Media and Games: An Intermedial Framework

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Abstract

This paper addresses the relationship between games and media and discusses to which extend games can be conceived as media, and how they should be studied as such. The paper proposes a revised version of Elleström's intermedial framework that has been harnessed to better describe games. The framework acknowledges the heterogeneous nature of not only games but all media. Elleström's framework allows us to address games as particular tangible objects in the world in a way that avoids normative assumptions about games in general as well as specific types of games such as digital or analog games. This framework has several usages. It can be applied in an analysis the relationship between different modalities in a single game; it can be used to compare different games; and finally, it can be used to discuss the similarities and differences between games and other media objects.

Keywords

1. Introduction

Since its emergence as a field of research, game studies have expressed a difficult and ambivalent relationship to the media concept. Aarseth [4] notes that games in their ontology differ from non-ergodic media such as literature, Eskelinen [33] conceives of digital games as re-mediations of games, and Juul [18] argues that games are transmedial and that there is not only one but many games media. Despite this, the term 'medium' or its plural form 'media' is used extensively in game studies literature. A search in the DiGRA online library on the term 'media' results in 105 articles, while the term 'medium' results in 43 articles. These numbers of course, do not say anything about in what context the term appears and whether authors stipulate a definition of the term or engage in a critical analysis of it. While this is an interesting question, that deserves a dedicated study of its own, it is not within the scope of this paper. The aim of this paper is rather to discuss to what extend games can be conceived as a medium or even as plural media, and to suggest a framework for analyzing, not the 'medianess' of games, but rather their various medial modes. However, since the problematic relationship between games and media has been a congenital and maybe even a constitutional aspect of game studies that we all seem to be able to tolerate and look beyond, one might rightfully ask why we need such a framework now. This paper argues that the question of media is as pertinent as ever in the current landscape of game studies that according to Apperley and Jayemane [47] is marked by a 'material turn'. Furthermore, the question of media, as it is raised in this paper, is not so much concerned with essentialist media categories, but rather with particular material phenomena in their multimodal existence.

The paper is structured as follows. First, I will offer a brief discussion of the problems with the media concept as such and how it has been applied in game studies specifically. Second, the intermedial approach will be introduced in detail and it will be discussed how this approach resonates with current trends within game studies. Third, a framework for analyzing the modalities of games will be presented and applied in an analysis of a single case study.

2. Media, Means, Modes and Mediation

The term media has a long history and have changed its primary meaning several times (c.f. Guillory[19]). While the term is frequently used in contemporary discourse, Meyrowitz in 1998 noted that there is less consensus about what media means than we probably think [20] . This lack of consensus has likely not decreased over the last twenty years. On the contrary, everytime a new medium appears it spawns a range of other media-concepts. The concept of 'new media' necessitated the term 'old media', 'online media' spawned 'offline media' and so forth. Guillory [19] observes how early efforts to theorize communication and the media was grounded on discourses about the so-called fine arts such as poetry as well as the ancient arts of rhetoric, logic and dialectic. The term medium then rests on two important concepts, namely communication and representation. While the two terms are definitely related, communication typically refers to the transmission of content between sender and receiver, whereas representation primarily refers to the relationship between sign and what it signifies (c.f. Mitchell [49]). Similarly, Guillory contrasts two underlying media concepts in early modern philosophy, namely 1) the medium as an abstract process, which is found in Locke's conception of communication as the (transparent) transmission of ideas and his focus on speech, and 2) the medium as a material technology, as it is found in Wilkin's notion of communication over distance and time and his focus on writing rather than speech. These two conceptions each lays different weight on the issues of representation and communication respectively.

Later, as it is described by Benjamin [48], the emergence of new technologies of reproduction and more importantly remediation by the end of the 19th century, somehow altered the status of the work of art. The existence of the notion of communication and representation in the media concept is reflected in two main trajectories of media theory, as Hansen [32] identifies and describes them. In the United States media theory have been mostly preoccupied with the notion of communication, which is evident in for example the Shannon's abstract and 'universal' theory of communication. Canadian and Continental media theory on the other hand, have historically been more concerned with the notion of mediality, which marks an interest in particular media and how they operate. This trajectory has especially been influenced by Benjamin's [48] analysis of the artwork in the era of mechanical reproduction, Adorno's and Horkheimer's critique [35] of the cultural industry, and finally McLuhan's [34] postulate about the medium as message and media as extensions of man. As we can see these various uses of the media concept not only stress differently the aspect of representation and communication, but also the institutions and production processes of media, along with issues of impact pertaining to society.

