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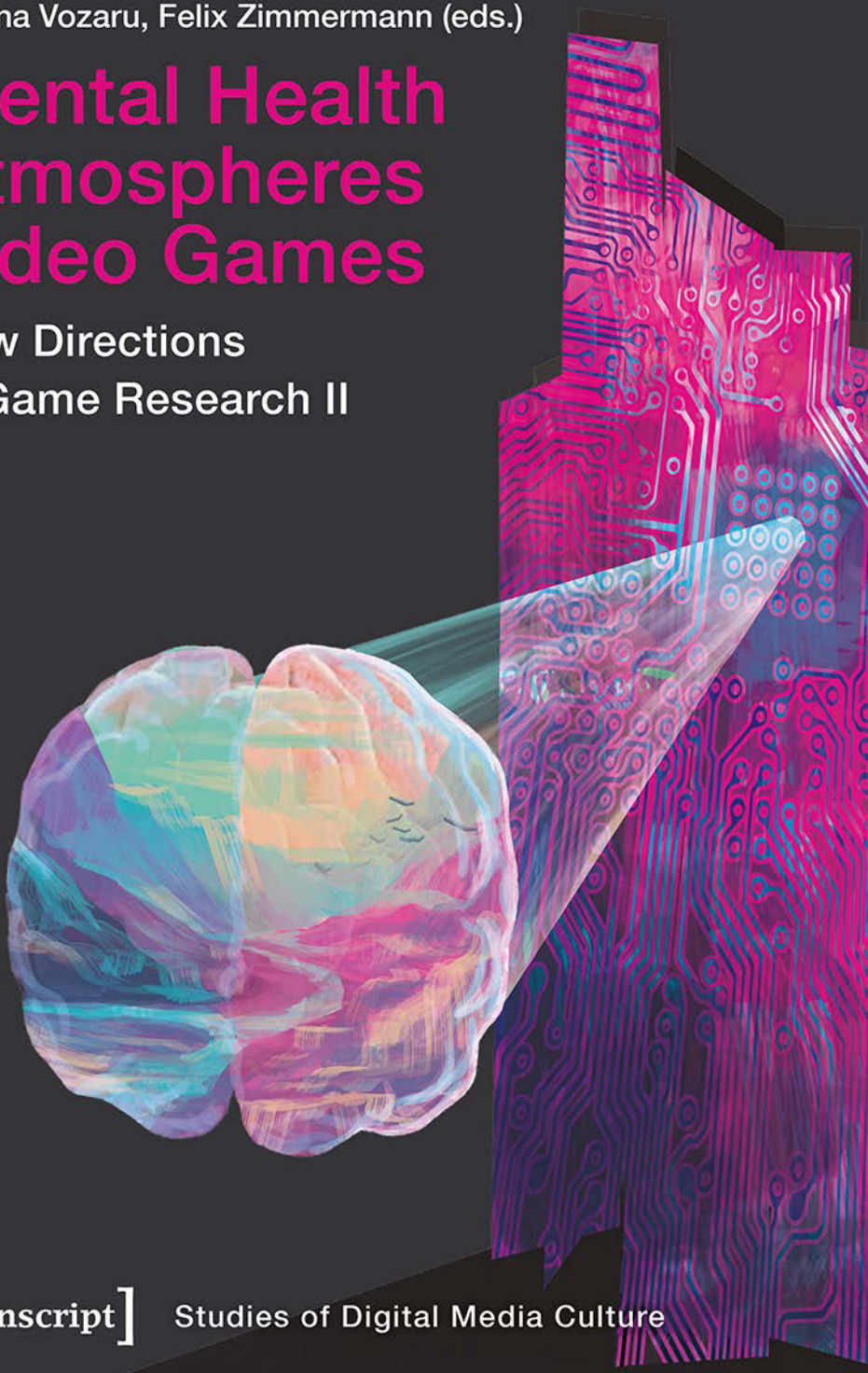
Mental Health Atmospheres Video Games

New Directions in Game Research II



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Mental Health | Atmospheres | Video Games

Studies of Digital Media Culture | Volume 15

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Technology
Arts Sciences
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Preface

GUNDOLF S. FREYERMUTH

Unique to the Clash of Realities – International Conference on the Art, Technology, and Theory of Digital Games, which takes place annually at the Technical University Cologne, is its fundamental principle: the dialectic of diversity and universality, coexistence, and cooperation. The research conference consists, to a part, of several specialized summits. The default subject areas are Game Studies, Game Design, and Media Education. Annually changing topical summits have investigated, e.g., game technologies, game entrepreneurship, or the relationship of games to music, film, and history. The diversity of themes ensures that specialists from very different disciplines and fields attend the Clash of Realities, academics as well as professionals, who otherwise hold their own conferences and rarely exchange ideas with each other.

On the main day of the conference, this diversity merges into one room and one joint discussion. The encounter produces a productive clash of the many disciplines and cultures around digital games. Academics meet artists. Indie developers argue with industry representatives. Humanities scholars, social scientists, and computer scientists exchange experiences. Established experts and professionals discuss with students and games enthusiasts. Together, we assess and debate the artistic design, technological development, economic conditions, social perception, and cultural reception of digital games. This bridge-building fosters research and education as well as creative and professional practice. Year after year, the conference generates strong impulses and surprising synergies.

The third indispensable element is the Young Academics Workshop (YAW). It brings together young researchers from all over the world and a wide range of educational levels—post-docs and doctoral candidates, master's students, and exceptionally talented bachelor's students. The workshops, focusing on changing topics, are always held as a prelude to the conference so that the young academics

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are free to participate in the summits and the main day. However, this third element was only added in 2017, when–obviously–the academic discussion of digital games finally had developed a particular breadth and maturity.

The origins of the Clash of Realities Conference date back to those of the century. At the time, academia, like the general public, suffered from a lack of factual knowledge about digital games. Instead, there was mistrust and even outright hostility toward the new medium, which was falsely portrayed as inherently violent and addictive. The founders of the conference-Winfried Kaminski, director of the Institute for Media Research and Media Education at the then Cologne University of Applied Sciences, and Martin Lorber, at that time head of the press department at Electronic Arts, wanted to counter these prejudices. The first biennial iterations of the conference, in 2006 and 2008, focused on media education issues. The Cologne Game Lab participated in the research conference for the first time in 2010, the year the lab was founded, contributing a Game Studies and Game Design track.

After Winfried Kaminski's retirement in 2015, the two founding directors of the CGL—Björn Bartholdy and the author of this text—took over the steering of the conference. We repositioned the Clash of Realities more broadly thematically: as an annual international, i.e., English-language, academic and artistic research conference. In addition to the previous partners and sponsors–the Technical University Cologne, the City of Cologne, and Electronic Arts–we recruited new ones, most notably the University of Cologne, the ifs international film school, and as our main sponsor the Film- and Media Board North Rhine-Westphalia. Since 2015, the Clash of Realities has attracted academics, artists, and industry representatives from several dozen countries. Keynote speakers have included game scholars Ian Bogost, Alexander R. Galloway, Celia Hodent, Jesper Juul, Frans Mäyrä, Nick Montfort, Janet H. Murray, Mark J.P. Wolf, Nick Yee, and Eric Zimmerman, as well as artists and game developers Sam Barlow, Chris Crawford, Ian Dallas, Jörg Friedrich, David OReilly, and Nathalie Pozzi.

Perhaps the most important innovation, however, was the Young Academics Workshop. This forum for young researchers was conceived by two CGL research assistants and Ph.D. candidates, Federico Alvarez Igarzábal and Curtis L. Maughan, together with Michael S. Debus, then a Ph.D. student at the IT University of Copenhagen. Among the objectives was stimulating the intellectual growth and academic skills of young researchers, who may present the results of their scholarly research in a safe and encouraging atmosphere to their peers. The approach is as inclusive as possible. Digital games are researched by various disciplines, from literature and film studies to art history and game design theory to theater and performance studies, pedagogy, cognitive science, and computer science. The first two workshops investigated "Perceiving Videogames" (2017) and

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"Violence and Videogames" (2018). The collected proceedings came out in 2019.[1] For some of the contributors, this was their first academic publication.

The subtitle of that volume –"New Directions in Games Research"– can also serve as a motto for the two subsequent workshops, the results of which this volume presents. In 2019, the focus was on "Play, Games, Mental Health," the connection between mental health and play. In organizing the YAW, Su-Jin Song, research assistant at CGL, joined the founding team. Isabela Granic, professor and chair of the Department of Developmental Psychopathology at Radboud University Njimegen and director of the Games for Emotion and Mental Health Laboratory, could be recruited as an experienced, encouraging, and enthusiastic mentor.

A year later, at the 11th Clash Conference, which was held entirely online due to the COVID-19 pandemic, the topic was "Atmospheric Propositions: Creating and Thinking the Aesthetics of Playable Atmospheres." A mostly new team organized this workshop: While Su-Jin Song stayed on, Jimena Aguilar, research assistant at the ifs international film school, Miruna Vozaru, a Ph.D. fellow at IT University of Copenhagen; and Felix Zimmermann, a Ph.D. fellow at the University of Cologne, replaced the original YAW team. Dan Pinchbeck, co-founder and creative director of game studio Chinese Room, served as an engaged mentor combining academic and artistic perspectives.

The two parts of these proceedings unite–despite the diversity of the topics– on the one hand, their timeliness and, on the other hand, the freshness of the young scholars' approaches. Both are evident from the contributions themselves and the commendable introductions and conclusions by the editors and my CGL colleague Sonia Fizek.[2]

Whether the future of media actually belongs to digital games as we know them or whether, in the coming decades, another new medium will challenge their current cultural supremacy might be a matter of debate. However, what is indisputable is first that the Young Academics Workshops have immensely enriched the Clash of Realities research conference and secondly, that young academics like the ones who participated in these workshops and contributed to this volume

1 Igarzábal, Federico Alvarez, Michael S. Debus, and Curtis L. Maughan (eds.): *Violence | Perception | Video Games: New Directions in Game Research*, Bielefeld: transcript 2019.

2 Miruna Vozaru: "The End is Never The End is Never The End. A Conclusion," in this volume, pp. 117-125; Sonia Fizek: "Introduction: Slow Play. Notes on Enveloping Ambience in Video Games," in this volume, pp. 129-146; Felix Zimmermann: "Conclusion: Toward an Atmospherology of Digital Games," in this volume pp. 243-254.

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are an essential part of the bright future of media and, in particular, games scholarship and research.

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JIMENA AGUILAR RODRÍGUEZ, FEDERICO ALVAREZ IGARZÁBAL, MICHAEL S. DEBUS, CURTIS LEE MAUGHAN, SU-JIN SONG, MIRUNA VOZARU, FELIX ZIMMERMANN

"It has never been our goal to counsel participants as their seniors but to learn with and from them"—this sentiment from the introduction to the first proceedings of the Young Academics Workshop still rings true and has informed the scholarly exchange with the authors of this anthology. We are more than grateful for the opportunity to work on this second iteration of the "New Directions in Game Research" with so many promising researchers we gladly and proudly call colleagues. Who would have thought that the Young Academics Workshop would become a staple of the renowned Clash of Realities conference and would even bring into being not one but now even two thematically diverse and innovative edited collections?

We consider it a great privilege to support promising young scholars in the early stages of their career. From our own experience we know quite well the importance of collegial support and feedback, and of being provided with opportunities to present and publish while still trying to find your place in academia. Being somewhat responsible for these up-and-coming researchers and the flourishing of their ideas, we hope that we lived up to this considerable responsibility.

Therefore, first and foremost, we want to thank the Young Academics assembled in this book, for their passion and tenacity in working with us on this book– and finishing this work, even in these trying times. We learned so much from you and for this we are grateful.

We want to thank the many people behind the Clash of Realities conference, doing so much for the game studies field nationally and internationally. Especially to Björn Bartholdy and Gundolf S. Freyermuth, supporters of the Young

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Academics Workshop from day one, we are grateful. It is not for the first time that Gundolf made room in his busy schedule to support our work. Also, we want to thank him and Lisa Gotto, the editors of the book series this volume is a part of, for welcoming the Young Academics again in their renowned series "Studies of Digital Media Culture."

Finally, we want to give our thanks to the many institutions supporting our research, allowing us this time-consuming endeavor, among them the *a.r.t.e.s. Graduate School of the Humanities Cologne*, the IT University of Copenhagen, the Cologne Game Lab and ifs internationale filmschule köln. We are very grateful to all professors and staff of the institutes for their support of the Young Academics Workshop over the past years. We would also like to thank Benjamin Beil and the University of Cologne for co-organizing the Clash of Realities 2021 conference. Michael Debus and Miruna Vozaru are also indebted to the European Research Council for the grant that supported the project Making Sense of Games, and also allowed them to bring their contribution to this anthology. Last but not least, we are grateful to the *TH Köln* for their financial support, to *transcript* and especially Linda Dümpelmann for her trouble-free collaboration and to the Federal Ministry of Education and Research for making an Open Access publication possible.

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Mental Health

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Play, Games, Mental Health

An Introduction

FEDERICO ALVAREZ IGARZÁBAL, MICHAEL S. DEBUS, CURTIS LEE MAUGHAN, SU-JIN SONG

Before introducing the workshops and contributions that made this volume possible, the editors would like to address the ways in which world events shaped–and continue to shape–the questions, the concerns, and the ideas explored in the pages to follow. Though the 2019 Young Academics Workshop preceded the initial outbreak of the pandemic and the subsequent lockdowns of spring 2020, the following contributions were composed, compiled, and edited in a world that was continually adapting to the dangers and demands of the deadly global virus. Regardless of whether the following contributions directly thematize COVID-19–and some do–, it goes without saying that the publishing process that produced this volume was not only influenced by the immediate health threats and logistical complications of the pandemic, but it was also burdened with the emotional and intellectual gravity of grappling with a research topic that had taken on–and remains–a crucial, central role of our global discourse: mental health. In this light, the editors were continually heartened and inspired by the resiliency of this volume's contributors, who worked collectively and individually, in person and online, and who did not give up on this project in the face of truly unprecedented challenges and constraints. While this volume does not purport to have all the answers to the ever-increasing multitude of mental health queries and questions, this volume serves as a testament to the strength of community and the necessity of collaboration that has always been and will continue to be at the heart of scientific inquiry and academic research.

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THE 2019 WORKSHOP

In 2019, the Young Academics Workshop (YAW) at the Clash of Realities conference explored the connection between mental health and play. While video games are at the center of the Clash of Realities—and, accordingly, the workshop—mental health is a matter that concerns play in general, so we chose to frame the issue broadly.

Nowadays, video game addiction is perhaps the first thing that comes to most people's minds when it comes to the relation between play and mental health. In the same year this workshop took place, the WHO made gaming disorder an official medical condition; a decision that was met both with approval and strong criticism (especially in the scientific community), showing that this is still a polarizing issue that needs to be discussed further.

But games have also been credited for bringing about cognitive and emotional improvements in players. In 2014, Isabela Granic, Adam Lobel, and Rutger Engels published the influential paper THE BENEFITS OF PLAYING VIDEO GAMES.[1] This publication contributed significantly to broadening the focus of the discussion, which gravitated primarily around the possible detrimental aspects of video games, to include the medium's cognitive, emotional, motivational, and social benefits.

