imgur.com/gallery/OSdch> [edited]; HAI-ALARM! (Asmodee, 2013). Photo by P. Podrez, with friendly support of Deutsches Spielearchiv Nürnberg

These transformations, which are to a large extent conditioned by the players’ use, can be purely on the aesthetic level but can also lead to loss of instrumental agency and ludic dysfunctionality. The degrees of loss of agency through demateria-

lization can be illustrated using the example of figures in TIPP-KICK (since 1921, cf. Fig. 12).

Figure 12: Dematerialization of Game Figures in TIPP-KICK



Source: Various TIPP-KICK editions (Mieg, unknown). Photo by P. Podrez, with friendly support of Deutsches Spielearchiv Nürnberg.

The eponymous principle of this table soccer game is based on ‘tapping’ a button on the head of the figure to make its leg swing and ‘kick’ the ball in the direction of the goal. The figures, historically made of sheet metal first, then of lead, and today mainly of zinc, are relatively robust in terms of game mechanics. Age-related flaking of the thin layer of paint is a phenomenon with a purely aesthetic effect. However, pressing the button too often or too hard can cause it to break off. In principle, the figure is then still functional because it is possible to press the iron wire sticking out of the head to move the leg.

However, this not only requires more skill, it can also become painful, thus influencing the actions of the players. The figure becomes completely dysfunctional when the leg ‘wears out’ due to the deterioration of the metallic joint and thus performs crooked movements, making aiming impossible, or completely breaks off, making it impossible to trigger a shot at all. In terms of their instrumental agency, game figures thus have a certain lifespan, which results from their material and their use by the players.

If such phenomena can be interpreted as transformations towards *destruction*, then in a final step, transformations should also be considered whose starting point is in the *creation* of figures. This does not refer to the aforementioned

assembly of prefabricated elements but to the creative (re-)designing of figures, which has less ludic than aesthetic or ideological motivations.

The extent to which such processes take place depends on the intentions of human actors, but also on the figures, or more precisely: on their affordance ‘(re-)designing.’ This affordance is all the stronger, the more blank spaces the figures leave open, inviting to be filled. One such blank space is the color scheme. In particular, detailed but monochrome miniatures, such as those found in fantasy, horror, or science fiction scenarios, invite the player to paint them. In this context, entire communities exist,⁵⁹ which exchange tips on the use of colors or the application of various painting techniques, and in which the presentation of design results and subsequent discussions are also important.

Taking a look at such designed results on the ideological level, it is striking that remarkably stable conservative conventions of *gender*, *race*, *class*, *age*, *dis/ability*, or *species* are inscribed into them. Although the underlying models already display strong conservative prescriptions through predefined aspects such as body shape, clothing, facial features, etc., subversive moments could theoretically arise through creative design processes. Here, it would be obvious to establish different ethnicities through the use of various painting colors as skin colors, the queer appropriation of gender-connotated features such as make-up, or the like. De facto, however, the design is dominated by classical hegemonic patterns, as an exemplary look at one figure from WARHAMMER 40.000 shows (cf. Fig. 13). The (hand-designed) bearer of an (industrially produced) banner can be seen. The painting of the figure emphasizes the futuristic armor with its powerful elements suggesting the great strength of the arms and the sharp-edged, masculine connotated face of a white man, distorted to a martial scream, framed by a beard, marked by wounds. This way, a typically militaristic image of white masculinity is (re-)produced in the design of the figure, which is not only representative of WARHAMMER 40.000 but of many board and tabletop games. However, exceptions can be found, and these can even appear as complete figural redesigns. In such cases, the original figure establishes the affordance of ‘transforming,’ which can be realized in an analog way through working with modeling material as well as digitally through technologies like 3D printing. A counter-example to the conservative figure discussed, for example, is represented by a queer WARHAMMER 40.000 figure (cf. Fig. 14). This figure is modeled to fly a flag painted in rainbow colors as a symbol of the Pride movement; its pole adorned with a small heart. The Pride symbol is also reflected in a shoulder element of the figure, while the rest of the armor is painted pink. In addition, the figure has been modeled to give a

59 For an example cf. <http://www.coolminiornot.com/forums/>

thumbs-up as a positive commentary on the Pride theme. Finally, the use of a model in which the face is obscured by a visor allows for the reading that a figure with diverse gender identities may be concealed beneath the armor.

Figure 13 and 14: Transformed WARHAMMER 40.000 Figures. Martial Masculinity and Diversity



Sources: Unknown parts of the WARHAMMER-series. u/AllThatJazz85: “Standard Bearer for the XIIIth raising the banner high,” *reddit* (2021), [https://www.reddit.com/r/Warhammer30k/comments/kz8yj9/standard_bearer_for_the_xiiiith_raising_the_banner/\[edited\]](https://www.reddit.com/r/Warhammer30k/comments/kz8yj9/standard_bearer_for_the_xiiiith_raising_the_banner/[edited]); u/yoruma: “Mytake on the Pride Marine,” *reddit* (2021), [https://www.reddit.com/r/Warhammer/comments/o7nv09/my_take_on_the_pride_marine/\[edited\]](https://www.reddit.com/r/Warhammer/comments/o7nv09/my_take_on_the_pride_marine/[edited])

CONCLUSION: WHY NOT ANALOG AND DIGITAL GAME FIGURES?

This article sought to gain some insights into the playfulness of materialities by taking a closer look at analog game figures. To conclude, this approach will be discussed in relation to the playfulness of game research.