Furthermore, the emergence of digital technology caused a rupture in the humanities on an epistemological, theoretical and methodical level [35], and deeply challenged the media-concept. While some scholars, e.g. Andersen [40], accepted the computer as a medium, others, e.g. Finnemann [36] saw the computer as a sort of meta-medium that could simulate older media and turn them into genres of the meta-medium. Other scholars have been skeptical about the notion of a digital medium. Aarseth [5] for example rhetorically asked to what extend it make sense to conceive of a Furby, an ATM and a Palm Pilot as the same medium just because they are all digital (p.1), and instead suggested the notion of an intermedium as a nexus where different and similar media interface with each other. In addition to this, the computer brought with it the question of hardware vs. software. Kittler [8] argued that there is no software in the sense that all code operations can be reduced to signifiers of voltage differences. Mulder [1] on the other hand emphasized the status of software by arguing that hardware can ultimately be simulated by software. For both scholars, however, digital media renders the media-concept obsolete because it loses its explanatory power [8], [1].

To sum up: on the one hand the concept of medium and media have proven itself useful in the sense that we colloquially all seem to understand approximately what we are referring to when we use the term, on the other hand the concept of medium and media in distinct theories has come to mean as different things as a mode of communication, a channel, a technological artifact, an abstract set of instructions, a way of doing things, a language, or an industry or institution to name a few. As a result of this, Mitchell and Hansen [51] provocatively argue that in humanities and humanistic social science we are all practitioners of media studies, whether we recognize it or not.

2.1. The Media Concept and Games

While the media concept as we have seen comes with its own ambiguities and is further challenged by the computer, the application of the media concept to games poses additional problems. The first problem concerns whether games are media at all. Eskelinen [33] adopts Parletts's notion of games as systems of ends and means and understands digital games as remediated games. Similarly, Juul [18] argues that games are transmedial and consist of six features that are independent of any particular medium but can be realized in a number of different media. Implied in this idea is a dualism according to which games then exist as abstract entities, ideas or concepts independent of their mediation. In contrast to this view, this paper argues that games should not be thought of as separate from their mediation.

The role of the player poses an additional problem to the question of games and media. As Aarseth [3] argues, games are ergodic texts, which means that they consist of underlying textons and scriptons, whose appearance are governed by the mechanics of the text as well as the ways in which the text is configured by a player. The player thus occupies a radically different position in relation to the text itself than in other media. This position cannot be compared to the position of the reader in active audience theory (c.f. Hall [44]), since the audience not only takes active part in processes of meaning-making and redistribution of a text, but also in the actual configuration of the text itself. In 1997 Aarseth describes cybertext as a triangular relationship between sign, material medium and operator [3], and thus still maintains a distinct position where the medium is other to both sign and player. In a later model by Aarseth and Calleja [7] the notion of medium has disappeared altogether and seems to be replaced by the notions of mechanics and materiality. In this model the term medium – or rather 'cybermedia' is used to describe the whole relationship of all dimensions in the model, that is materiality, mechanics, sign and player. As such Aarseth and Calleja abandon the term 'medium' in favor of 'cybermedia', where the prefix cyber- lays emphasis on information feedback loops rat her than linear communication.

The notion of cybermedia seeks to identify a common structure to what Wittgenstein [26], and several games scholars after him, has described as a highly heterogeneous group of phenomena that are all labeled games. With games as different as tag, StarCraft II (Blizzard 2010), 80Days (Inkle 2014) and Rummy, one might rightfully ask if it is even possible to characterize them as the same medium. Games it seems are highly different in terms of their materiality, the type of signs and mechanisms they employ and so forth. This leads to a conception of cybermedia not as a specific technological object or a particular semiotic system but rather an unstable exchange between materiality, signs, player and mechanics. This instability is both a strength and a weakness in the cybermedia model. It allows us to overcome both conceptions of games as 'platonic ideas' that exist independent of their realization, technological determinism, and notions of a particular game medium with a distinct expressive power, but on the other hand makes it difficult to inquire in more detail into how these four cybermedia aspects are expressed in particular games, and how they relate to one another. To be able to do this then, this paper adopts an intermedial approach. What this entails will be discussed in the following section.

3. Intermedial Studies

Intermediality studies is a particular perspective on art- and media studies that inquire into the relations between media. This has – for obvious reasons – been a persistent perspective in the field of comparative literature and has a somewhat long tradition as a research field in German academia but has also been studied in English speaking communities under the heading of 'interart studies' (c.f. Rajewsky [15]). However, what exactly characterizes the relations between media differ. In some theories, the notion of intermediality is better understood as transmediality, since the focus is on how a phenomenon, such as narrative, can occur in more than one medium, e.g. literature, cinema and games. The notion of transmediality thus challenges media-essentialism while maintaining relative stable media-borders. Concepts such as transmedia storytelling, and convergence culture all belong under this branch of intermedial studies, and in game studies, the works of Marie Laure-Ryan (e.g. [27]) is a good example of this approach.