Beyond the benefits of those video games created primarily for entertainment purposes, games can also be designed with the specific intent to diagnose and treat mental illness. Granic and her lab at Radboud University are once again spearheading this movement. Psychologist Daniel Freeman and colleagues see the potential of VR as especially promising, and believe that the technology will usher in "[a] technological revolution in mental health care."[2] Recent projects like VIRTUALTIMES are attempting to develop VR tools to diagnose and treat psychopathologies like depression and schizophrenia.[3] And in a landmark achievement,

1 Granic, Isabela/Lobel, Adam/ Engels, Rutger, C. M. E."The Benefits of Playing Video Games," in *American Psychologist* 69(1), 66-78 (2014). https://doi.org/10.1037/a0034857.

2 Freeman, Jeffrey, D./Reeve, Sarah/, Robinson, Amy/Ehlers, Anke/Clark, David, M./Spanlang, Bernhard/Slater, Mel "Virtual Reality In The Assessment, Understanding, and Treatment of Mental Health Disorders," in *Psychological Medicine* 47(14) (2017), 2393-2400. https://doi.org/10.1017/S003329171700040X

3 https://virtualtimes-h2020.eu/ from 18.07.2022.

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the mobile game ENDEAVORRX obtained approval from the United States' Food and Drug Administration (FDA) as a treatment for anxiety.[4, 5]

Video games can also enhance our popular understanding of mental illness by including characters who suffer from them and devising novel forms of representing their symptoms. HELLBLADE: SENUA'S SACRIFICE is a recent popular example of a game whose main character suffers from psychosis.[6] Games like Hellblade can also make those suffering from these pathologies feel like they are not alone in their struggle.

But video games are one of myriad ways in which we play. We play sports, we play fight, we play tabletop games, and we play pretend–to name a few examples. Play is a central aspect of human experience and, as scholars like Peter Gray have stressed, a fundamental component of a child's development.[7] Nowadays, with the rise of helicopter parenting, children are at risk of missing the important life lessons that free, unsupervised play provides.[8] All work and no play makes Jack not only a dull boy, but also a depressed and anxious adult.

The intersection between play, games, and mental health is as timely a topic now as it was in 2019. All of the above claims are still being openly debated, which is why they were the focus of YAW's 2019 edition and of this anthology. The articles that make up this part of the volume tackle the issues of representation of psychopathology in games, the design of games for mental health, and different perspectives on the effects of play and games on our mental wellbeing, all from the point of view of game design and a variety of academic disciplines.

Rune Nielsen discusses the complications the WHO's decision to include 'Gaming Disorder' into the ICD-11 catalogue faced and still faces. He raises and reiterates concerns regarding the effect it has on psychological diagnoses, as well as a lack of scientific evidence for and transparency during the decision-making process.

4 U.S. Food & Drug Administration: "FDA Permits Marketing of First Game-Based Digital Therapeutic to Improve Attention Function in Children with ADHD," June 15, 2020. https://www.fda.gov/news-events/press-announcements/fda-permits-marketing-first-game-based-digital-therapeutic-improve-attention-function-children-adhd.

5 ENDEAVORRX (Akili Interactive Lab, 2021: Akili Interactive Lab).

6 HELLBLADE: SENUA'S SACRIFICE (Ninja Theory, 2017: Ninja Theory).

7 Gray, Peter: Free to Learn: *Why Unleashing the Instinct to Play Will Make Our Children Happier, More Self-Reliant, and Better Students for Life*, New York, NY: Basic Books 2013.

8 Skenazy, Lenore: *Free-Range Kids, Giving Our Children the Freedom We Had Without Going Nuts with Worry*, Hoboken, NJ: John Wiley & Sons 2009.

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Nils Bühler deals with the censorship of video games by youth protection law in Germany. For this purpose, he analyzes the indexing documents for video games by the Federal Review Board for Publications Harmful to Young Persons (BPjS) and contextualizes their central arguments in discourses of media effects research and social ethics. The paper conducts a Foucauldian critical genealogy of game indexing in the 1980s.

Anh-Thu Nguyen explores the importance of space in nonverbal storytelling, focusing on spaces that express a character's cognitive process—mindspaces or mindscapes. In doing so, she takes a closer look at the representation of spaces and mental health in popular culture and games in particular, through an analysis of the Japanese role-playing game PERSONA 5.[9]

Miruna Vozaru seeks to move away from anthropocentric views of agency in games and analyzes self harm and the representation of recovery in THE MISSING: J.J. MACFIELD AND THE ISLAND OF MEMORIES through changes in its agential network.[10] To achieve this, she applies Actor-Network Theory and related game analysis methods to map out and examine changes in the game's mechanical layer.

Natali Panic-Cidic introduces the benefits and possibilities of using digital fiction for narrative-driven games and deals with issues of body image and the resulting psychological problems faced by young women and female-read individuals. As a case study, she refers to the WRITING NEW BODIES (WNB) a narrative-based, interactive story game application that can be used as an intervention method in therapy for body image issues.

Rogerio Augusto Bordini and **Oliver Korn** examine the potential of mental health apps and offers valuable insights into their design by walking the reader through the development of NONELINESS, his app to combat loneliness in university campuses.

Kelli Dunlap inspects the role of Twitch streamers during the COVID pandemic in providing mental health support to their communities, and their struggle in maintaining their own mental health in this trying context. She discusses the

9 PERSONA 5 (P-Studio, 2016: Atlus).

10 THE MISSING: J.J. MACFIELD AND THE ISLAND OF MEMORIES (White Owls Inc., 2018, Arc System Works).

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findings of a specific survey and, on the basis of these results, identifies ways in which streamers can improve their mental health.

We thank all workshop participants and contributors to this volume for their efforts and insightful contributions. We are honored to have their work in this volume's pages. We also want to thank Isabela Granic for her generous engagement. We had the privilege to welcome her to the workshop as our guest speaker and, while her work is not included in these pages, her invaluable input is reflected in the final result.

We are deeply grateful to the entire network of people who made this publication and the 2019 workshop possible. First and foremost, we would like to thank the team at the Cologne Game Lab for all of their help. We are especially grateful for the ongoing support we have received from Gundolf S. Freyermuth and Björn Bartholdy, co-directors of CGL and board members of Clash of Realities. We would also like to thank the Clash of Realities' board, as well as the conference organizing team and the CGL "Events" Student Work Group. We are grateful for the support from the Center for Computer Games Research of The IT University of Copenhagen and for the support from the sponsors of the Clash of Realities conference, in particular the TH Köln-University of Applied Sciences (Cologne, Germany).

Last but not least, we would like to thank the lively audience that enriched the workshop with their thought-provoking questions and comments. And we thank you, the reader, for engaging with this volume and hope that you find the texts that constitute it as thought provoking and inspiring as we did while editing them.

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Gaming Disorder – a "lousy" and "meaningless" label

RUNE KRISTIAN LUNDEDAL NIELSEN

A NEW DISORDER, A NEW PANDEMIC

On January 1 2022, at the stroke of midnight, millions of people across the globe officially began suffering from a new mental disorder: Gaming Disorder. For the first time in history, the World Health Organization (WHO) introduced two 'behavioral addictions' (i.e., addictions that do not involve a psychoactive substance) into its international classification system: The International Classification of Diseases and Related Health Problems (ICD). The 11th and most recent edition of the manual took effect on January 1.[1] It is unclear what effect this new diagnosis will have on the societal and individual level. For some, it may be a welcomed change to finally have officially recognized terminology to describe their experiences, for others it may feel like an unwanted stigmatization. One reason it may feel stigmatizing is that the WHO is only introducing two behaviors under the new heading of "Disorders due to addictive behaviors:" gaming and gambling. The new ICD does not recognize other "popular addictions" such as work addiction, shopping addiction, internet addiction, etc.[2]

1 https://www.who.int/standards/classifications/classification-of-diseases.

2 World Health Organization: *ICD-11 Beta Draft-Mortality and Morbidity Statistics*.

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THE CURRENT STATE OF SCHOLARSHIP

Scholars sharply disagree over whether 'gaming disorder,' more commonly referred to as 'game addiction,' exists or not. Most evidence comes from prevalence studies (questionnaire studies that seek to determine how large a proportion of a given sample meet the criteria for the disorder).[3] Proponents argue that these provide evidence for similarities between gaming and substance addictions. Detractors argue that prevalence studies do not measure a discrete clinical phenomenon, but in the best case capture a symptom of something else (e.g., problems at school, home, or work, or other underlying psychological issues, such as anxiety, depression, ADHD, etc.). In the worst-case scenario, the new disorder singles out and pathologizes one type of behavior in a sea of problematic behaviors.

THERE IS NO END TO THE CONFUSION IN SIGHT

The inclusion of Gaming Disorder into official diagnostic manuals could be a signal that the new diagnosis rests on a solid empirical and theoretical base. However, this paper aims to show that the WHO expert panel invited to present and discuss scientific evidence on the new disorder fully recognized the significant limitations of the evidence. According to research presented by the experts, it is still unclear how the disorder manifests itself, what separates it from other disorders, if it is a disorder itself or merely a symptom of other disorders, and how widespread the problem is (or is not). The experts convened by the WHO to discuss the evidence base for the new disorder ahead of its inclusion into the ICD-11 thus outlined some of the most severe critiques imaginable for a new disorder. Proponents and detractors of the new disorder appear to agree that the scientific basis for this new disorder is severely lacking.

The basic disagreement is between two camps: The first camp sees the new disorder as real (even if the science that supports it is flawed) and believes that a common language for the disorder will move the science forward and help researchers to achieve consensus. The second camp sees the science as flawed and believes that the disorder does not exist. Furthermore, the second camp sees gaming disorder as a symptom of underlying causes. This paper aims to show that no

3 World Health Organization: *Public Health Implications of Excessive Use of the Internet, Computers, Smartphones and Similar Electronic Devices: Meeting Report*, Main Meeting Hall, Foundation for Promotion of Cancer Research, National Cancer Research Centre, Tokyo (2014).

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amount of critique of the research on the addictive properties of digital games is likely to make a difference as the disorder was formalized despite significant flaws in the evidence. In other words, there is a consensus in the research community that it is not clear what "Gaming Disorder" is and whether it exists. The question that divides researchers is whether or not to use the label "Gaming Disorder" despite its scientific shortcomings.

WHAT IS IN A WORD?

All humans, across time and cultures, have categorized their environment. In fact, it is difficult to imagine any complex organism surviving without some sort of rudimentary categorization of its environment into good and bad; edible and non-edible; safe and unsafe, etc. Modern attempts at developing classification systems or taxonomies and common nomenclature have their roots in the 18th century when the likes of Carl Linnaeus, often referred to as "the father of modern taxonomy," set out to create a comprehensive and scientific classification system of all living organisms.[4] However, it is François Boissier de Sauvages de Lacroix, a friend of Carl Linnaeus, who is credited as the original taxonomist of diseases and pathology based on his comprehensive treatise NOSOLOGIA METHODICA.[5] The statistical study of diseases and causes of death began a century earlier with the work of John Graunt on the LONDON BILLS OF MORTALITY who attempted to collect and analyze data on, for example, child mortality rates.[6]

When the ICD-11 officially went into effect on January 1st, 2022, it had been 26 six years since the launch of its predecessor ICD-10 and some 400 years since the first efforts to collect and statistically analyze data on death and disease. Since its inception, disease classification has been recognized as imperfect but useful. In the words of William Farr:[7]

4 Calisher, Charles H.: "Taxonomy: What's in a Name? Doesn't a Rose by Any Other Name Smell as Sweet?", in: *Croatian Medical Journal* 48 (2007), pp. 268-270.

5 World Health Organization: *History of the Development of the ICD*, n.d., p. 10.

6 World Health Organization; *History of the Development of the ICD*.

7 Farr, William: "First annual report", in: *Registrar General of England and Wales*, London 1839, p. 99. In: World Health Organization, *History of the Development of the ICD,* p. 1.

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"The advantages of a uniform statistical nomenclature, however imperfect, are so obvious, that it is surprising no attention has been paid to its enforcement in Bills of Mortality. Each disease has, in many instances, been denoted by three or four terms, and each term has been applied to as many different diseases: vague, inconvenient names have been employed, or complications have been registered instead of primary diseases. The nomenclature is of as much importance in this department of inquiry as weights and measures in the physical sciences, and should be settled without delay."

Here, Farr argues that we should not wait for science to gain a perfect understanding of the world before we begin to use statistical methods to study the imperfect conceptions of the world. It may be that our current nomenclature does not perfectly match the world as it exists beyond our senses, but the advantages of having a common language far outweigh the disadvantages.

The tricky questions then and today are thus: 1) when do we have enough evidence that a given disorder exists and 2) what do we do with boundary cases? Most proponents of diagnostic manuals would probably agree that to fully classify mental disorders we need to know how patients experience them, what causes them, what symptoms they produce, what the short- and long-term effects are, and how they progress both when treated and left untreated. Disagreement arises when the question turns to how low the bar for the minimum amount of knowledge and evidence can be set.

The United States does not use the WHO's ICD. Instead, they rely on The American Psychiatric Association (APA) who publishes the DIAGNOSTIC AND STATISTICAL MANUAL (DSM), which is currently in its fifth edition (published in 2013). The APA has chosen to not include game addiction in the manual because of insufficient evidence of its existence.[8] Instead, they have opted to add "Internet Gaming Disorder" as a disorder for further study-a sort of beta version of a diagnosis for researchers to use in their work. The WHO and the APA, presumably with access to the same research and evidence, have come to different conclusions. This leads to the peculiar situation that any American wanting to be diagnosed with a gaming disorder must travel abroad to get it.

8 American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders*, 5th Edition, DSM-5, Washington, D.C: American Psychiatric Publishing, 2013.

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THE WHO AND THE BLACK BOX

In 2014, the WHO held a three-day meeting about the "Public Health Implications of Excessive Use of the Internet, Computers, Smartphones and Similar Electronic Devices," a report from the meeting was published in 2015,[9] and in 2016 the WHO officially proposed 'Gaming Disorder' as a new disorder.[10] The meeting featured 16 experts, under the coordination of Dr. Vladimir Poznyak, who discussed the evidence for what came to be Gaming Disorder, which was included in the ICD-11 in "Disorders Due to Addictive Behaviours." According to the meeting report, it was decided that "a more comprehensive evidence base on behavioral addictions associated with excessive use of the Internet, computers, smartphones and similar electronic devices [will be gathered] by end of 2016."[11]

The process behind the inclusion of Gaming Disorder as an official diagnosis has been black boxed. It has been impossible (for me and researchers in my professional network) to gain insight into the process of selecting the experts, the decision-making process, and the evidence that was considered aside from the meeting report.[12] It is curious how the group of experts came to the decision to single out gaming as the only addictive behavior to add to the manual. According to evidence presented in the meeting report "the most popular and frequently described behavioral addictions" (pp. 136-142) are:

- Pathological gambling
- Internet addiction; with three subtypes: "excessive gaming, sexual preoccupations (cybersex), and e-mail/text messaging"
- Shopping addiction
- Food addiction

9 World Health Organization: *Public Health Implications of Excessive Use of the Internet, Computers, Smartphones and Similar Electronic Devices: Meeting Report*, Tokyo 2014.

10 Aarseth, Espen et al.: "Scholars' Open Debate Paper on the World Health Organization ICD-11 Gaming Disorder Proposal", in: *Journal of Behavioral Addictions* (2016), pp. 1-4.

11 World Health Organization: *Public Health Implications of Excessive Use of the Internet, Computers, Smartphones and Similar Electronic Devices: Meeting Report*, p. 22.

12 I have reached out to several key participants in the 2014 meeting via email and have only heard back from one person, who informed me that: "there is currently no other publicly available documents related to this issue." (emphasis in original).