Although efforts to deal with analog games have been made in recent years in the fields of game studies and media studies,⁶⁰ they are (still?) exceptions. There

60 From a media studies perspective cf. Booth, Paul: *Board Games as Media*, New York: Bloomsbury 2021; from a game studies perspective cf. Clüver: “Würfel, Karten und

is a gap between game studies, in which games are generally synonymous with digital games, and analog game research, which, as mentioned at the beginning, is less visible and, moreover, characterized by conceptual and theoretical ambiguity. However, both research directions could be set into productive dialogue with each other if one were to draw on a holistic concept of games, which understands them as nomadic media⁶¹ that can manifest in a wide variety of forms and which also approaches the specific elements of digital and analog games in equal measure.

In the course of their history, analog and digital games have constantly remediated each other.⁶² Analog games such as NIM or CHESS served as models for digital adaptations as early as the 1950s, and if one looks at today's games landscape, one can find innumerable examples of digitalized board games, ranging from classic games like SENET (2022) to role-playing games like GLOOMHAVEN (2021). Intermedial adaptations⁶³ also occur in the opposite direction. This becomes clear when taking a look at the board game adaptations of canonical arcade games that appeared in the 1980s, such as PAC-MAN (1982) or FROGGER (1981), but also by focusing on the more complex and narrative adaptations of games from various genres since the 2000s, from ANNO 1701: DAS BRETTSPIEL (2007) to THIS WAR OF MINE: THE BOARD GAME (2017). All of these adaptations raise questions about the media-specific transformations that inevitably accompany them.

In addition to adaptations, numerous intermedial references⁶⁴ between analog and digital games can be observed, breaking away from concrete models and dealing instead with individual motifs, aesthetics, and structures of games. The palette is extensive, ranging from the integration of dice and card game elements into digital (role-playing) games to video games-oriented, level-based design in board games such as LOONY QUEST (2015). Finally, on the object level, one can also cite games that establish ludic networks in hybrid constellations when analog elements are required to interact with digital devices, e.g., the aforementioned WORLD OF

Bretter;" Freyermuth, Gundolf S.: *Games—Game Design—Game Studies. An Introduction*, Bielefeld: transcript 2015; Schmidt, Hanns Christian: "Ludo Labo Literacy. Papphäuser, Bauhäuser und der Versuch einer medienpädagogischen Selbstentfaltung," in: GamesCoop (eds.), *Navigationen: Spiel|Material* 1/20 (2020), pp. 161-178.

61 Rautzenberg, Markus: "Spiel," in: Beil, Benjamin et al. (eds.), *Game Studies*, Wiesbaden: Springer 2018, pp. 267-281, here p. 267.

62 Cf. Bolter, Jay David/Grusin, Richard: *Remediation. Understanding New Media*, Cambridge, Mass.: MIT Press 2001.

63 Cf. Rajewsky, Irina O.: *Intermedialität*, Tübingen: Francke 2002, p. 16.

64 Cf. *ibid.*, p. 16.

YO-HO or XCOM: THE BOARD GAME (2015), an analog video game adaptation that requires a smartphone app in order to play it.

Analog-digital intersections are also numerous on the theoretical level. Following this article, one can continue to focus on theories of materiality and agency-based approaches such as ANT or affordance theories. After all, not only analog games with their players and game materials ranging from boards, cards, and dice to balls, throwing objects, and the like can be understood as ludic networks. Digital games also constitute ludic networks, which, in addition to the players, involve a variety of media technologies such as PCs, consoles, screens, controllers, or the respective game software, as well as the images and sounds generated by them, etc. All these media technologies are materially based, which is why technological-materialistic approaches like platform studies would be highly compatible with the analysis of digital ludic networks. The aspect of materiality, however, is not only found in hardware but also on the level of aesthetic representation. In game worlds, the material characteristics of landscapes, objects, figures, and the like are made as tangible as possible, for example, by simulating surfaces and textures or by evoking haptic, olfactory, or gustatory qualities.

Finally, game figures could function as an intersection on an analytical level. Most video games are just as figure-based as most analog (board) games. This means, for example, that certain questions raised in this article—for example, regarding aesthetic or cultural aspects—could also be asked in relation to digital game figures. Conversely, approaches to figure analysis⁶⁵ could be adapted and made useful for understanding analog game figures. Moreover, comparative approaches are conceivable. For example, the abovementioned remediations of analog and digital games also affect figures to a considerable extent. What does it mean in terms of its affordances when, for instance, Pac-Man is transformed from a collection of pixels on the screen of an arcade machine into a plastic figure with a mechanically hinged mouth? And vice versa: If the static poses of miniatures from tabletop games are transformed into audiovisually opulent movements and actions, what types of agency do the figures gain or lose? Furthermore, how can game figures that establish hybrid ludic networks be analyzed? Nintendo's amiibo figures, e.g., are material figures that are able to interact with specific (Nintendo) hardware and software and, after being scanned, unlock functions in games that would not be accessible without them.

65 Cf. F. Schröter: *Spiel|Figur*, pp. 147-178.

These are just a few examples that show that figures are highly interesting research objects of holistic game research:⁶⁶ They offer the opportunity to rethink a media theory of play(ing) and to observe different figural forms, functions, and meanings in an analytical way. From a historical perspective, game figures allow us to reconstruct their millennia-old lines of evolution spanning all cultural areas, from the ancient bone to the avatar of the 21st century. Focusing on cultural studies or ideology critique, game figures can be understood as representations of images of identity. These and many other perspectives show that game figures are more than just playful material: They are theoretically, historically, aesthetically, and politically significant.

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66 For the following, cf. Podrez, Peter: "Mehr als nur Spielsteine—Medienkulturwissenschaftliche Perspektiven auf Spielfiguren," in: Boch, Lukas et al. (eds.), *Mehr als nur Zeitvertreib? Wissenschaftliche Perspektiven auf analoge Spiele. Eine Publikation anlässlich der SPIEL 2021*, Münster: WWU Münster 2022, pp. 240-250.

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