Another and somewhat different branch of intermediality studies concerns the combinations of modalities - or communicative forms [21]- in 'works' ranging from the fine arts to entertainment media. This notion of intermediality follows Mitchell's [46] credo that all media are mixed media. To stress this a priori mixed or combinatory character of all media, Bruhn [21] proposes the term heteromediality rather than intermediality. Heteromediality thus is not about the exchange between media as in transmediality, but about the mixedness as an ontological characteristic of all media. While the notion of heteromediality is easy to apply to phenomena such as video games that typically combine image, sound and tactile feedback, and applies different semiotic systems such as verbal communication, likeness and gestures, it is important to stress that heteromediality does not concern specific mixed-media texts but all media.

Elleström [24] proposes a framework for studying the modalities of media in a detailed yet systematic manner. Elleström makes an important distinction between the basic dimension, the technical dimension and the qualified dimension of media, which will be introduced in reversed order in the following. The notion of *qualified media* refers to the ways in which we construct media borders, not so much based on intrinsic qualities, but rather on how they have been understood and used over time and in different cultural and aesthetic contexts. Elleström distinguishes between the contextual qualifying aspect of media, which refers the origin, delimitation and use in specific historical, cultural and social circumstances (p. 24), and the operational qualifying aspect, which refers to the aesthetic and communicative characteristics that form the baseline of a normative understanding of a given medium. The notion of qualified media thus allows us to inquire into how specific media emerge and disappear, how relationships between different media has been understood in some time and place, and how media has been somehow demarcated from similar phenomena. While the main interest of this paper lies in the concept of basic media, the notion of qualified media opens up for an interesting discussion of how the academic field of game studies have been demarcated from other fields such as literature and film studies, but also from anthropology and psychology, when it comes to questions of ontology, epistemology and methodology.

Elleström applies the notion of *technical media* to address any object that realizes basic and qualified media. The technical medium therefore is an integral part of what we perceive as media. Paper can be the technical medium of written words, but so can a television set or a computer, to name some obvious examples. The defining feature of a technical medium is its capacity to realize specific modal variants of the basic medium. Furthermore, we can observe, that technical media in some contexts play an important role in the qualification of media. In game studies for example, there have been a long tradition of distinguishing between digital and non-digital games (c.f. Aarseth [4]), despite the many similarities between these two groups as well as the many internal differences between the members of the two groups respectively. Basic media, is by far the most complicated category in Elleström's framework.

Basic media are the latent properties of a media object. Here Elleström distinguishes between material, sensorial, spatiotemporal and semiotic modalities. Each modality can be realized in a number of variant modes. As such the term modality refers to the overall categorization and modes to the actual values that makes up any media object. The material modality refers to the latent corporeal interface and can have many different modes, for example a flat or elevated surface, surfaces that are static or changing, sound or light waves, human bodies etc. A media object will often be a combination of several different material modes (p. 17). The sensorial modality concerns the physical and mental acts of perceiving the interface, and here Elleström distinguishes between three levels: the sense data that originates from the phenomenon, the sensorial receptors used to receive this data and finally the sensation, which is the experienced effect of this. The spatiotemporal modality refers to the gestalt that these perceptions take in space and time, and Elleström stresses that all media have both spatial and temporal qualities. The material interface of a photography for example, only has two corporeal dimensions (width and height) and in addition to this, the interface remains the same over time, in other words it is static. However, the material interface is not the only level of the spatiotemporal modality. Rather, Elleström also includes in this modality, space and time as a general cognitive concept that affects our whole way of thinking, and finally space and time as an interpretative aspect that refers to the construction of imagined space or time. To describe the latter, think of motion blur in still images. Finally, the semiotic modality describes the ways that the other three basic modalities are interpreted as meaningful. Elleström applies the triadic framework of symbol, index and icon, originating in the American pragmatist C.S. Peirce's, semiology. These three categories are neither distinct nor mutually exclusive.

The above four basic modalities as well as the qualifying and technical aspects are dimensions of all media. To describe a so-called medium, we must therefore look into all these dimensions. To use the so-called medium of 'television' as an example, the television set is technical media dimension, whereas the television show, with its specific conventions such as an opening title, credits, and a relatively short duration, compared to film, is a matter of the qualified media dimension. Finally, the basic media dimension consists of a flat two -dimensional surface with moving images along with soundwaves, that applies all three types of signification, where iconic and symbolic might be the most dominating.

With the notion of modalities and modes, Elleström's framework describes both the particular and the general. It steers clear from any normative ideas about different media categories and rather takes as it's starting point actual media products. Furthermore, Elleström does not settle with descriptions of individual media products. Instead the notion of modalities, qualified and technical media allows him to compare and discuss media on a more general level.