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It remains a mystery, at least to researchers skeptical of the new disorder, why the experts ended up only including one of the subtypes of internet addiction in the manual. The evidence considered by the expert group outlines excellent critiques of Internet addiction (and presumably by extension all its subtypes). The following briefly outlines critiques presented in the meeting report:[13]

1. Definition: It is hard to define what the problem is, is it a problem of impulse control or is it a substance-like addiction?
2. The nature of the problem: the expert group believes that there are prob ably two kinds of Internet related problems – One where there is a primary problem with a compulsive focus on and pattern of behavior centered on the Internet, and one where pre-existing psychiatric problems are closely related to and are exacerbated by the Internet use. These problems might be: "personality disorders, anxiety disorder, depression, bipolar disorders, substance dependence, compulsive control disorder, pathological gambling, eating disorders, etc."
3. The extent of the problem: Most evidence comes from problematic research designs that cannot establish causal links between specific behavior and their cause. Furthermore, the "most obvious confounds are not controlled for in most surveys, such as pre-existing mental disorders."
4. Natural course and treatment outcomes: There are very few studies on how Internet addiction develops and progresses with and without treatment. Moreover, these studies are marred by serious design flaws and limitations.
5. The position in the classification system of mental disorders: The relationship or difference between "addiction" and various compulsive or impulsive orders is a source of confusion.
6. The final concern relates to medicalizing pleasure-seeking or impulsive behavior: Adding Internet addiction as a disorder runs the risk of medicalizing behaviors that are part and parcel of being human. Potentially this could create millions of new "patients" who would be given a "sick role" by fiat, which might lead to an excuse for impulsive irresponsibility.

13 World Health Organization: *Public Health Implications of Excessive Use of the Internet, Computers, Smartphones and Similar Electronic Devices: Meeting Report*, pp. 139-140.

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In short, it is unclear what gaming disorder is, what it looks like, what the extent of the problem is, where to place it in the manual, how to differentiate it from other disorders, if it is a disorder itself or a symptom of underlying problems, and whether there might be negative effects associated with introducing it into official diagnostic manuals.

It might seem puzzling that the WHO chose to introduce this new disorder, when their own expert panel presents such harsh critique of its existence. Obviously, it would be a rare thing if 16 individuals were in complete agreement about such a complex issue, so this critique may reflect internal division. It may also reflect the fact that the WHO, on the one hand, is supposed to represent the pinnacle of scientific knowledge, but, on the other hand, is also a political organization that needs to retain its member states if it wants to retain power and influence (politics and science both play a role here as WHO officials have expressed being under "enormous pressure" to include "Gaming Disorder" in the ICD).[14] It may also simply be the case that the experts put more emphasis on uniform nomenclature (or a common language) for statistical reporting than on this nomenclature accurately reflecting the world as it exists beyond our senses and social constructions. Balancing out the need for a common language and the need for an accurate representation of the world is an immensely difficult task. Some, however, are less concerned with this balancing act as they see diagnostic categories as conducive to reflection on the part of clinicians. It is unclear how widespread this view is, but it is present in the evidence presented at the WHO meeting:

"Thus, the DSM-V, like all DSM's before it, will be, almost by definition, incomplete or deficient. It will be a descriptive tool, taxonomy, guidebook, featuring the authors' best guess as to what might constitute a treatable condition. The danger does not lie in the diagnostic label, but in how we use it. In fact, one might even argue that a lousy label – or a label that is so nonspecific that it applies to a broad swath of the population, including some in the 'normal' part of the spectrum (wherever that maybe) – may actually be beneficial, because it will be so meaningless that it will require the clinician to think more deeply about what that label is trying to convey."[15]

A counter argument might be that introducing "lousy" and "meaningless" new mental disorders that pathologize otherwise "normal" behavior will not encourage

14 Bean, Anthony M. et al.: "Video Game Addiction: The Push To Pathologize Video Games," in: *Professional Psychology: Research and Practice* 48 (2017), p. 378.

15 World Health Organization: *Public Health Implications of Excessive Use of the Internet, Computers, Smartphones and Similar Electronic Devices: Meeting Report*, p. 135.

https://doi.org/10.14361/9783839462645 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-SA

clinicians to reflect more deeply but will instead be a convenient diagnostic trashcan where clinicians can in good faith place people that are not doing well and who also happen to play digital games. In this scenario, the introduction of "lousy" and "meaningless" labels will cause more harm than good as they obscure the root causes of suffering. Classifying "Gaming Disorder" as a "disorder due to addictive behavior" might give clinicians the impression that digital games and gambling are activities that are unique in their ability to cause clinically significant behavioral addiction. If digital games and gambling games are not uniquely addictive, why would the WHO expert panel leave out the Internet, smart phones, sex, exercise, and all the other behaviors that are effectively treated as addiction, and are referred to as "popular addictions" in the presented evidence? Using the words "due to" clearly expresses a causal link from the game to disorder unsupported in the literature.

In the case of Gaming Disorder, the WHO is committing exactly the disservice to science that William Farr tried to eliminate some 200 years ago, namely that they are registering complications instead of primary diseases. This would be the equivalent of recording a complaint, such as a high fever, as a disorder without regard for the underlying cause.

The ICD-10 does not use the term "addiction" when describing disorders related to psychoactive substances (such as alcohol and other drugs) preferring instead the more neutral term "Dependence syndrome." In the ICD-10, "Disorders Due to Psychoactive Substance Use" are grouped with the "organic mental disorders," that is, disorders that are a direct result of damage to brain tissue.[16] This was done precisely because "Dependence syndrome" in the ICD-10 are believed to be caused by substances; and just like with disorders caused by physical damage to the brain, we know what the cause of the disorder is. We see here two fundamentally divergent views on what a taxonomy should be: is it a) a classification system that does not necessarily reflect the world and how it works, or b) are taxonomies in fact also testable theories about the world? The latter view is championed by such luminaries as Stephen Gould, who says that taxonomies are not trivial, but rather mini theories:

"Taxonomy (the science of classification) is often undervalued as a glorified form of filing – with each species in its prescribed place in an album; but taxonomy is a fundamental and dynamic science, dedicated to exploring the causes of relationships and similarities among

16 World Health Organization: *The ICD-10 Classification of Mental and Behavioural Disorders: Clinical Descriptions and Diagnostic Guidelines,* 1992, p. 44.

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organisms. Classifications are theories about the basis of natural order, not dull catalogues compiled only to avoid chaos." [17]

It would appear that the WHO is choosing to err on the side of wanting to have a common language rather than on the side of knowing that the common language accurately corresponds to the world beyond our senses.

The core description of gaming disorder in ICD-11 is the same as for gambling disorder. They revolve around three loosely defined features:

"1. impaired control over gaming (e.g., onset, frequency, intensity, duration, termination, context);
2. increasing priority given to gaming to the extent that gaming takes precedence over other life interests and daily activities; and
3. continuation or escalation of gaming despite the occurrence of negative consequences."[18]

Time will tell if the inclusion in the ICD-11 and this description of the core features will lead policy makers, researchers, clinicians, parents, educators, etc. to reflect on the legitimacy of the label or if they will trust that it is based on solid science.

THE GREAT PANDEMIC OF 2022

With the introduction of behavioral addictions into the ICD-11 we are going to see a range of new pandemics in 2022 (though probably mostly in the literature). According to the evidence presented by the WHO expert group, epidemiological studies find that 34% of Chinese college students suffer from social network site addiction.[19] Even though the experts also note that such epidemiological research is limited and often based on unreliable data (just like with video games), many more people will qualify for a new disorder in 2022. It is unclear how the behavioral addiction pandemic will interact with the COVID-19 pandemic. The WHO expert group warns of the risks associated with technological addictions in ways not so subtly reminiscent of the concern about needle sharing by drug addicts:

17 Gould, Stephen Jay: *Wonderful Life: The Burgess Shale and the Nature of History,* New York, NY: W. W. Norton & Company 1990, here p. 98.

18 World Health Organization: *ICD-11 Beta Draft-Mortality and Morbidity Statistics*.

19 World Health Organization: *Public Health Implications of Excessive Use of the Internet, Computers, Smartphones and Similar Electronic Devices: Meeting Report*, p. 9.

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"Insufficient hygiene precautions and sharing of mobile devices such as smartphones may enable the spread of pathogens and infectious diseases."[20]

Whether this is an actual concern or more of a rhetorical move to make game addiction look like drug addiction is unclear.[21] It is clear, however, that it is increasingly rare to go through life without qualifying for a mental disorder. A conservative estimate, from a large-scale study in New Zealand, determined that 83% of the population at one point in time had fulfilled the criteria for a mental disorder before reaching midlife.[22] With the addition of disorders due to behavioral addiction, it would appear that we are rapidly approaching a point where it makes more sense to ask *what* mental disorder someone is suffering from than *if* they are suffering from one.

EXPERT CONSENSUS OR CONFIRMATION BIAS?

After the WHO decided to acknowledge gaming disorder as a psychiatric disorder, a group of researchers set out to "integrate the views of different groups of experts" in order to reach "expert consensus" on the diagnostic criteria.[23] To this end, 29 international experts with clinical and/or research experience in gaming disorder completed three iterative rounds of a Delphi survey. Five experts declined to participate and 11 of the 29 experts were also members of the WHO advisory group on gaming disorder. The authors prioritized experts with both clinical and research experience and intentionally left out researchers from certain fields (e.g., game studies) and disciplines (e.g., anthropology). However, the authors also considered experts with experience in only one setting when they reported more than five years of clinical experience or having published more than 20 papers on gaming disorder.

While it is commendable to try to integrate different opinions, I suspect that the selection method effectively had the result of excluding specific opinions. The

20 World Health Organization: *Public Health Implications of Excessive Use of the Internet, Computers, Smartphones and Similar Electronic Devices: Meeting Report,* p. 14.

21 For a discussion of the discursive production of the gamer as an addict see: Cover, Rob: "Gaming (Ad)Diction: Discourse, Identity, Time and Play in the Production of the Gamer Addiction Myth", in: *Game Studies* 6 (2006).

22 Schaefer, Jonathan D. et al.: "Enduring Mental Health: Prevalence and Prediction.", in: *Journal of Abnormal Psychology* 126 (2017), pp. 212-224.

23 Castro-Calvo, Jesús et al.: "Expert Appraisal of Criteria for Assessing Gaming Disorder: An International Delphi Study", in: *Addiction* (2021), pp. 2463-2475.

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selection criteria effectively barred anyone whose clinical or research experience tells them that 'gaming disorder' is not a mental disease or disorder, but instead is a coping strategy or a symptom.

CONCLUSIONS

For reasons that remain unclear to outsiders, the WHO has decided to add Gaming Disorder to the ICD-11 list of disorders "due to substance use or addictive behaviours."[24] The decision was completely black boxed to the broader research community who remain unaware of the experts behind this decision, the decision-making process, and on what scientific basis the decision was made. This paper has outlined some of the arguments against the inclusion of the disorder into official diagnostic and taxonomic manuals that was laid out by an expert group under the WHO ahead of the decision. These arguments include:

- We don't know what gaming disorder is,
- We don't know what it looks like,
- We don't know the extent of the problem,
- We don't know where to place it in the manual,
- We don't know how to differentiate it from other disorders,
- We don't know if it is a disorder in itself or if it is a symptom of underlying problems, and
- There might be negative effects associated with introducing it into official diagnostic manuals.

As outsiders, we can only speculate as to why the WHO has chosen to include Gaming Disorder in the ICD-11 in spite of the issues listed above. Some possible reasons behind the decision discussed in this paper are:

1. Balancing two important qualities of diagnostic manuals. Diagnostic manuals need to a) reflect the world beyond our senses and social constructions and b) provide a common language to ensure the ability of researchers, clinicians, and other stakeholders to communicate. It appears that the WHO has chosen to err on the side of ensuring a common language at the cost of accuracy.

24 World Health Organization: *ICD-11 Beta Draft-Mortality and Morbidity Statistics*.

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2. It may also be that political pressure from member countries has played a role.
3. It may also be the sincere belief that "lousy" and "meaningless" categories encourage clinicians to reflect more deeply about what a given diagnosis reflects.
4. It may also be that this decision is simply the first step towards a future where everything is potentially addictive – a future with an extremely narrow window of normalcy where most people most of the time fulfill the requirements for at least one disorder.

Scholars are still debating whether game addiction exists. This debate is not likely to be resolved any time soon. However, when it comes to diagnostic manuals a decision will have to be made: either Gaming Disorder is retired as a diagnosis again at some point, or diagnostic manuals will have to define addictive behavioral disorder related to everything from gardening to Argentine tango.[25] Perhaps the most straight forward solution would be to create a general disorder regarding behavioral addiction that does not single out just two behaviors and one form of media. The current situation, where only digital (as opposed to analogue or physical) games and gambling games (whether off-line or online) are considered to cause addiction, is not tenable.

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25 Argentine tango addiction has been researched using similar methodology as has been used with video game addiction. Cf. Targhetta, Remi/Nalpas, Bertrand/Perney, Pascal: "Argentine Tango: Another Behavioral Addiction?", in *Journal of Behavioral Addictions* 2 (2013), pp, 179-86.

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Protecting the Youth by Controlling the Ludic

Indexing Practices in 1980s West Germany

NILS BÜHLER

INTRODUCTION

In autumn 1983, just in time for Christmas shopping, home computers were introduced as a mass product to the West German market.[1] Digital gaming moved from arcades into the homes of its players, continuing the trend set by gaming consoles in the late 1970s. Home computers enabled users to play games developed by a diverse set of companies, copy code from magazines or other users, or program their own games. Gaming thus evaded the constraints of its previous publicity and often even eluded parental supervision. This situation prompted the Federal Review Board for Publications Harmful to Minors (BPjS)[2] to *index* some computer games, i.e. to prohibit them from being sold, advertised, or otherwise made available to minors.[3]

1 Cf. Eckert, Rolandet al.: *Auf digitalen Pfaden. Die Kulturen von Hackern, Programmierern, Crackern und Spielern, Opladen*: Westdeutscher Verlag 1991, pp. 155-156.

2 Abbreviation: Bundesprüfstelle für jugendgefährdende Schriften.

3 To index (German: "indizieren") is the action of placing a publication on the 'Index', i.e. the List of Publications Harmful to Minors (LjS: Liste der jugendgefährdenden Schriften). Publications on the Index are subject to the mentioned prohibitions.

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This paper conducts a Foucauldian critical genealogy of game indexing in the 1980s.[4, 5] To this end, ten BPjS indexing documents are analyzed and their central arguments contextualized in discourses of media effects research and social ethics. This analysis follows the central thesis that stereotypical imaginations of a gaming youth constituted the basis for institutionalized control of games in the 1980s. The first section is a brief overview of game indexing and its method of operation in the 1980s. The second section discusses its constitutional context. The third section traces references in ten exemplary indexing documents to grasp the BPjS's process of knowledge generation. In the final chapter, Sneath, Holbraad, and Pedersen's concept of "technologies of the imagination" will aid in understanding how reactionary morality in youth protection discourses led to the indexing (prohibition) of computer games by the BPjS and other actors who were influenced by their imagination, rather than by their observation of children and youths at play.[6]

The BPjS has been characterized as a censorship institution by many critics, as discussed below. While my analysis is a critical one, I prefer the term *control* over *censorship* to describe indexing. As Frederick Schauer observes, censorship is a problematic term for external influences on communication, because on a descriptive level, it cannot be distinguished from other forms of discourse control. Claiming censorship denotes that control is exercised by undesired actors in contrast to control by desired actors (e.g., librarians choosing literature for a library), which is considered professional selection.[7] My aim is not to denounce the BPjS, but to understand the historical conditions which led to indexing decisions that were incomprehensible to critics of the time and today.

4 This article is a brief account of the key findings of my master's thesis.

5 Michel Foucault's discourse and governmentality theories provide the theoretical background for the document and context analysis used here. Cf. Foucault, Michel: "The Order of Discourse", In: Young, Robert J. C. (ed.), *Untying the text. A post-structuralist reader*, Boston: Routledge & Kegan Paul 1981, pp. 48-78; Foucault, Michel: *Security, territory, population. Lectures at the Collège de France*, 1977-1978, New York, NY: Picador 2009.

6 Sneath, David/Holbraad, Martin/Pedersen, Morten Axel: "Technologies of the Imagination: An Introduction", In: *Ethnos* 74 (2009), pp. 5-30.

7 Cf. Schauer, Frederick: "The Ontology of Censorship", In: Post, Robert C. (ed.), *Censorship and silencing. Practices of cultural regulation*, Los Angeles: Getty Publications 1998, pp. 147-168.

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INDEXING GAMES IN THE 1980S

In 1984, the BPjS began to index action games for home computers, starting with the fighter jet game RIVER RAID.[8] The BPjS claimed that the game trained its players in aggressive behavior and exposed them to a strict regimen of order and obedience. Young players were deemed uninterested in the difference between reality and fiction, hence unable to reflect that they were 'just playing,' and consequently they were easily affected by the game.[9] The ruling against RIVER RAID paved the way for 133 indexings of computer games in the 1980s.[10] How could these decisions come to be? Why were the pixelated games of the 1980s considered means of militarization, brutalization, and dehumanization, while their graphic representation of violence seems trivial and harmless from today's perspective?

Comparing a sample of ten BPjS decisions which indexed action computer games reveals several paragraphs, sentences, and phrases that are featured identically or similarly in all or most of the documents.[11] Apart from phrases necessary for normative administrative texts, most of these segments contain the central arguments of the indexing decision. In these passages, game and gamer are ambiguously depicted as equal partners as well as master and subject, respectively. A translated excerpt from the BPjS document on BEACH HEAD exemplifies this:

"The game device acts as a game partner, both parts—player and game device—react to each other […]. The player's reactions keep the game going, his creative possibilities are limited to avoiding, shooting, and destroying. The course of the game does not allow any other

8 RIVER RAID (Carol Shaw, 1982: Activision).

9 Cf. Bundesprüfstelle für jugendgefährdende Schriften: 454/84, December 13, 1984.

10 Cf. Beierwaltes, Andreas/Neumann-Braun, Klaus: "Computerspiele und Indizierungspraxis. Zu Mediengewalt und Doppelmoral in der Gesellschaft", In: *medien praktisch* 16 (1992), pp. 20-24, here pp. 21-22.

11 Analyzed BPjS documents and respective games: BPjS: 454/84 on River Raid (Carol Shaw, 1982: Activision); BPjS: 341/85 on Beach Head (Bruce Carver, 1983: Access Software); BPjS: 106/86 on Blue Max (Peter Adams, 1983: Synapse Software); BPjS 334/86 on Theatre Europe (Personal Software Services, 1985: Personal Software Services); BPjS: 7/87 on Protector II (Ken Rose, 1983: Synapse Software); BPjS: 13/87 on G.I. Joe (Epyx, 1985: Epyx); BPjS: 307/87 on S.D.I. (Master Designer Software, 1986: Cinemaware); BPjS: 466/87 on Shockway Rider (Carter Follis Software Associates, 1987: Faster Than Light); BPjS: 534/87 on Highlander (Canvas, 1986: Ocean Software); BPjS: 629/87 on Renegade (Technos Japan, 1986: Taito).

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decisions. [...] Furthermore, the game forces the player into an automated 'command and obedience relationship' in which obedient behavior is expected without question."[12]

The paradoxical claim of both equivalence and hierarchy between game and player is due to the two main arguments for the indexing. For the BPjS, BEACH HEAD and the other nine games are harmful to minors because they make players passive, therefore stunting their development of self-determination. At the same time, the BPjS assumes an activating effect that induces aggressive behavior.

The BPjS assumes that playing action games also leads to increased aggression outside of the game context. This is based on the following related assumptions: firstly, the games exert performance pressure on the players leading to "physical tension, anger, aggressiveness, mental slowness, concentration difficulties, headaches, and other problems;"[13] secondly, this pressure is intensified through the authoritative nature of the game, which exclusively orders aggressive action and offers no alternative solutions; thirdly, this leads to the fact that "aggression reduction can […] only take place outside of the game."[14] The BPjS sees a habituation of aggressive behavior as a result of these three effects. This cannot be ameliorated by reflecting on it being 'only a game', since children and youths are "not so much interested in the difference between game and reality."[15] Children and adolescents cannot distinguish game spaces from their material environment, according to the BPjS.[16]

This argument follows an assessment on RIVER RAID by psychologist Helmut Kampe, which is part of the file on the game.[17] Kampe attempted a hermeneutic study of RIVER RAID referenced and, in many cases, even copied in the action computer game indexings to come. The recurring passages cited above are all taken verbatim or in essence from Kampe. Two of the passages that recur in most indexings in verbatim contain references to a research project at the University of

12 BPjS: 341/85, p. 4. This and all other excerpts from the BPjS documents are my translation.

13 Ibid., p. 5. Similar in BPjS: 106/86, p. 6; 334/86, p. 5; 7/87, p. 4; 13/87, p. 4; 307/87, p. 5.

14 BPjS: 341/85, p. 5; 106/86, p. 6; 7/87, p. 4; 13/87, p. 5; 307/87, p. 5.

15 BPjS: 341/85, p. 5; 106/86, p. 6; 7/87, p. 4; 13/87, p. 4; 466/87, p. 4; 534/87, p. 4; 629/87, p. 6.

16 Although the cited passages are not included in all analyzed BPjS documents, as can be seen by the mentioned references, the overall argumentative structure is the same throughout.

17 BPjS: 454/84.

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Applied Sciences in Cologne, discussed in more detail below.[18] Kampe asserts that the findings of this research project support his claims about the effects of computer games.[19]

NEGOTIATING FREEDOM OF SPEECH

Before these references are analyzed further, a brief account of critical voices against the BPjS and its relationship to other institutions of power is necessary. This is to provide contextualization and an account of the BPjS's standing in the German state and society.

As one of the few institutions in Germany with the authority to limit free speech, the BPjS has been under critical scrutiny since its foundation in 1953, frequent accusations of censorship against the BPjS being a recurring theme.[20] The first sentence of the fifth article of the German Constitution—"Censorship does not take place"—lends the powerful claim of unconstitutionality to these accusations.[21] However, the Constitution also offers an equally powerful refutation: The imperative of "Censorship does not take place" has exceptions, one of them being youth protection.[22]

Some critics accept youth protection as a necessary limit of free speech but claim malpractice by the BPjS. In a pamphlet to the German Parliament, K. Volter accuses the BPjS of autocratic oppression of different world views and of effectively censoring publications not only for minors, but for the whole German public.[23, 24] Similar criticism originated from the Börsenverein des Deutschen

18 Fritz, Jürgen/Dorst, Brigitte/Metzner, Joachim: "Videospiele – Regelbare Welten am Draht" Part I-IX, In: *Spielmittel* 2-5 (1983) and 1-5 (1984).

19 BPjS: 454/84, pp. 15, 17.

20 Cf. Volter, K.: Denkschrift. *Unsichtbare Zensur und geistige Freiheit*, Stuttgart: Freyja 1959; Bauer, Fritz: "Grundgesetz und Schmutz- und Schundgesetz", In: Juristenzeitung 20 (1965), pp. 41-47; Otto, Ulla: *Die literarische Zensur als Problem der Soziologie der Politik*, Stuttgart: Ferdinand Enke Verlag 1968; Barsch, Achim: Jugendmedienschutz und Literatur Universität Siegen 1988; Kentler, Helmut: "Jugendschutz als Zensur. Zur Spruchpraxis der Bundesprüfstelle", In: *vorgänge* 27 (1988), pp. 74-87.

21 "Eine Zensur findet nicht statt." Art. 5 (1) GG.

22 Art. 5 (2) GG.

23 K. Volter's first name is not mentioned in full in their publications.

24 Cf. K. Volter: *Denkschrift*.

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Buchhandels (German Publishers and Booksellers Association). The Börsenverein had a seat in the BPjS but stepped down in 1982 to protest the indexing of an edition of the erotic novel *Josephine Mutzenbacher*. [25, 26]

The publishers' and Volter's use of the term censorship is similar to that of Silke Buschmann's.[27] Books are censored, she writes, not because of detrimental effects but because they contradict the dogma of a ruling social organism. Censorship takes place when this organism has passed its prime and tries to save its preferred societal order.[28] In this understanding, the accusation of censorship against the BPjS contains two assertions: Firstly, it implies that there is a prevailing dogma represented by the BPjS, and secondly, that the accuser's own moral conception is the newer and superior one. With the combination of the accusation of censorship and the assertion of one's own moral primacy, a paradoxical tension arises between the critique of, and claim to, hegemony. In most academic texts on the subject, the accusations of censorship against the BPjS lack this claim. The review board is seen as a means of oppression, which uses youth protection as a pretext to censor literature (and in a few cases also other media).[29]

Despite broad scrutiny, the BPjS's practice has remained virtually untouched. The board has been able to maintain a high level of continuity, illustrated by the fact that between 1954 and 2016, the BPjS only had four different chairpersons. An explanation for this resistance to change lies within the tension between a subjective and an objective concept of liberty.[30] Ernst-Wolfgang Böckenförde

25 The BPjS had twelve seats in normal and three in speedy proceedings, given to governmental, religious and civil representatives. Critics viewed the appointment process as biased, cf. e.g. A. Barsch: *Jugendmedienschutz und Literatur*, p. 19.

26 Cf. Heker, Harald: "BPS: Rückkehr der Verleger?", In: *Börsenblatt für den deutschen Buchhandel* from 21.07.1992, pp. 6-8.

27 Cf. Buschmann, Silke: *Literarische Zensur in der BRD nach 1945*, pp. 22-23.

28 Ibid.

29 Cf. U. Otto: *Die literarische Zensur als Problem der Soziologie der Politik*; Ferchl, Irene: "Zensurinstitutionen und Zensurinitiativen", In: Kienzle, Michael/Mende, Dirk (eds.), *Zensur in der BRD. Fakten und Analysen*, München, Wien: Hanser 1980; Kienzle, Michael: "Logophobie. Zensur und Selbstzensur in der BRD", In: M. Kienzle/D. Mende (eds.), *Zensur in der BRD* (1980), pp. 15-46; H. Kentler: "Jugendschutz als Zensur.", pp. 74-87; S. Buschmann: *Literarische Zensur in der BRD nach 1945*, p. 85.

30 The BPjS also has a high level of legal immunity through the GjS. This legal immunity can be attributed to the same discursive conditions as the immunity to criticism explicated here.

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discusses this tension as a fundamental problem of the interpretation of constitutional rights. In the subjective conception, liberty is performed and defined by the individual. The state only acts as a negotiating intermediary, which leads to arbitrariness and inequality, Böckenförde cautions. Objective liberty, by contrast, can provide equality but requires a determination of universal values, which, in turn, entails hegemony. Böckenförde prefers a third concept of liberty that both allows for individual interpretations of liberty and is guided by collective values.[31] In the German Constitution, freedom of speech is a negotiated liberty: Censoring a publication is prohibited, as long as it respects certain core values–including youth protection.

Youth, thus, is a value that needs to be determined. When the BPjS was founded, Christian social ethics provided a moral compass to a post-Nazi country in need of a state ethos. Consequently, the Catholic church had considerable influence over legislature and value-building processes of the Bonn Republic.[32] The BPjS is a case in point: The Volkswartbund (Warden of the People Association), an organization of the archbishopric of Cologne, initiated its formation.[33] The first chairman of the BPjS, Robert Schilling, continued to work closely with the Volkswartbund.[34] Schilling pursued a restoration of a Christian West,[35] and declared the protection of the traditional, heteronormative family model as the main goal of youth protection.[36]

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31 Böckenförde, Ernst-Wolfgang: *Recht, Staat, Freiheit. Studien zur Rechtsphilosophie, Staatstheorie und Verfassungsgeschichte*, Frankfurt am Main: Suhrkamp 1992, pp. 44-47.

32 Cf. Anzenbacher, Arno: *Christliche Sozialethik. Einführung und Prinzipien*, Paderborn: Schöningh 1998, p. 150; Humberg, Michael: *Vom Erwachsenenverbot zur Jugendfreigabe. Die Filmbewertungen der FSK als Gradmesser des kulturellen Wertewandels*, Münster: Telos 2013, p. 120; Mölich, Georg: "Christliches Abendland am Rhein. Ein politisches Denkmodell der früheren Bonner Republik", In: Cepl-Kaufmann, Gertrude/et al. (eds.), *Die Bonner Republik 1945-1963 – Die Gründungsphase und die Adenauer-Ära. Geschichte – Forschung – Diskurs*: transcript 2018, pp. 85-95, here p. 85.

33 Cf. Schilling, Robert: *Schund – und Schmutzgesetz. Handbuch und Kommentar zum Gesetz über die Verbreitung jugendgefährdender Schriften vom 9. Juni 1953*, Darmstadt: Stoyscheff 1953, p. 46.

34 Cf. Schilling, Robert: *Zwei Jahre Bundesprüfstelle*, Köln: Volkswartbund 1956, p. 9; I. Ferchl: *Zensurinstitutionen und Zensurinitiativen*, pp. 214-215.

35 Cf. R. Schilling: *Schund- und Schmutzgesetz*, p. 8.

36 Cf. R. Schilling: *Zwei Jahre Bundesprüfstelle*, p. 3.

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The BPjS's knowledge generation followed this naturalized concept of youth. A free subject, in this understanding, can only develop if childhood and adolescence are spent in an environment free of harm and full of virtue. This presupposes an objective value of youth, which, in effect, was defined *ex negativo* by the indexing practice of the BPjS. Defining and guaranteeing the core value of 'youth' within the negotiation of liberty, the BPjS was immune to more subjective claims of freedom of speech.

Until the 1970s, the BPjS based most of their indexing on claims of sexual ethics violations. In the 1980s, however, depictions of violence constituted the majority of indexed media.[37] Although Christian social ethics lost significance as a state ethos, the BPjS still operated with 'objective' terminology: a publication could still only be indexed when its harmful effect was considered definite.

PROVING TECHNOLOGICAL DETERMINISM

Without an objective set of values, other epistemes had to fill the void in BPjS's knowledge generation left by Christian social ethics. In the analyzed indexings, this void is filled with an idealized, humanist understanding of a 'natural' youth: play is only considered beneficial when it is taking place without technology, hence digital games militarize, dehumanize, and rationalize children and youths.

A further look into the references in Kampe's assessment illustrates how this technological determinism made its way into the very core of the BPjS's indexing practice. Kampe bases his claims of the psychosomatic and aggression-inducing effects of digital games on a research project led by media education scholar Jürgen Fritz.[38] The findings of this project were published in the family magazine *Spielmittel* (Devices of Play), as a series of nine articles titled "Video Games – Controllable Worlds on a Wire."[39] Fritz and colleagues set out to explore the influence of video games on socialization. With its nine articles and a diverse

37 Cf. Hajok, Daniel/Hildebrandt, Daniel: "Jugendgefährdung im Wandel der Zeit. Veränderungen und Konstanten in der BPjM – Spruchpraxis zu Darstellungen von Sexualität und Gewalt", In: *BPjM Aktuell* (2015), pp. 3-17, here p. 4.