Elleström's model also rejects the separation of form and content that can be found in many communication models. In relation to intermedial studies this distinction is particularly interesting. While Lessing in the mid 18th century argued for clear borders between the expressive power of different art forms [11], the emergence of technical media, with its ability to remediate from one channel to the next (c.f. Guiollory [19]), rendered content relatively independent from form, which is evident in communication models such as the Shannon-Weaver model, or Louis Hjelmslev's semiotic model. As such intermedial studies marks a rejection of this rather modern distinction and a return to the idea of a reciprocal relationship between form and content, but this time around not in the form of distinct media, but rather in the form of a number of modes available to all media.

Given the above discussion, a brief statement about terminology should be in order before we proceed. First, while I believe Bruhn's [21] notion of heteromediality is better equipped to express the mixedness of all media, I will be using the term intermediality to make it more consistent with the terminology used in Elleström's model. When I am referring to intermediality in the following I am therefore addressing media as it is conceived in Elleström [24]. That said, I will try to avoid the label

media altogether, unless it refers to particular qualified media. Instead, I will be using the term media object, with which I will refer to a group of actual objects usually described as media. If I am describing a single particular object I will be using its specific name or title.

3.1. Intermediality and Game Studies

While the transmedial approach outlined above has been applied successfully by several games scholars (c.f.[12], [13], [14], [16], [1 7], [25], [2 8], [2 9], [30], [31], [41], [46]), the idea of heteromediality and Elleström's notion of multimodality has so far not enjoyed a great impact on game studies (a few examples of discussions can be found in Neitzel [2] and Ryan [30], endnote 3). This version of intermediality however, offers great potential, as it is able to address many of the current issues in game studies, which will be outlined in the following.

The research typically associated with game studies have for a long time tended to draw borders between non-digital games and digital games(both of them itself broad and heterogeneous categories) and have been concerned primarily with the latter category. In addition to this, games research has formed roughly three relatively distinct categories of research, 1) the game as formal system, 2) the game as played, and 3) studies of players. However, while these categories have probably always been transgressed in game studies, the research community has lately seemed to embrace more consciously a wider approach to game studies. Apperley and Jayemanne [47] observes a 'material turn' shifting attention to digital games as objects that exist in and impact the world. As examples of this shift of focus, the authors discuss the focus on practices and materials of play in ethnographic research, the role of hardware in platform studies, and finally studies of labor, and in particular unwaged labor, in the game industry. While Apperley's and Jayemanne's material turn is still primarily focused on digital games, Aarseth in his 2017 editorial [6] in the journal Games Studies convincingly argues that the study of games cannot and should not be segregated into digital and non-digital games, but that we should rather think of games as a perspective from which we can study a number of highly different phenomena.

Lastly, I would like to point to few examples of games research that engages with the different modalities of Elleström's framework. Kirkpatrick [10] discusses aesthetic form in video games and challenges the visual hegemony in existing game studies. He argues that if we want to understand visual experiences of play we need to position them alongside other elements of the gameplay experience. Kirkpatrick therefore focuses on how play 'feels', something he explores by looking into how the body is engaged in play through the physical control interface. The aesthetic experience of play thus becomes something that involves the actual physical hardware of the game as well as a broader range of sensations than just sight. This also positions games not only in relation to narrative media such as film or literature, but also to more embodied phenomena such as dance (p. 120), musical performance and sculpting (p. 89).

Niedenthal [43] explores the role of smell in games, both as stimuli that have been designed into the gameplay, for example via so-called 'scratch-and -sniff cards', but also the possible 'smellscapes' that accompany games such as the smell of drinks and snacks on the board game table, the smell of old cardboard, or the odor of the gamer who have been sitting in front of his PC for a whole day. However, Niedenthal is not only interested in smell as it can be perceived by our olfactory system, but also the representation of smell through other types of sense-data. In Discworld Noir (Perfect Entertainment 1999) Niedenthal for example, observes how smell is visually represented as transparent clouds of hue that gives clues to advance the game. With this exploration of smell as something that occurs on many different levels of a game, Niedenthal's analysis provides a good example of the potentials of the intermedial approach to games studies.

What these examples suggest is that there is a trend in current games research to conceive of games as more than mechanics and a narrative, but as something that exists as material objects in the world

and that therefore in different ways engages the whole sensory apparatus. This should also be addressed when we discus to what extend games are media and how they relate to other media products.

4.   A Ludophile Intermedial Framework

While Elleström's framework is both fine-grained and flexible, it does not account for many important aspects of games. Therefore, to arrive at a more ludophile version, Elleström's framework needs to be slightly modified. To do this I apply Grabarczyk's and Aarseth's [39] meta-ontology of games. This model has several advantages for this project. First of all, Grabarczyk and Aarseth aim to develop a framework that is flexible enough to account for the current and future heterogeneity of games, as well as the complex role of the player. Furthermore, their model also strives to be general enough to describe games played on very different platforms. The authors also recognize the multidisciplinary character of game studies and have constructed their model so that it can be used by game scholars with a wide range of different epistemologically and methodologically backgrounds.