38 Cf. BPjS: 454/84, pp 15, 17.

39 J. Fritz/B. Dorst/J. Metzner: *Videospiele – Regelbare Welten am Draht Part I-IX.*

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methodology, the study is too comprehensive to be fully described and analyzed in this paper.[40] I will only briefly present some key aspects.

The premise of the study, that any preconceptions of computer games are discarded in the interest of science,[41] must be questioned in view of numerous technologically deterministic interpretations of data in the rest of the study. The preface introduces computers as invaders of the emotion-based world of humans. Contact with computers, in Fritz's view, leads to the elimination of the irrational, creative, and sensible and puts the human in a purely information-consuming position without the chance to think critically. Computer games fit into this scenario as both overpowering overlords that sedate young players into a state of inactivity and as instigators of feelings of omnipotence.[42]

In the following eight articles of the *Spielmittel* series, the topos of computers as invaders of the human world recurs as the central interpretation of the study's data, which was collected in an experiment with school and university students. The participants had two hours to play as many games as they liked from a collection of about 300 games. Before and after the session as well as after the individual games, the participants were surveyed on their feelings and well-being. A group discussion was conducted to reflect experiences during play, and photographs of the players were taken to capture their expressions.[43]

The surveys found significant changes in the participants' emotional state after playing. Almost all variables—positive general mood, vitality, activity, stress, positive social emotionality, self-confidence, and interest—settled at average values after two hours of play. Fritz interprets this as a de-emotionalizing effect of digital games. The data suggest a stronger de-emotionalization in older adolescents and young adults than in children. Older participants, Fritz concludes, are more competitive and therefore more likely to get caught up in the game's pressure to perform. The more advanced reflectiveness of older players allows them to quickly see through the game's fantastic avatars and thus understand the game mechanics faster but is nevertheless often insufficient to escape the game's draw to play to the point of emotional exhaustion. Intensive play, thus, wears older

40 Study design and methodology elaborated in Fritz, Jürgen: "Videospiele – Regelbare Welten am Draht Teil I. Erläuterung und Begründung des Forschungsprojekts", In: *Spielmittel* (1983), pp. 2-7, here pp. 6-7.

41 Cf. ibid., p. 2.

42 Cf. ibid., p. 3.

43 Cf. ibid., pp. 6-7.

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adolescents and young adults out emotionally to a higher degree than their younger peers.[44]

Fritz's claim of a general fatiguing effect of computer games does not consider the unusual setting in which they were played. Participants found themselves in a room with hundreds of games, were faced with the objective to play as many of them as possible and had to identify favorites to cater a cut-throat competition between the games.[45] Fatigue after two hours of exposition can hardly be attributed to playing games alone. A moment of reflection, where Fritz states that the findings should only be seen as indicators for temporary effects of individual games, is negated by the posit that longer play creates "an indifferent phenomenal world, a desert of consciousness, an emotional swamp without a clear emotional tendency and expression."[46]

Three iterations of techno-deterministic tendency have now been addressed: Firstly, the experiment design results in a stressful gaming situation, which, secondly, results in stress and fatigue being the major findings of the subsequent survey, and thirdly, playing games is identified as a mind-numbing stressor due to this data. In the description of the group discussion following the gaming session, this techno-deterministic narrative is even more prominent. Participants reporting that they are still shivering, cannot concentrate anymore, feel a bit stupid, and don't remember what they played is interpreted as evidence of a causal relationship between games and long-lasting effects such as headaches, aching eyes, tremors, loss of memory, and concentration disorders.[47] Most participants judged the games as unrealistic and thus expressed a reflective distance to what they depicted. Still, their reports of indifference to shooting down objects in the game are taken as evidence for a perception of ludic action as actual, cold-blooded murder.[48]

Only negative remarks about video games are acknowledged as critical thinking and are considered a result of the pedagogical approach of the group discussion. Brigitte Dorst's account of the group discussion in the fifth part of the

44 Cf. Fritz, Jürgen: "Videospiele – Regelbare Welten am Draht Teil III. Software – Wirkungen, systematische Vergleiche", In: *Spielmittel* (1983), pp. 30-37 and 69-75, here pp. 32-35 and 72-73.

45 Cf. Fritz, Jürgen: "Videospiele – Regelbare Welten am Draht Teil IV. Software – Systematische Vergleiche", In: *Spielmittel* (1983), pp. 24-32 and 49-62, here 60.

46 Ibid., 62, my translation.

47 Cf. Dorst, Brigitte: "Videospiele – Regelbare Welten am Draht Teil V. Erlebnisdimensionen von Jugendlichen beim Videospiel", In: *Spielmittel* (1984), pp. 24-36, here p. 26.

48 Cf. ibid., p. 28.

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Spielmittel series illustrates this bias. For example, she reproduces a participant's statement that "war games benefit from the fact that they are abstract" because they thus "appear less harmful."[49] In contrast to the implicit acknowledgement of the gruesome reality of war and of the fictionality of games in this statement, Dorst equates the remark with a game-induced "functional way of thinking" which treats events, living beings, and things alike as "interchangeable objects."[50] While Dorst does not recognize a critical distance to games in this instance, she does so when participants report being quickly bored by games. Here, the students are not simply bored, but "see through" the "monotony" of the games.[51] Consequently, Dorst views the group discussion as a pedagogic success encouraging critical self-reflection.[52]

IMAGINING A PLAYING YOUTH

The technological determinism featured in the *Spielmittel* study was adopted and intensified by Kampe and then again by the BPjS. Step by step, the weak—and problematic—indication of a fatiguing effect from intensive play became the definitive evidence of a computerization of the new generation, a de-emotionalization, and the fall of humanism. The mental health of a whole generation seemed to be at stake.

Why some statements by Fritz and Dorst could attain this intertextual power in seemingly unrelated contexts can be explained if they are seen as part of various discourses around youth media culture. The BPjS did not operate in discursive isolation; the organization was permeable to interpretive practices of other groups like the *Spielmittel* study group. The BPjS acted in contact with discourses of politics and, as has been shown, especially to discourses of social ethics. Its position within the German state and legal structure gave the BPjS power to grant hegemonic interpretative power to these external discourses.

Far removed from the empirical basis of its knowledge, the BPjS decided not based on an observation but an imagination of a playing generation. The refining process of the techno-deterministic narrative between the *Spielmittel* study, Kampe's assessment, and the indexing decision can be grasped as a complex 'technology of the imagination.' This concept was coined by Sneath, Holbraad

49 "Bei Kriegsspielen hilft es, wenn die abstrakt sind, es wirkt dann harmloser." Ibid.

50 Ibid., my translation.

51 Ibid., p. 36, my translation.

52 Cf. ibid.

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and, Pedersen and is a modification of imagology, as introduced by Benedict Anderson.[53] It adopts the notion that imagination is an effect of certain practices and is the basis of modern communities such as nations.[54] To introduce a more precise tool for analyzing imagination, the three authors introduce the concept of imagination as an effect of particular 'technologies.' Technologies, here, is both used in a colloquial sense and to address an abstract, theoretical object.[55] Sneath, Holbraad, and Pedersen's concept is used for its precise definition of the relationship between these technologies and imagination: "[T]he distinguishing mark of imaginative effects is that while they are the product of the specific processes we are calling 'technologies', they are nevertheless peculiarly underdetermined by them."[56] This indeterminacy is applicable to discourse and imagination. In this sense, discourses can engender imagination but do not necessarily do so. Yet, some technologies—and, I argue, discourses—"are particularly good at opening up spaces in which the underdetermined outcomes that we call imagination emerge."[57] The knowledge generation behind 1980s game indexing was a complex set of technologies which did not determine the historical outcome but was the source of the BPjS's image of playing children and youths.

CONCLUSION

By providing an overview of the BPjS's game indexing practice in the 1980s, this paper demonstrates the relationship between the media control institution and the novel practices of digital gaming at home. The brief account of the legal and constitutional basis of the BPjS as well as a report of my analysis of indexing documents provide a better understanding of the BPjS's close relationship with political, moral, and scientific discourses. As the above section introduced, the complex entanglements of these discourses can be subsumed as technologies of the imagination. The central thesis of this study maintains that an imagination of a youth at play is the basis of the BPjS's practice.

Further publications should analyze indexing documents in more detail, which are outside the scope of this paper, to further illustrate the knowledge generation underpinning indexing. In my ongoing research, I conduct a similar knowledge

53 Cf. D. Sneath/M. Holbraad/M. A. Pedersen: *Technologies of the Imagination.*

54 Ibid., p. 9.

55 Ibid., pp. 16-18.

56 Ibid., p. 19.

57 Ibid., p. 25.

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archaeology in relation to the control of mechanical, electrical, and digital games in 20th century Germany. Was the policing of coin machines, flipper machines, and early console games based on similar imaginations of a playing youth? Which institutions were responsible for the control of the ludic in different political and social contexts? How was their knowledge generated and which discourses had power over or gained power through these institutions? Future research could deploy the methodology of this paper to uncover the indeterminate yet consequential role our cultural imaginations play within different instances of institutionalized media control.

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Mindspaces

The Mind as a Visual and Ludic Artifact

ANH-THU NGUYEN

INTRODUCTION

It is no secret that media like film and video games can tell stories and express feelings and thoughts through methods other than text and dialogue. It is hard to overstate the importance of space in non-verbal storytelling. Film and video games construct complex sets and create (digital) landscapes and architecture that often only offer glimpses into their narrative universes. This analysis focuses on spaces that express the cognitive process of a character. These spaces tap into feelings, dreams, fears, and memories, and, as such, they are typically surreal, confusing, and even fantastical. I will call these spaces *mindspaces* or *mindscapes*. Different rules apply in such spaces, with both film and video games using their own techniques and strategies to create them. However, as I argue here, mindspaces and mindscapes are used to express a character's mental health, often linked to trauma. This essay will therefore take a closer look at these spaces in recent popular culture to provide an overview of their use and portrayal of mental health. To examine these spaces' particularities in the video game medium, the latter half of this essay will focus on the case of the 2016 Japanese role-playing game PERSONA 5.[1]

1 PERSONA 5 (P-Studio, 2016: Atlus).

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INVESTIGATING MINDSCAPES

Mindspaces and mindscapes, as their name suggests, give internal states–feelings and memories–a shape in landscape form. They investigate places within the human mind that are otherwise not visible. In media, mindscapes are an attempt to visualize the complexity of the human condition, often drawing on the unimaginable, the unthinkable, or the surreal to express the vastness of the human mind. As I argue here, they manifest in spaces—mindspaces—through media-specific strategies and are narrative tools to relate to trauma.

When considering existing literature of mindscapes or mindspaces, it is difficult to make out a distinction between either term because the terminology has gone through various definitions and applications. In the humanities, literature studies use the term mindscapes, albeit in a different context than the one introduced here. In their anthology MINDSCAPES. THE GEOGRAPHIES OF IMAGINED WORLDS, George E. Slusser and Eric S. Rabkin analyze science fiction literature.[2] The authors mention imaginary landscapes created by mapping cognitive processes, as if there was an innate "need to link inner and outer reality, mind and matter, by means of a mindscape [...]."[3] Slusser and Rabkin regard fantasy and science fiction as artistic forms that engage in thought experiments, with "the mind using its speculative power in hopes of reaching beyond itself [...]."[4] In another example of mindscapes in literary studies, Bernhard Lindemann also uses the concept to refer to a reader's cognitive processes when engaging with complex literary works such as Robert Coover's THE BABYSITTER.[5] Told in more than 100 short paragraphs, the story employs numerous narrators and focal points, delivering various narrative frames in which readers themselves might not clearly understand whether the told events are merely fictitious or not. To navigate the complex storytelling, Lindemann describes the reader having to enter

"[…] particular mental landscapes, particular cognitive tableaux, i.e. particular mindscapes. A mindscape is a cognitive landscape which readers enter from a particular angle, which

2 Slusser, George/Rabkin, Eric: "Introduction: The Concept of Mindscape", In: Slusser, George/Rabkin, Eric (eds.), *Mindscapes. The Geographies of Imagined Worlds*, Southern Illinois: Southern Illinois University Press 1989, p. ix-xiii.

3 Ibid., here p. x.

4 Ibid.

5 Coover, Robert.: "The Babysitter", In: Robert Coover (ed.), *Pricksongs and Descants,* New York: Grove Paperback 1969/2000.

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they live in for some time by rambling through its conceptual make-up, a cognitive scene which they eventually become accustomed to by repeated and prolonged returns."[6]

Whilst Slusser and Rabkin refer to mindscapes as an artistic expression of the mind, Lindemann understands them as referential frameworks for readers to comprehend information. Research on mindspaces and mindscapes is scarce in the humanities and the few texts that do exist on this subject vary greatly in their use of the terms. Before moving onto popular culture to see how mindspaces and mindscapes are used, it is first necessary to further clarify the terminology.

Although Slusser and Rabkin's use of mindscape differs greatly from Lindemann's application of the same term, they refer to a mindscape as a landscape. For geographer Jay Appleton, landscapes are "a kind of backcloth to the whole stage of human activity,"[7] a description as vague as the use of the term 'mindscapes.' Yet, as the title of Appleton's monograph THE EXPERIENCE OF LANDSCAPE suggests, a landscape is not merely the objective arrangement of the environment through hills, mountains, flora, and fauna but also humans' relationship to it. In this vein, Appleton explores styles of landscape in art and literature, landscape design natural and man-made, or symbolic interpretation and aesthetic appropriation of landscape. In this approach, the backcloth of human activity encompasses an entire discourse on and with landscape. In a similar fashion, one might subsume mindscapes to a similar scope: the backcloth of the human mind. The greatest difference between this and a landscape, however, is that a mindscape is not necessarily a feasible place. When Appleton attempts to explore why humans derive pleasure from seeking landscapes, an "aesthetic sensitivity to landscape [...] from inborn behaviour mechanism,"[8] it is questionable whether the same can be said about mindscapes. Slusser and Rabkin use other words to describe a mindscape, such as the relation of mental and nonmental worlds or speculative worlds.[9] Lindemann, on the other hand, speaks of cognitive landscapes, in which information can be stored and understood, it is less about an aesthetic experience as one might have with a landscape. As I argue here, mindspaces necessarily relate to emotions, memories, and trauma—aspects not required for mindscapes in Lindemann or

6 Lindemann, Bernhard.: "Readers and Mindscapes", In: *Journal of Literary Semantics* 22 (1993), pp. 186-206, here p. 193.

7 Appleton 1975, 2.

8 Appleton 1975, 169.

9 Slusser, George/Rabkin, Eric: "Introduction: The Concept of Mindscape", In: Slusser, George/Rabkin, Eric (eds.), *Mindscapes. The Geographies of Imagined Worlds*, Southern Illinois: Southern Illinois University Press 1989, p. ix-xiii, here p. xi.

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Slusser and Rabkin's use of the term. Mindscapes remain a vague concept, a subjective experience occurring either within oneself or created by someone else. The experience of mindscape, then, may be a venue to further explore the mind in science, literature, and art.

UNDERSTANDING THE (MIND)SPACE

Mind*spaces*, then, are the spatial manifestations of a mind*scape*. Here, mindspaces are a visual experience, one that is linked to mental and emotional trauma. I argue that characters use mindspaces to bury and rediscover trauma again to overcome it. These mindspaces are part of mindscapes, in a sense that they are necessary to communicate in media that the viewer is, in fact, experiencing one and not merely looking at a regular landscape. How exactly this happens, and which media-specific strategies exist to make this possible will be the focus of this chapter.