That said, there is also important differences between my approach and the approach of Grabarczyk and Aarseth. Their meta-ontology is first and foremost, as the name suggests, interested in describing games and comparing different definitions and conceptions of games. As such, the framework is ill fit for comparisons between media. The framework presented in this paper however, is not primarily interested in the ontology of games as such, but rather their medial character and how they are different and similar to other media objects. While games are frequently compared to other media this has so far not been qualified systematically. Therefore, the aim of the framework that will be presented below is to be able to make such intermedial comparisons – despite the many ambiguities with both the concept of games and the concept of medium. As such, the framework proposed in this paper aims not at describing what games are, but rather what medial forms games may take. This means that while the current framework will retain many of the dimensions in Grabarczyk's and Aarseth's model, some will be conflated into one dimension, whereas others might be rephrased if too game-centric for this project. Furthermore, it is important to stress that while the aim is to revise Elleström's [23] model, it should be done in a way that preserves the basic purpose of it. From this also follows that Grabarczyk's and Aarseth's model is used simply as an application to a quite different project that focuses not so much on games, but on the modes of all media.

Grabarczyk's and Aarseth's model consist of four layers, each with their own sublayers. The first layer is the physical layer, which consists of three sublayers: 1) 'platform', which is the material medium, e.g. computer or cardboard, 2) physical interface which is the physical means for play, and 3) behavior which is the physical actions used for play, e.g. pushing buttons. The second layer is the structural layer, which again consist of three sublayers: 1) computation (code), 2) mechanics and 3) economics, by which the authors refer to the way the game is sustained. The third layer, the authors call the communicational layer. This layer is divided into three sub-layers, namely 1) presentation (aesthetics), 2) semantics, which refers to communicational information, and 3) interface, which is the non-diegetic information in the game. The fourth and final layer, the mental layer, consist of the following three sub-layers: 1) phenomenal, i.e. the way the game is experienced, 2) conceptual, which refers to how the player understands the game, and 3) social, which refers to the social interrelations between players.

Using the dimensions proposed by Grabarczyk and Aarseth, the modalities of Elleström's model will now be revised. This however, is done in the spirit of Elleström's original framework. This entails that while the various modes that a media object can have might differ from one object to the next, the overall modalities should be common to all media. Therefore, there should be no modality in the framework that cannot be applied to games and non-games alike. In other words, the framework will not include a 'core game modality'. Such a 'game-modality' will both be untrue to the spirit of the original framework, but also runs the risk of oversimplifying the phenomena that we call games. To think

that games can be properly described with reference to an essence that sets them apart from other media simply seems over reductive, especially given the discussions outlined in section 3.1.

Name of dimension	Name of modality	Description
Basic dimension	Structural modality	The structural elements of a media-product, their function, operation and organization
	Material modality	Latent material interface of the media-product
	Semiotic modality	The ways the media -product presents itself as meaningful
	Mental modality	The ways in which all other basic aspects are perceived and cognitively processed
Qualified dimension	-	How a group of media products are qualified as on distinct medium
Technical dimension	-	The technical object(s) that realize(s) the basic aspect of the media-product

Table 1: A Ludophile Intermedial Framework

In the revised framework (table 1), the overall distinction between the basic, qualified and technical dimension is retained. In relation to games, the qualified dimension could refer the idea of digital games, and how this group of games is often conceived in terms of very specific conventions, for example a domination of visual sense-date (hence video-games). But the qualified aspect could also refer to a much narrower type of games, such as so-called roguelike games or AR games. The technical dimension is a particularly useful distinction in relation to the game industry, where gamesare often released on several platforms simultaneously or older games are ported to newer or different platforms. Here the distinction between the basic and the technical dimension of media allows us to address the ways in which these games are similar and different as well as to what extend the basic aspects of the original game has been retained or altered in a ported version (c.f. discussions in [8]).

The revised intermedial framework consists, like Elleström's original model, of four different basic modalities. The first modality I call the structural modality. Structure refers to the formal arrangement and function of elements of a media object. All media objects have a structure, but this structure can be simple or highly complex. Examples of structural modes might be repeated patterns (for example rhythm in music or architecture or the use of alliteration in speech and text). In comparison to Elleström's framework, I take space and time to be specific categories of the structural modality rather than a modality in itself. Furthermore, the things Grabarsczyk and Aarseth [39] in their model call code, mechanics, and economics may be seen as different structural modes in my model.

The second modality in the revised framework is the material modality, which corresponds to Elleström's modality by the same name, but also to some extend to the physical dimension in Grabarczyk's and Aarseth's model. However, similarly to Elleström's original model, but unlike Grabarczyk's and Aarseth's model, I make the distinction between the latent material interface and the actual realized physicality of the technical dimension. The latent material interface of a particular game for iPhone might be a flat surface with moving images, which may be characteristic of many different technical objects. The semiotic modality makes up the third layer in the revised model and corresponds to Elleström's modality by the same name. Here I follow Elleström's very general distinction between symbolic, iconic and indexical signification as it enables both a description of the representational sign in itself, and what it signifies.

Following Grabarczyk and Aarseth, I call the last modality the mental modality, and this modality describes how a media object is perceived and cognitively processed. As such, this last modality includes and goes beyond Elleström's sensorial modality. This is done at the expense of the phenomenological quality of Elleström's model, that starts from the material in itself over the perceptual to the cognitive. To avoid this, the mental modality could be divided up in different modalities, but this road has not been chosen as a relatively simple model seemed preferable. One might then ask why we need the extra categories, compared to Elleström's model. When it comes to games, as discussed earlier, it is crucial to consider the player not only as interpreter but also as operator. This also entails that the user upon perceiving the media product is able to understand how to act on it. As such the mental modality, Like in Grabarczyk's and Aarseth's model may include both perception, conception and social interrelations. This should be beneficial not only for describing games, but in general the many so-called interactive media.

Together with the structural modality, the mental modality is what distinguishes this revised framework the most from Elleström's original model. Though these changes are made to cater for the description of games, the modalities also apply to other media objects. While the operation of games is non-trivial [3] and often complex, all media objects can be said to be operational to some extent. Therefore, while the sensorial and semiotic modality might be sufficient to describe the interpretation of non-ergodic media objects, all four modalities in this refined framework can be applied to ergodic and non-ergodic media products alike.

The four modalities are highly interrelated and interdependent. The actual modes of the structural modality for example naturally depend on the material modality - for example the spatiality of the material - but they also depend on the mental modality in the sense that pattern recognition as such is a fundamental cognitive ability. Exactly how these different modalities relate in a given media product can only be generally described, but most be explored through particular cases. Therefore, in the following, an intermedial analysis based on this model will be demonstrated through a case-study.

5. 1. Case Study: FRAMED

In the latter part of this paper, the revised model presented above will be discussed through a case study of the game *FRAMED* (Loveshack 2014) played on Android OS. *FRAMED* is a narrative puzzle game that in both graphics and gameplay draw inspiration from the qualified medium of comics. The game is not an adaptation of any particular comic, but rather draws on the medial conventions of comics as such. In each level the player will be presented with a single screen resembling a comic book page on which a number of panels are layed out. In the game, the player has to make sure that the protagonist of the story is not caught by the police, and this is done by rearranging the panels and thus the progression of the story.

While Bruhn [22] demonstrates how the intermedial perspective can be used in narrative analysis, this paper will not follow this trajectory. Nor will the paper discuss the qualification of games as medium,

as this is a wide topic that deserves a dedicated paper on its own. Instead this paper will focus on describing the basic medial aspects of *FRAMED* and discus in what respect the game is similar to and different from the qualified medium of comics. *FRAMED* is relatively short, consisting of around 47 levels, which again depend on which ending is reached. While the story develops, the gameplay throughout *FRAMED* is built around the same simple principle of re-arranging panels. Due to its shortness and lack of complexity in terms of gameplay, this analysis applies to *FRAMED* its entirety. Different specific levels will be discussed, but only as representatives of more general features of *FRAMED*. Last, it is important to keep in mind, that games, like comics are qualified categories that may contain highly different media-objects. Therefore, when this analysis discusses the modalities of comics as such it should be understood as aspects that we conventionally apply to the objects that we call comics, rather than as essential features of all comics.

Technical dimension: *FRAMED* is realized on a smartphone, which implies certain hardware and software characteristics, most importantly for this game, a touch-based interface that allows the player to drag and drop objects on the screen with the use of a finger. As the game is not a remediation of any specific comic book however, we cannot determine to what extend this differs from comics, as they (like games) does not dependent on any one technical object for their realization.

Basic material modality: The latent material interface of *FRAMED*, like many comics, is a two-dimensional flat surface. In addition, we should also include as part of the material modality the sound waves. While comic books often do not include sound, it is not difficult to imagine a scenario where the comic is read aloud and where the reader for example adds information to the visuals on the page by making different voices to different characters. This scenario however, would then become a separate instance of the media product. In *FRAMED*, like comics needs to operated, and as such we can include the interface of the human body in the material modality. In both *FRAMED* and most comics, it is primarily the hands and fingers that are involved, but this depends on the technical dimension. At the time of writing this paper, *FRAMED* is released for Android OS and iOS but will be released to Switch and PC later in 2018. Realized on the two latter technical objects, some but not all basic material modalities may change. The two-dimensional surface on which the graphics appear for example, presumably would remain the same, whereas the Switch and PC may add to this a three-dimensional control interface which then also requires a different bodily engagement with the game.