For this approach, Benjamin Beil's media-focused essay on mindscapes, for which he also uses the German term *Erinnerungsräume* (literally *memory spaces*), views them as a place where two narrative layers of memories and reality merge.[10] Beil uses both the English term mindscapes and the German term *Erinnerungsräume* somewhat interchangeably, despite the German translating into memory spaces. However, Beil's choice to translate *Erinnerungräume* as mindspaces helps to understand the strategy behind creating mindspaces in media. The fusion of the layers of narrative and reality is made possible through editing techniques that establish the mindspace through montage conventions, merging the topographies of reality and memories.[11] In an analysis of Charlie Kaufmann's screenplays, such as ETERNAL SUNSHINE OF THE SPOTLESS MIND, Chris Dzialo describes the film's narrative style of memory sequences as "spatializing multiple simultaneous timeframes."[12, 13] A recent example is the television series SHERLOCK.[14] SHERLOCK is not only about memories or dreams but also the detective's genius ability to recall

10 Cf. Beil, Benjamin: "Mindscapes. Erinnerungsräume im zeitgenössischen Film", in *Rabbit Eye. Zeitschrift für Filmforschung* 2 (2010), pp. 4-18, here p. 2.

11 Cf. ibid.

12 Dzialo, Chris: "'Frustrated Time' Narration: The Screenplays of Charlie Kaufmann" in: Buckland, W. (ed.), *Puzzle Films. Complex Storytelling in Contemporary Cinema*, New Jersey: Wiley-Blackwell 2009, p. 107-129, here p. 109.

13 ETERNAL SUNSHINE OF THE SPOTLESS MIND (US 2004, D: Michel Gondry).

14 SHERLOCK (UK 2010-2017).

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information by storing it in a so-called mindpalace. Usually, the series merely refers to the mindpalace in lieu of showing it. However, in the third season of the series an entire sequence is dedicated to this mindpalace to make use of various layers of consciousness, merging layers of memory and reality. As Beil comments, the visual portrayal of a mindscape can be realistic but also spectacular, and Sherlock's mindpalace is an example of this.[15] The mindpalace sequence in SHERLOCK demonstrates how the mise-en-scène and editing process are vital for the audience's understanding of a mindspace.

The mindscape sequence is set at night in a London office with a view of nearby skyscrapers. Here, Sherlock is shot, falls on his back, and is then later found by his companion John Watson. Sherlock is subsequently brought to a hospital to undergo emergency surgery. This is what happens in the narrative framework of reality, and the audience only sees snippets of this happening in between mindpalace sequences. Whilst these events unfold, Sherlock is desperately trying to find a way to survive, such as purposefully falling backwards to increase his chances of survival. Primarily audiovisual indicators throughout the sequence allow for the audience to recognize the mindpalace. One such example is the beginning of the mindpalace sequence: as soon as Sherlock is shot, all present characters in this scene halt their movements, a siren begins to howl off-screen, and the room's lighting changes. Furthermore, the skyscrapers outside are not visible anymore; the view has completely darkened–as if this office apartment was floating freely in a dark void. The lighting is focused on Sherlock only, starkly contrasting to the now darkened room as Sherlock begins venturing into his own mindpalace.

The mindpalace sequence shows at least five different locations, each with their own mise-en-scène and an audiovisual indicator that this is not a real place, but rather a place created by Sherlock. In one moment, Sherlock is seen in an uncharacteristically bright morgue, looking at his own dead body. In the next moment, Sherlock can be seen running through a long corridor with both ends mirroring each other, creating a seemingly infinite space. SHERLOCK never ventures into fantastic territory with these mindspaces. Rather, these mindscapes are used to estrange familiar locations of the show. This is further reinforced with the use of unconventional perspectives otherwise not used in the series, such as extreme close-ups of Sherlock and other characters he meets in his mindpalace or showing the entire scene from an oblique angle.

Although each place within Sherlock's mindpalace is visually different, these scenes take place in the same mindspace, even at the same time. In fact, there are almost no scenes indicating Sherlock leaving one place and going to another, so

15 Cf. Beil, Benjamin.: *Mindscapes. Erinnerungsräume im zeitgenössischen Film*, p. 5.

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the order of events is not told through the character's movements. Time has slowed down, or is at least working differently, demonstrated by the scene where Sherlock falls backwards in slow-motion. Sherlock's worsening condition is shown across different places, indicating that he is in all these places at the same time. As Beil comments, mindspaces are not a loose arrangement of spatial and isolated events, but a complex interplay of consistent and paradoxical sequences.[16] In SHERLOCK, this is indicated by the increasingly emotional barrage that the protagonist faces as he descends within his mindpalace, from facing the trauma of losing his childhood dog Redbeard, to his complex relationship with his older brother Mycroft. The final sequence begins with Sherlock reaching the bottom of a winding staircase that leads to the last room of his mindpalace, the room that is buried the deepest in his subconscious. Here, he meets his nemesis Moriarty, chained, and dressed in a straitjacket in what seems like a prison or isolation cell. As the show has repeatedly shown Moriarty as a counterpart to Sherlock, meeting Moriarty in his mindpalace implies Sherlock fights against a part of himself that is like Moriarty, a criminal mastermind without regard for human life. The order of sequences and montages implies a specific layout of Sherlock's mindpalace, one that orders the spaces according to their and their significance to the character. The deeper Sherlock descends, the more he dives into emotional and traumatizing memories, gradually losing control over the search for information to help him survive until Sherlock face things concealed or suppressed.

Other than merely being a spectacle for the audience, the mindspace is a narrative tool to introduce or reenforce themes. A concurrent theme throughout the series is Sherlock's human side—or the lack thereof. He appears apathetic regarding human emotion (especially the suffering of the crimes he investigates) and repeatedly claims to be a high-functioning sociopath. The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM) categorizes sociopathy as a type of antisocial personality disorder. Some of the listed traits certainly ring true regarding Sherlock, such as failure to conform to social norms, irritability, aggressiveness, and impulsivity.[17] Despite Sherlock being quite vocal about his (likely self-diagnosed) disorder, the series often questions whether he is truly a manic genius devoid of human empathy and emotions. Independently of whether he really is a sociopath or not, the series emphasizes Sherlock's human side by comparing him to characters such as his partner John, just as the show explores Sherlock's dark side by comparing him to his nemesis Moriarty.

16 Cf. ibid., p. 5.

17 DSM (Diagnostic and Statistical Manual of Mental Disorders). DSM-5 (5th edition), Washington, DC: *American Psychiatric Publishing* (2013), here p. 695.

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The mindspace sequence here is a tool to further emphasize this theme: the final room at the bottom of Sherlock's mind is an isolation cell, where he nearly dies. However, Sherlock manages to pull himself out as Moriarty whispers John's name, giving him the strength to survive. His mindpalace reenforces these narrative themes to contest Sherlock's self-proclaimed sociopathy. This becomes even clearer with the reveal that his childhood dog was not merely a dog but a forgotten traumatic experience about losing his friend Victor Trevor, apparently the starting point for many of his personality issues.

MINDSPACES IN GAMES

Set in modern-day Tokyo, PERSONA 5 follows the lives of high school students who lead a double life as a group called the Phantom Thieves of Hearts. Facing injustice and corruption in their everyday lives, these teenagers are given the power to change the hearts of their targets. The game's general structure reflects this double life: one half is playing a relatively normal teenager with daily obligations such as performing well at school or maintaining social relationships, the other half is infiltrating palaces, manifestations of particularly negative and corrupt thoughts of an individual; the game's choice of "palace" is no coincidence. Thus, the gameplay is two-fold: the player is either a student, doing seemingly mundane things such as studying, doing laundry, participating in food challenges, or spending time with friends. On the other hand, the player battles foes inside these palaces, becomes stronger, and finds treasure. This treasure is not monetary but the embodiment of the targeted person's corruption—their corrupted hearts, as the game describes them. These palaces and their existence are not consciously created by their hosts; rather, the corruption of their own mind has become so severe that it manifests physically in what the game calls the *metaverse.* The metaverse can only be accessed by the members of the Phantom Thieves group, and even then, they must use a smartphone and enter three keywords to locate the palace: the host's name, the type of distortion, and the location. Usually, the targets of the Phantom Thieves are corrupt adults in positions of power, such as a teacher, a CEO, a mafia boss, or a politician. Stealing each target's treasure forces them to feel remorse for their wrongdoings, often leading them to confess their crimes to the police and the public.

To what extent can PERSONA 5 serve as a case study for mindspaces? First, as television shows such as SHERLOCK follow specific rules to tell a story, games follow rule sets to make them playable:

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"The arena, the card-table, the magic circle, the temple, the stage, the screen, the tennis court, the court of justice, etc., are all in form and function play-grounds, i.e. forbidden spots, isolated, hedged round, hallowed, within which special rules obtain."[18]

Scholars such as Beat Suter use the idea of Johan Huizinga's magic circle and extend it to the framework of video games, noting that within a video game, new parameters can be set, and new worlds built: "This world can be perceived as object-oriented. To this we add more mechanics with the actions the players can perform."[19] For PERSONA 5, the framework is two-fold: life as a student in a metropolis on one side, Phantom Thief on the other. Each allows for different parameters and different objectives for the player. Naturally, as a specific set of rules comes into play, it is not freely accessible by anyone. On gamespaces, Mark Wigley notes:

"Paradoxically, electronic games offer a form of sanctuary from electronic space, a refuge. Gamespace is the only space that mobiles and email don't reach. There are no messages from another world because there is no other world. The only messages come from other players. The only news from the inside. The inside *is* the only news."[20]

In PERSONA 5, this isolation is even doubled: as per the game's premise, the metaverse is not freely accessible by anyone but the player's party. This access is part of the superpower given to the protagonist and his friends, and part of making the gameplay more than a daily life simulator. It allows for two very contrasting modes of gameplay, which is particularly evident when looking at how space and time are structured in PERSONA 5.

This set of rules has an imminent effect on space and time in the game. Due to the premise of the game, different slices of time as well as different kinds of spaces are united that are otherwise incompatible. PERSONA 5 makes use of a calendar and indicates the daily time, with school usually occupying most of the day, leaving the player with some free time after. The player can improve the player-

18 Huizinga, Johan: Homo Ludens: *A Study of the Play-Element in Culture*. London: Routledge (1949 [1938]), here p. 10.

19 Suter, Beat: "Rules of Play as a Framework for the 'Magic Circle'", in Suter, Beat. et al. (eds.) *Games and Rules. Game Mechanics for the 'Magic Circle'*, Bielefeld: transcript (2019), pp. 19-34, here p. 24.

20 Wigley, Mark: "Gamespace", in von Borries, Friedrich. et al. (eds.) *Space Time Play. Computer Games, Architecture and Urbanism: The Next Level*, Basel: Birkhäuser Verlag (2007), pp. 484-487, here p. 485.

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character's attributes such as knowledge by, for instance, spending time studying at the library. Doing such an activity takes time, leaving the player with only a few activities a day to choose from. This flow of time, however, only applies to the daily activities as a student, not when the player-character is in a palace. Although a visit to the palace will cause time to pass as well, the amount of play time available to the player to explore the palace is almost infinite. They can be visited multiple times across several days, or all exploration can be done within one calendar day until reaching the final room. Although palaces must be cleared within specific deadlines given by the calendar and take a minimum of two visits, activities inside the palace do not cause time to pass and stand in clear contrast to the player having to carefully manage each of their activities in their allotted free time. In PERSONA 5, different slices of time are inevitably tied to different slices of space.

What makes the palaces in PERSONA 5 inherently a mindspace however, is the idea of the metaverse itself—a place where a human's distortion and corruption manifests itself. Space and time are regulated differently in the metaverse, with direct effects on gameplay. The game explains that the root of these palaces stems from deep corruption. Generally, this kind of corruption is an incredibly negative trait, such as narcissism, greed, or gaining power for selfish ends. However, there is one exception: the palace of Futaba Sakura, a young teenager whose corruption does not stem from greed or narcissism but self-loathing. Indeed, Futaba's palace specifically addresses themes such as trauma and depression as a manifestation of her mental state.

Futaba's palace manifests in the shape of a pyramid called the Pyramid of Wrath, which works as a metaphor of the character's shut-in personality. As the party ventures further inside her palace, murals that function as puzzles need to be rearranged to find out more about her trauma. Quickly, the party learns that Futaba blames herself for her mother's death and once completing the murals, the player learns of Futaba's memories at the time of her passing. These memories suggest that her mother did not love Futaba and prioritized her work instead, with Futaba portrayed as a nuisance. The names of different sections of the palace like Chamber of Rejection or Chamber of Guilt are revealing. Yet, as the party continues to venture through the palace, it is also revealed that Futaba's anxiety and depression have heavily altered her own memories-to an extent that she pictures her mother as a beast in the shape of a Sphinx, the final enemy of her palace.

Story elements such as these are weaved into the exploration and conquest of the palace. Despite palaces of the metaverse being somewhat unreal places, they have dire consequences for the affected person. The Phantom Thieves are responsible in evoking these consequences for their goal often against the subject's wills; however, in Futaba's case she eventually learns of the metaverse, enters her own

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palace, and consciously faces her memories and trauma. She recognizes that her altered memories stem from her battle with self-hatred as well as other people who orchestrated her mother's suicide. Supported by the Phantom Thieves, she joins the fight against her Sphinx mother, finally realizing that she had a loving relationship with her mother and is not guilty for her death. The Phantom Thieves group support Futaba not only inside her palace but also in the real world of Tokyo, looking after her and helping her during her rehabilitation. Despite palaces usually being born out of corrupt, negative desires hurtful to other people, Futaba's palace is framed as an exception.

As demonstrated, mindspaces in PERSONA 5 allow for diverse types of gameplay and serve as places for social commentary. To a certain extent, the game's palaces also refer to the inability of modern society to address these issues lying beneath the façade of a lively metropolis, such as bullying, sexual harassment, greed, and abuse of power at the cost of powerless people in PERSONA 5. These mindscapes attempt to tap into the minds of its characters, the minds of people, and the underlying issues of society that often cannot be put into words but are felt through other means. Mindspaces open a possibility to create such a space that can diverge from the norm and tell stories that are otherwise difficult to tell or add a certain depth to the issue at hand.

CONCLUSION

Despite existing literature on mindscapes and mindspaces, the concept's definition and use have varied in the past decades. Slusser and authors Rabkin and Lindemann offer early interpretations of what a mindscape might entail and Beil specifically makes use of mindspaces in visual media, addressing both the editing techniques that enable the visual representation of such a mindspace and what it attempts to represent: memories. Drawing on these observations, the discussion here focuses on the television series SHERLOCK and the video game PERSONA 5 to emphasize the subjective experience of the mindspace, driven by feelings, memories, and, often, trauma. The comparison of a video game and a television show illustrates the respective techniques and strategies that facilitate mindspaces in different media. These analyses further our overall understanding of how the respective media work and, in this case, also shows how themes of mental health can influence these strategies. For PERSONA 5, the analysis offers contrasting modes of play, changing the rules of game space and time.

Recent trends in popular culture reveal an interest in visualizing dreams and memories into media. By using the term mindspace for this phenomenon—the

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visual portrayal of a space expressing memories and dreams—it is possible to further investigate the meaning and significance of mindscapes in media culture.