Basic structural modality: Not surprisingly, it is in terms of structural modes, that *FRAMED* departs the most from its comic book inspiration. Liken a typical comic, *FRAMED* is made up by a number of panels that are layed out on a surface. In a typical comic, this layout is fixed, whereas in *FRAMED* it can and indeed should be changed by the player. Furthermore, while each panel in many– but not all – comics remains static, the panels of FRAMED contains moving images. We see the protagonist running from left to right, a bullet moving in the air towards its target, a stack of boxes falling to block a path etc. In most of levels of *FRAMED* however, after an initial animation, the panels will remain static while the player re-arranges them. When this is done, the player may then watch the whole scene play through, like a short animation and then re-arrange the panels again until the correct layout is reached. Other levels require the player to re-arrange panels while the animation is playing. The same panel may be used more than once, and the player needs to move the panel into a new position as soon as the events of this particular panel has played out for the first time.

There are several embedded structural layers in *FRAMED*. On the top-most layer you have the structure of the screen that makes up a demarcated space on which a number of panels of varying sizes are laid out. This plane also marks the boundaries of one level, which means, that actions that takes place in one level does not proceed uninterrupted to the next level. And furthermore, that the next level is not reached until the player has figured out the right configuration of the present level. While levels are all part of an overall narrative, each level functions as a self-contained unit that can be played over

again and again. The temporal structure of this layer then is defined by how long it takes the player to find a correct layout of the screen, and not by the particular story that plays out. Finally, in terms of operation, this level primarily requires the player to press the 'play button' (as shown in figure 2) and watch the animation play out. The layout of the panels represents another structural layer. Here the totality of the panels represents some whole that can be either based on space or events. Level 19 represent s an urban space from a birds-eye perspective, where each panel represents a subset of an assumed larger space. The player then makes changes to this space in order to allow the protagonist to move without being seen by police officers. In lev el 12 on the other hand, each panel represents a distinct temporal state that together makes up a sequence of event. In one panel the protagonist runs on a rooftop while being followed by an antagonist. In another panel a revolver is pointed at the protagonist in a way that reveals to the player that there is only two bullets in the cylinder. In another panel one sees the hammer of the revolver being pulled back. And finally, one panel shows a close-up of the protagonist standing on the edge of the rooftop. In this level then the rearrangement of panels is not concerned with the construction of space, but with the order of events. The player can configure the panels in such a way to make sure, that there is no bullet in the firing chamber when the revolver is being shot, which then allows the protagonist to jump of the roof-top. Here the role of the player is less akin to the one of the jigsaw puzzle, and more akin to the role of the film editor, who by arranging shots in a certain way can determine how the audience interpret the progression of time.

The individual panel finally makes up the last structural level. Each panel has its own spatiality and temporality, which remains largely static throughout each level. The player can for example not make changes to the space depicted in each of the panels in level 12, but only their positions vis a vis each other. Similarly, the player cannot change the temporal structure of each of the panels in level 19, but only the temporal structure of the overall layout. To sum up, the top-most layer constitutes a demarcated space that has a significant temporality that is not unlike that of turned-based game. The operation of this layer is trivial and can be reduced to pressing play. It is in the middle layer that we find the most significant structural features. The space and time is the totality of the spatiotemporal structure of each of the panels configured in a certain way, including multiple use of one panel. Finally, on the layer of each individual frames we find a static space, a fixed temporal sequence and no possibilities for operation.

Basic semiotic modality: FRAMED applies a distinct noir aesthetic, as it has become known from 1940's crime films which was characterized by the use of chiaroscuro, oblique and vertical lines and typically set in an empty post-war urban environment [38]. In the neo-noir tradition color was introduced, often by the use of saturated colors against neutrals, colors combined with lightning (e.g. neon signs), diffused lightning, and the use of distinct color profiles in individual scenes [23]. Even more so, *FRAMED* resembles the visual style of Frank Miller's neo-noir comic series Sin City, in particular in his use of simple contours, relatively abstracted figures and large planes of black and white, in addition to diagonal likes and odd angles. *FRAMED* is represented primarily through the use of visual elements and musical sound. Despite the soundtrack that accompanies the gameplay, the game remains oddly silent. There are no written text and no oral speech, and even when guns are fired, police officers are knocked down, trains are passing, no graphic elements on these images suggests the slightest sound. Probably as a result of this, the game does not adopt the psychological depth Sin -City.