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Reclaiming Agency

Engaging Non-Human Agency for a Nuanced Portrayal of Mental Distress and Recovery

MIRUNA VOZARU

INTRODUCTION

The relationship between digital games and mental health is diverse and multifaceted. Digital games have found use in therapeutic interventions and as a platform for disseminating information and normalizing discussions around mental health.[1,2] Games often include playable figures and Non-Playable Characters (henceforth NPCs) described as living with psychological or psychiatric disorders.[3, 4] While games used for therapeutic interventions and dissemination have presented both positive and mixed results, the topic of representation has a more troubling history. Representation of people living with mental health disorders has generally been linked to tropes, often highlighting those individuals as violent or

1 Mandryk, Regan Lee/Birk Max Valentin: "Toward game-based digital mental health interventions: Player habits and preferences.", In: *J Med Internet Res* 19 (4) (2017).

2 Colder Carras, Michelle et al.: "Commercial Video Games As Therapy: A New Research Agenda to Unlock the Potential of a Global Pastime", In: *Frontiers in Psychiatry* 8 (2018).

3 The term 'playable figure' is used in this work according to the description given by Daniel Vella, as both an object of the game system, and an individual in the game's heterocosm.

4 Vella, Daniel: *The Ludic Subject and the Ludic Self: Analyzing the 'I-in-the Game-world'*. Doctoral dissertation. IT University of Copenhagen. 2015.

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dangerous. A survey of video games that included both playable figures and NPCs depicted as living with a mental illness identified several prevalent stereotypes. These include those of the homicidal maniac, the afflicted victim, and the narcissistic parasite.[5] Ferrari et al. have also found that people who live with mental health conditions have been frequently presented as violent or helpless to return to a stable state.[6] The conclusions the authors draw regarding the portrayal of the experience of living with and confronting mental disorders and mental distress is that the portrayal of characters is negative and limited, and their hope for recovery is slim, often leaving them trapped in a never-ending battle.

Recently, developers working on games presenting characters living with mental health disorders have made efforts to convey a more nuanced portrait of the experience. Ninja Theory, the developers behind HELLBLADE: SENUA'S SACRIFICE (henceforth HELLBLADE), have earned both praise and accolades due to their efforts to involve mental health professionals and individuals who experience psychosis in the development of the game.[7, 8, 9] Other titles, not developed for commercial purposes, explore various disorders such as Obsessive-Compulsive Disorder, Attention Deficit Disorder, Depression, and Anorexia Nervosa actively involve people suffering from these disorders in the core development team.[10] These games often employ mechanics that act as analogs for the mental disorder they are portraying. One of the mechanics described by Rusch in their game that focuses on Obsessive Compulsive Disorder involves performing rituals such as walking in circles several times to stave off anxiety represented by encroaching darkness. On a similar note, one of the core mechanics of HELLBLADE connotes pareidolia, one of the symptoms experienced by individuals living with psychosis. Pareidolia

5 Shapiro Samuel/Rotter Merrill: "Graphic Depictions: Portrayals of Mental Illness in Video Games", in *Forensic Sci*. 61 (6) (2016), pp. 1592-1595.

6 Ferrari Manuela et al: "Gaming With Stigma: Analysis of Messages About Mental Illnesses in Video Games", in *JMIR Ment Health* 6 (5) (2019).

7 Stuart, Keith : " Hellblade: Senua's Sacrifice dominates at video game Bafta awards" in The Guardian, April (2018) https://www.theguardian.com/games/2018/apr/13/hellblade-senuas-sacrifice-bafta-game-awards-2018-what-remains-of-edith-finch.

8 HELLBLADE: SENUA'S SACRIFICE (Ninja Theory, 2017, Ninja Theory).

9 Tyer, Ben : " How Ninja Theory's Hellblade: Senua's Sacrifice is creating a realistic portrayal of psychosis" in Games Radar+, July (2017) https://www.gamesradar.com/ninja-theory-hellblade-senuas-sacrifice-psychosis-interview/.

10 Rusch, Doris C.: "Games about mental health: Designing the experience of "What it's Like"", In: *Proceedings of the 9th International Conference on the Foundations of Digital Games* (2014).

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manifests as the perception of meaningful messages and patterns in an otherwise insignificant, random, or ambiguous situation. Senua, the main character in the game and the avatar that the player controls is portrayed as symptomatic of pareidolia. This appears in the game in sections where the player must manipulate Senua's position so that the camera enables the formation of symbols out of otherwise unrelated game objects. Mechanical representations of symptoms of mental disorders are thus a procedural means of centralizing them.

Another way in which Senua's illness is mechanically embedded in the game is via a dark mark that appears on her arm when Senua dies. The first appearance of the mark is accompanied by the warning that such repeated failures will lead to the spread of the darkness and, finally, Senua's permanent death. The mark is thus an iteration of a mechanic frequently employed in games dealing with the topic of mental health: the sanity meter. Sanity meters are a means through which the player's actions, through the playable figure, are tracked and contribute positively or negatively to the character's current state. Central to many games, such as AMNESIA: THE DARK DESCENT, DON'T STARVE, and DARKEST DUNGEON, the sanity meter becomes a signifier of mental well-being as a resource that can be exploited or managed.[11, 12, 13] Sanity meters effectively act as a signifier of the control the player has over the character's mental well-being, just as they remind the player of their responsibility to manage the character's well-being to successfully complete the game. For example, if the player allows the sanity meter in AMNESIA: THE DARK DESCENT to deplete, the playable figure will begin to hallucinate, thus hampering the navigation the environment. Likewise, when the stress meter of characters in DARKEST DUNGEON becomes full, the character receives a random virtue, such as becoming "Powerful" and dealing more damage, or a random "Affliction," such as becoming "Masochistic" and developing the ability to damage to themselves. Mechanics that connote mental disorder symptoms and mental well-being centralize the player's agency and their role as manager of a playable figure that has no agency over their own mental well-being. In either of the games mentioned above, the player's actions directly influence the character's sanity. Additionally, the mental well-being of the playable figure can sometimes be negatively manipulated and exploited for the sake of rewards. For example, if the playable figure in DON'T STARVE becomes mentally distressed, certain enemies begin to spawn who drop items that would otherwise be inaccessible. In DARKEST DUNGEON, choosing not to use a torchlight will increase the character's stress

11 AMNESIA: THE DARK DESCENT (Frictional Games, 2010, Frictional Games).

12 DON'T STARVE (Klei Entertainment, 2013, Klei Entertainment).

13 DARKEST DUNGEON (Red Hook Studios, 2015, Red Hook Studios).

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while at the same time providing a chance for better loot. In such situations, there are no mechanics in place for the character to protest or exhibit a form of scripted behavior to guard their own well-being.

While mental well-being is presented as a manageable resource, mental distress is often framed as mechanically detrimental to the player's progress in the game. Afflicted characters in DARKEST DUNGEON may damage themselves or their allies or increase their allies' stress levels, thus endangering the successful completion of the dungeon. Likewise, when Senua's dark mark first appears, the player is told that once the mark reaches Senua's head, the game will be over. The hallucinations that plague the unnamed protagonist of AMNESIA: THE DARK DESCENT also hamper progress by handicapping the player's visual perception of the gameworld. Thus, the playable figures and their fragile mental states become detrimental to the player's progression and successful completion of the game. Not only must the player contend with the enemies in the gameworld, but also the dangers presented by the bodies that they are given control over. Coupled with Ferrari et al.'s conclusion that the character's recovery is often unattainable, the player's control over the playable figure's mental well-being may lead to the negative positioning of the playable figure as an inefficient tool whose recovery is secondary to the attainment of ludic goals. [14] [15]

Thus, beyond the portrayal of dangerous stereotypes, depicting characters as violent and incapable of successfully tackling their condition, games have also framed characters that live with mental illness as lacking in agency, wholly dependent on the player for their mental well-being. Character mental health or mental disorders are also frequently portrayed in these settings as merely a resource to be exploited, as seen in the frequent use of the aforementioned sanity meters. Furthermore, the playable figures themselves are presented as an obstacle to progression due to their fragile mental states.

The current chapter discusses how the video game THE MISSING: J.J. MACFIELD AND THE ISLAND OF MEMORIES (2018) (henceforth THE MISSING) employs changes and fluctuations of agential networks to explore acts of self-harm and the portrayal of recovery.[16] The chapter argues that moving away from the anthropocentric view of agency in gameplay and toward the multiple agencies at play in a digital game allows for more nuanced approaches to the portrayal of

14 Debus, Michael S./Zagal, José P./Cardona-Rivera, Rogelio. E. "A Typology of Imperative Game Goals" in *Game Studies* 20, 3 (2020).

15 Ferrari Manuela et al: *Gaming With Stigma*.

16 THE MISSING: J.J. MACFIELD AND THE ISLAND OF MEMORIES (White Owls Inc., 2018, Arc System Works).

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individuals living with mental health issues. This perspective will be explored through a study of THE MISSING, specifically its mechanical layer, viewed through the lens of Actor-Network Theory and game analysis methods inspired by it.[17] The argument follows two distinct methods through which the game brings the character's mental state, and their agency into focus. The first one focuses on the game's departure from genre-specific conventions, which results in the destabilization of the player's expectations and an increased focalization on the portrayal of the main character's internal turmoil through game mechanics. The second method centers on the destabilization of the relationship the game initially establishes between the player and the character they control, changing it from one of submission to one of cooperation.

DISTRIBUTED AGENCIES AND NETWORK INSTABILITY

Actor-Network Theory proposes that humans and non-humans are agential if their existence, attributes, or actions modify the actions of the other agents with whom they come into contact.[18, 19] Engaging in the act of playing a game embeds the player in a network of human and non-human agencies, including the technologies that make possible and shape the play session, the game itself, game objects and characters, gameplay modifiers, and of course, other players.[20, 21, 22] While the player acts within the game, the freedom given to them to do so exists because of,

17 Latour, Bruno. *Reassembling the social* (1st ed.). Oxford Univ. Press. 2005.

18 Ibid.

19 Sayes, Edwin: "Actor-Network Theory and methodology: Just what does it mean to say that nonhumans have agency?.", In: *Social Studies of Science* 44 (1) (2014). Pp. 134-149.

20 Taylor, T. L.: "The Assemblage of Play.", In: *Games and Culture* 4(4) (2009). Pp. 331-339.

21 Hung, Aaron, C. Y.: "Beyond the player: A user-centered approach to analyzing digital games and players using actor-network theory.", In: E-*Learning and Digital Media* 13(5-6) (2016). Pp. 227-243.

22 Harrel, D. Fox/Zhu, Jichen: "Agency play: Dimensions of agency for interactive narrative design.", In: *AAAI Spring Symposium: Intelligent Narrative Technologies II* (2009). Pp. 44-52.

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and within, the rules of the game system. Thus, the player becomes a part of an extended network of agencies.[23] As Seth Giddings explains:

"We should resist conceiving of the video game as a discrete and ''whole'' object. The video game is constituted by software components that effect their own operations and semi-autonomous agency within the video game system. Game worlds and temporalities, modes of presentation, puzzles and combat, engagement with computer-controlled characters, are all constantly configuring the player's experience and responding to the player's responses."[24]

Avatars have often been characterized as extensions of the player's agency, or tools that facilitate the player's access to the gameworld.[25, 26] This position of facilitators, or extensions of agency automatically cast the role of the avatar as one that is submissive to the player, a disequilibrial relationship wherein the avatar's body is, within the mechanical bounds of the game, under the complete control of the player. This perspective involves a paradox. While the avatar is intended to be the direct representation of the player's actions in the game, the control of their actions is unilaterally attributed to the player, thus putting the avatar in a position of submission. This position is underlined, as mentioned, in games that portray individuals living with a mental disorder, through the conventions of portraying that disorder as a hindrance to progression. This approach is facilitated by the anthropocentric perspective of agency wherein the avatar, while seen as a direct channel to the agency of the player, is eliminated from the equation as an agential entity.

Viewing the engagement between the player and the game through the lens of plural agencies enables a deeper look at how a game's mechanics contribute to the portrayal of characters described as living with a mental disorder. In the context of this analysis, the player is not viewed as an empirical individual, but as the

23 Leino, Olli: "Who should I call if no one shows up to pick up the dead?# movingout"- On gameness, materiality, and meaning in Cities: Skylines.", In: *The Philosophy of Computer Games Conference* (2015).

24 Giddings, Seth.: "A Glossary for the Microethnography of Video Game Play.", In: *Games and Culture* 4 (2) (2008).

25 Klevjer, Rune: *What is the Avatar?: Fiction and Embodiment in Avatar-Based Singleplayer Computer Games*. PhD-dissertation, University of Bergen, Norway. (2006).

26 Bayliss, Peter: "Beings in the game-world: characters, avatars, and players". In *IE '07 Proceedings of the 4th Australasian Conference on Interactive Entertainment*. (2007).

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entity that occupies the position of operator in the game.[27] For this reason, the following analysis that concerns the mechanical relationship formed between the player and the avatar will concern only the formal position of the game operator. This streamlines the adoption of a perspective that allows the examination of the plurality of agencies existent in the game by maintaining focus to only one ontological layer—the mechanical one—and not focusing on the individual interpretative experience of the game.[28] The principal benefit of this perspective is that it moves away from an anthropocentric view of agency, wherein the focus would fall on what the player does through and with the playable figure, and towards the roles that each actor has in the fluctuating network of agencies. I say 'fluctuating' because these networks are often unstable.[29, 30] Actors may exert their influence and depart the network. or their relationships with other actors may become so unstable as to become *blackboxed*. Blackboxing occurs when relationships between actors are in a state of stability that no longer fluctuates, allowing for their conjoined functioning to be taken as a whole.[31] Actors that have become blackboxed no longer leave individual traces in their surrounding network; their agency is subsumed under a single block. To illustrate blackboxing, and its reversal, Latour gives the example of a malfunctioning projector.[32] While the projector is functional, all its component parts, electrical circuits, lenses, and so on, fade from focus. Their relationships are stable, and thus can be blackboxed under the singular agency of the projector. However, once the projector is no longer functional, the relationships between the component objects is destabilized, and they reenter focus as the source of the malfunction. This fluctuation in the network of agencies that occurs in the video game THE MISSING will be the focus of the following section.

27 Debus, Michael S.: *Unifying Game Ontology: A Faceted Classification of Game Elements* PhD Dissertation. Copenhagen: IT University of Copenhagen. (2019).

28 Aarseth, Espen/Grabarczyk, Pawel "An Ontological Meta-Model for Game Research." In *proceedings of the Digital Games Research Association Conference. Presented at the Digital Games Research Association Conference*, Turin, Italy. (2018).

29 Latour, Bruno: *Reassembling the social* (1st ed.). Oxford Univ. Press. 2005 p. 65.

30 Law, John: "Notes on the Theory of the Actor-Network: Ordering, Strategy, and Heterogeneity.", In: *Journal of the Warburg and Courtauld Institutes* 5 (4) (1962). Pp. 379-393.