The visual side of the game relies on both iconic, indexical and symbolic signification. Obvious examples of symbolic signification are the play sign in upper left corner of each level. Furthermore, the imagery of *FRAMED*, are relatively abstracted and seem to rely more on symbolism than iconic realism. All characters appear as solid shapes of black, with a few significant characteristics, such as a pair of gloves, a mustache, a cigarette or a flower, set off in white. These monochrome characters contrast the more iconic colored backgrounds, which resemble a chiaroscuro aesthetic with bold contrasts between

light and shade. The game applies a limited neo-noir color palette of blue, purple and pink, often used for backgrounds, dark red and brown, and finally a bright desaturated yellow and a teal green. And often individual levels have a distinct color profile.

In comics, the frames and gutter that typically separate one panel from the other applies both symbolic and indexical signification. The black outline or white gutter around a panel symbolizes a demarcation from other panels and marks a transition between them. The frames and gutter furthermore establish a grid that governs the internal relations between these images and thus a factual order that allow us to interpret one image as representing events that precede the events depicted on the next. In *FRAMED,* the panels are mostly visually distinguished from each other by the use of a bold white gutter, though in a few levels, movable panels are layed ontop of another larger panel, and the gutter replaced by a subtle dark frame. In addition to the gutter that demarcates all panels from each other, movable panels are endowed with an additional dark frame as well as a subtle shadow.This way the game establishes two different visual layers. The bottom layer mimics watercolor-paper on which panels are painted directly on. In contrast, the shadow of the movable panels makes it seem like they hover over the paper and thus constitute a second layer.

Although *FRAMED* visually mimics a comic page layout, it significantly differs from it. While two panels placed next to each other in a comic book, suggest factual or existential relation between the two, it still requires a certain cognitive effort to make this connection [39]. FRAMED on the other hand, does not depend on any successful interpretation of the visual layout. Rather, the different panels will be related to each other through the short, animated sequence. The relation between the panels are therefore factual from the code of the game rather than a result of our interpretation. That said, the game would probably be quite tedious and boring, if the player was not able to exert some interpretive effort into the layout, but rather only proceeded through trial and error.

However, by now we are slowly moving into the basic mental modality which concerns how we perceive and interpret the above sign types. Here the difference between *FRAMED* and the conventional comic that it mimics becomes obvious. A comic is typically static, and time thus, is only 'virtual' and merely a result of the indexical representation observed above [24]. Time in *FRAMED* however, is not merely virtual as events actually occur in real-time. Due to its non-static quality, *FRAMED* only grants the player a limited time for perceiving the events, and things can be missed if the player is distracted while playing. This though, is somehow neutralized since the player can replay the level over and over again until she has found the right arrangement of the panels. However, after each re -configuration of the panels, the player will have to wait until the end of the animation to know the result. The pause in diegetic time after each animation gives the player unlimited time to observe the individual panels and plan their configurations. Then again, this planning face is limited by the fact, that each panel will remain in a static state until the player presses 'play'. Therefore, it may take a couple of playthroughs until the player is able to predict the actual results of each re-configuration, and in some of the more complex levels, this may even be almost impossible at all, and she is left with a trial-and error approach. As such, perception, interpretation and operation of *FRAMED* are not surprisingly, highly dependent on each other.

This short case study has demonstrated an application of the ludophile intermedial framework. This analysis has shown that *FRAMED* shares many medial characteristics with the comic genre. We may even wonder if the similarities are so great that we may actually call *FRAMED* a comic. While this question is probably a matter best discussed by comic scholars, it raises a number of interesting questions about the relationship between and classification of the two qualified media. Are comics and games mutually exclusive, or can a media object be both at the same time? If so are one more general or antecedent than the other, for example is a media object first a game and then a comic? Such questions raise awareness about the often arbitrary ways in which media are qualified. However, the intermedial

perspective allows us to bypass such questions and simply observe medial similarities and differences, and apply notions such as games or comics, only as certain perspective with which we can analyze particular media objects.

5 Conclusion

This paper has explored the modalities of the qualified medium of games. The paper has set out with a critique of the medium concept in games and in general. While the problems are not limited to games, games pose fundamental problems to the concept of media and as a result should be used with care in game studies. That said, there might be many good reasons that we are discussing games in line with similar or different phenomena, such as cinema or literature. However, when using the concept of medium we group together phenomena out of convention rather than because they naturally belong together. The result of this could be that we overemphasize their similarity or – even worse – ignore other phenomena that could just be used for comparison. To avoid this, I have presented a revised version of Elleström's [24] intermedial framework that aims at a better inclusion of games. Furthermore, as an example of how this model can be used in an analysis, a brief case-study of the medial character of the game *FRAMED* has been presented. A more thorough proof-of-concept of this model will require further application, and possibly revision, and will be left to future research.

Acknowledgments

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