31 Latour, Bruno: "On Technical mediation.", In: *Common Knowledge* 3 (2) (1994a).

32 Ibid.

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AGENTIAL NETWORKS IN THE MISSING

THE MISSING is a puzzle-platformer game in which the protagonist, J.J., sets out to find her missing friend on the mysterious island of Memoria. While multiple features make the game worthy of discussion, the most pertinent to the topic at hand is the game's portrayal of deliberate self-harm. One of the means through which self-harm is depicted in the game is harmful obstacles. While games like SUPER MARIO BROS. (1985), SUPER MEAT BOY (2010), or LIMBO (2010) present obstacles such as spikes, saw blades, or fire as harmful to the playable character, often diminishing their health pool or altogether negating progress in the game, THE MISSING subverts these genre expectations and extends the relationship between them and the playable character via one of the central game mechanics.[33, 34, 35] Colliding with an obstacle will result in various states of bodily harm for J.J. Running into spikes, for example, will result in dismemberment; touching fire will result in combustion; and being hit by a wrecking ball will give her a concussion, literally turning the world upside down. While in conventional titles such actions result in an automatic reload from a previous checkpoint or the loss of health points, THE MISSING makes damage necessary to game progression. Dismemberment causes J.J. to lose health points, but the resulting detached limbs become objects in the world that can be picked up and used to solve puzzles. In one of the game's first puzzles, J.J. must be repeatedly dismembered and her body parts must be used as counterweight to cross to the other side of a see-saw-like plank. In other puzzles, J.J. must set herself on fire and, like a human torch, carry that fire with her body in order to clear obstacles ahead by burning them. This use of the character's body is made possible by the existence of another mechanic: regeneration. Regeneration allows the player to fully heal J.J. back to her initial state, erasing whatever horrific harm they have done to her body. While J.J. is in a harmed state—missing limbs, concussed, or set on fire—the player can simply push a button and bring her back to an unharmed state. Through the regeneration mechanic, coupled with the effects of harmful obstacles, J.J.'s body becomes a functional tool, under the control of the game environment and the player, but not under her own control.

In these ways, the game destabilizes previously constructed genre expectations by recasting harmful obstacles in a new type of relationship with the playable figure's body. In games that adhere to genre conventions, the playable figure's body,

33 SUPER MARIO BROS (Nintendo R&D 4, 1985, Nintendo).

34 SUPER MEAT BOY (Team Meat, 2010, Team Meat).

35 LIMBO (Playdead, 2010, Playdead).

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its agency over other game objects, and their agency over the body, are typically blackboxed. In the case of THE MISSING, this blackbox is opened through the destabilization of genre expectations, resulting in the blackboxed elements being brought into focus. This design choice may be viewed through the lens of the externalization of psychological turmoil described by individuals who engage in acts of self-harm.[36] Psychological pain is often difficult to untangle from its source, so much so that the source is sometimes difficult to identify. Thus, physical pain can become a way of "creating a visible signifier for unseen and inexpressible emotional pain."[37] Self-inflicted wounds or other types of physical pain offer the sufferers a tangible, observable source for their pain, one that can be pinpointed and managed. In the act of self-harm, the body is brought back into the foreground, playing the central role, in cases where derealization has caused it to disappear into the background. Self-harm can be seen as invited pain caused by the sufferer to themselves, an exercise in ownership over their body, and an exercise in managing negative emotional tensions. This dynamic is reflected in J.J.'s disposition towards harm, as well as her ability to endure severe injury. The act of inviting pain through self-harm is relegated to the control of the player. The player is the one who enables J.J.'s harming and, in the process, allows her to bring her body back into focus. Whereas players generally coopt avatars to gain access to the gameworld, in THE MISSING the player is coopted by J.J. in order to bring the focus back onto the avatar body.

The ending of the game further destabilizes the agential network. As previously mentioned, J.J. can not only withstand extreme physical harm, but she can also be regenerated—by the player. Regeneration, like self-harm, is an integral mechanic of the game, because the puzzles demand that the avatar oscillates from healthy to severely damaged. The player is responsible for deciding when to heal and when to harm J.J., who maintains a passive disposition regardless of the player's decision-making. However, in the game's final act, the possibility of regeneration is removed from the player's control and becomes an automated action that J.J. herself can perform. Throughout the game, J.J. encounters the entity that will become the final monster. During these encounters, J.J.'s only recourse is to flee. This changes, however, in the final act of the game. Represented through an amalgam of lifeless bodies and wielding a box cutter, the entity is an additional metaphor of self-harm. Following the image of her best friend, Emily, being swallowed by the same monster that has hunted her, J.J. remembers that Emily had

36 Chandler, Amy: "Inviting pain? Pain, dualism and embodiment in narratives of self-injury", In: *Sociology of Health & Illness* 35 (5) (2013) pp. 716-730.

37 Ibid.

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committed suicide—and the island of Memoria and the entire game environment is a self-created mindscape. The realization that her life is not yet over empowers J.J. to fight the monster. More tellingly, the realization also grants J.J. control over the regeneration mechanic. During the last segment of the game, as soon as J.J. is harmed by an obstacle, she automatically regenerates. The redistribution of agency over the playable figure's body procedurally highlights her recovery while at the same time maintaining the input of the player as necessary for the completion of the game. J.J. is now in control of her own healing, contributing to the successful completion of the game, while not erasing, but redistributing the player's agency.

These practices of destabilizing relationships continually bring attention to the relationship between the avatar, her body, and the player. Her mental state is not allowed to fall in the background or be considered a manageable resource, as fluctuations of the agency that she displays over them are continuously negotiated. The perpetual negotiations of agency between the player and the character have repercussions over the relationship that is created between these agential counterparts.

PLAYER-AVATAR RELATIONSHIP

From the start, THE MISSING moves away from the noted tendency to present the character's mental state as an obstacle to the player. Unlike in games such as AMNESIA, or DARKEST DUNGEON, where states of mental distress cause the character to become frail and hamstring the player's progress, THE MISSING frames J.J. and the mechanics related to her struggle as integral to progressing in the game; J.J. is an asset and never a hindrance. Her mental state does not need to be managed alongside the other obstacles in the game. Instead, J.J. mental well-being is featured as an integral part of the gameplay, aiding in the successful traversal of the game. While the player's initial control over J.J.'s body is similar to previously discussed cases in which players manipulate the character's mental state for obtaining resources, THE MISSING distinguishes itself from other titles by rendering control over J.J. as central to progression, thus eschewing opportunistic and/or frivolous use. By contrast, in DARKEST DUNGEON, the torchlight mechanic allows the player to maintain a specific level of light as they navigate the dungeon. Diminishing the light will increase the mental distress of characters, but at the same time, it will provide the opportunity for obtaining more loot. The mental state of characters is then sacrificed for the sake of more resources and should the characters succumb to the demands of the dungeon, they can be replaced with other, healthier characters who will benefit from the loot. THE MISSING, however, does

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not frame J.J. as disposable. Her mental anguish and distress are means of traversing the game and reaching an end point that is beneficial to her, as well as the player.

Avatars express agency via their influences on other objects in the gameworld. Explorations of avatar autonomy generally focus on playable character actions that strengthen their role as an individual in the game's world, or actions taken for the sake of easing player interaction.[38] However, by taking control over the regeneration mechanic, J.J. does not only demonstrate autonomy within these parameters, but the scripted behavior in conjunction with the previously established relationship between her body and the harmful objects put her in a position where she can display mastery over the game mechanics. J.J.'s autonomy is thus elevated, mechanically, on a similar level to that of the player. This equivalence, established through the redistribution of agency, places J.J. and the player on similar footing; they share the capacity to achieve the ultimate goal of the game.[39] Prior to this event, J.J.'s body maintained the status of a tool that enabled progression, and the harmful acts were likewise, from the player's perspective, functional. Before the final act of the game, it is revealed that J.J. is a transgender girl who suffers from bullying and oppression from her family and peers, thus narratively framing the acts of extreme self-harm as a desire to hurt a body for which she has been chastised. The late reveal enables a misalignment between the player and the character when engaging in acts of self-harm, and then the realignment of their relationship after the redistribution of agency, when J.J. regains autonomy over her body.[40] By giving the relationship between the player and the playable figure a dynamic, malleable quality, the player-avatar relationship is foregrounded by the game's mechanics, allowing for an experiential comprehension of the roles each of the actors play. Their quasi-equal footing is highlighted, bringing into focus J.J.'s role as an agent of her own recovery and the player's role as assisting ally.

38 Willumsen, Ea: "Is my avatar, MY avatar? Character autonomy and automated avatar actions in digital games", In: *Proceedings of the 2018 DiGRA International Conference: The Game is the Message* (2018).

39 Zagal, José et al. (2019). On the Ultimate Goals of Games: Winning, Finishing, and Prolonging. *Proceedings of the 13th International Philosophy of Computer Games Conference*, St. Petersburg, Russia.

40 Lankoski, Petri: "Player Character Engagement in Computer Games", In: *Games and Culture* 6 (4) (2011).

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CONCLUSION

In recent years, video game developers have made efforts to provide a more nuanced, less stereotypical depiction of mental health in video games, one that moves away from harmful, violent depictions of individuals living with mental health disorders towards more informed and informing representations. THE MISSING brings into focus the possibilities of exploiting the multiple non-human agencies in digital games and destabilizing them to create games where the playable character is not a victim of their mental distress but an active agent in their own recovery; games, where the player is not their manipulating force, but an ally in their struggle.

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Digital Fictions: Towards Designing Narrative Driven Games as Therapy[1]

NATALI PANIC-CIDIC

TOWARDS AN EVOLUTION OF GAME DESIGN

Distress, low self-esteem, self-loathing, self-harm, and eating disorders are just a few of the body dysmorphic disorders (BDD) burdening the lives of many young teenagers. While both men and women experience BDD,[2] especially young women,[3] woman-identified and non-binary individuals tend to be more impacted.[4] If not treated early, BDD can last into adulthood where the impacted individual's

1 I want to thank Astrid Ensslin for including me as a research assistant intern for the Writing New Bodies project in the summer of 2019 for six months and letting me explore its game design processes. Without this, the initial talk and this paper would not contain this level of detail. Furthermore, thanks to the rest of the wonderful team-Carla Rice, Sarah Riley, Megan Perram, K. Alysse Bailey, Lauren Munro, Hannah Fowlie, Christine Wilks, and Antonia Mann. I would also like to note that their project has been funded by the Social Sciences and Humanities Research Council of Canada (SSHRC IG 435-2018-1036).

2 Koran, Lorin M., et al.: "The Prevalence of Body Dysmorphic Disorder in the United States Adult Population", In: *CNS Spectr 13* (2008), pp. 316-322.

3 Grogan, Sarah: *Body Image: Understanding Body Dissatisfaction in Men, Women and Children*. London: Routledge 2008 (2. ed).

4 Möllmann, Anne/Fanny A. Dietel, Antje Hunger/Ulrike Buhlmann: "Prevalence of body dismorphic disorder and associated features in German adolescents: A self-report survey", In: *Psychiatry Res*. 254 (2017), pp.263-267.

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quality of life may be threatened.[5] Furthermore, BDD becomes a serious issue for digital natives with social media as part of their daily routines and realities,[6] because they are being exposed to unrealistic body ideals.[7,8]

Traditional therapies that debilitate the symptoms of BDD in their early stages or offer treatment are psychotherapy, selective serotonin reuptake inhibitors (SSRIs), serotonin norepinephrine reuptake inhibitors (SNRIs), or exposure and response prevention. In addition to these pharmaceutical and non-pharmaceutical treatments there is also bibliotherapy. Bibliotherapy is a therapeutic approach or intervention method that employs directed reading to address psychological issues, often in combination with expressive disclosure writing. It is usually used as an adjunct part of a treatment therapy.[9]

Depending on a patient's needs, age, and reading interests, a mental health professional would prescribe a book targeting these specifics during treatment. When it comes to choosing literature, anything from fiction and non-fiction novels, poetry, comics, and other literary materials can be used if it allows a patient to identify with a text or a character. Stories help us experience scenarios we otherwise would not be able to from a safe distance. The safe comfort of a story is what patients use to project their own problems and talk about them in guided therapy settings or as self-help. The effectiveness of bibliotherapy has been shown as early as 1997 by Smith, Floyd, Jamison, and Scogin in a follow-up study on post-bibliotherapy outcomes. Patients who underwent bibliotherapy showed improved mental health outcomes three years after cessation of treatment.[10]

5 Halliwell, Emma, and Phillippa C. Diedrichs: "Testing a Dissonance Body Image Intervention among Young Girls," in *Health Psychology* 33 (2014), pp. 201-204.

6 Karuna, Nair, et al.: "Can Digital Fiction be Therapy?", October 2021, https://sites.google.com/ualberta.ca/writingnewbodies/about/digital-born-therapy?

7 Al Sabbah, Haleama, et al.: "Body weight dissatisfaction and communication with parents among adolescents in 24 countries: international cross-sectional survey", In: *BMC public health* 9 (2009).

8 Bearman, Sarah Kate, Erin Martinez, and Eric Stice: "The skinny on body dissatisfaction: A longitudinal study of adolescent girls and boys", In: *Journal of youth and adolescence* 35 (2006), pp. 217-229.

9 Lindberg, Sara: "What is Bibliotherapy?", In: *VeryWellMind*, August 29, 2021, https://www.verywellmind.com/what-is-bibliotherapy-4687157.

10 Smith, Nancy M./Floyd, Mark R./Scogin, Forrest/Jamison, Christine S.:"Three-year follow-up of bibliotherapy for depression", In: *Journal of Consulting and Clinical Psychology* 65 (1997).

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However, as this method relies on traditional print media, it might not appeal to the demands of the digital age and it might not reach younger generations that could benefit from a narrative-based therapy.[11,] The research project WRITING NEW BODIES: CRITICAL CO-DESIGN FOR 21ST CENTURY DIGITAL-BORN BIBLIOTHERAPY strives to engage with a digital bibliotherapy project to close this gap.[12]

The goal of WRITING NEW BODIES (WNB) is to create a novel method for therapy that could appeal to digital natives by combining the playful factor of digital fictions (DF) with the approach of bibliotherapy. A DF is an interactive, often multilinear form of storytelling, that exists exclusively in a digital format. While some DFs are text-based, such as DEPRESSION QUEST, some DFs are 3D and multimodal, such as WALLPAPER or INKUBUS.[13, 14, 15] Overall, DFs are a highly suitable medium for bibliotherapeutic settings because they are narrative driven. Furthermore, they provide a platform to deal with sensitive topics, such as depression, suicide, or body image issues in a safe and appropriate way.[16,17]

This approach offers a promising contribution to the evolution of digital games. Hence, this paper explores the benefits and possibilities of using (DF) games in bibliotherapy in the light of the WNB project. As the project is still in development, we cannot analyze the actual game or its efficacy in therapy settings. Instead, this paper looks at the WNB critical co-design methodology, outcomes, and its game design to learn lessons for successfully developing games as therapy.

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11 Clark, Christina/Teraveinen-Goff, Anne: "National Literacy Trust Research Report: Children and young people's reading in 2019", March 2020, https://literacytrust.org.uk/research-services/research-reports/children-and-young-peoples-reading-in-2019/.

12 Writing New Bodies, https://sites.google.com/ualberta.ca/writingnewbodies, retrieved October 2021. Initiated by Prof. Astrid Ensslin, co-investigated by Dr. Carla Rice, in collaboration with Dr. Sarah Riley, Christine Wilks, Hannah Fowlie, Megan Perram, Dr. Aly Bailey, and Lauren Munro.

13 DEPRESSION QUEST (Zoë Quinn, Patrick Lindsey, 2013: The Quinnspiracy).

14 WALLPAPER (Andy Campbell, Judi Alston, 2015: Dreaming Methods).

15 INKUBUS (Andy Campbell, Christine Wilks, 2014: Dreaming Methods)

16 Ensslin, Astrid et al: "Exploring Digital Fiction as a Tool for Teenage Body Image Bibliotherapy," in: *Digital Creativity* 27, 3 (2016), pp. 177-195.

17 Ensslin, Astrid: "Electronic Fictions: Television, the Internet, and the Future of Digital Fiction," in: Paula E. Geyh (Ed.), *The Cambridge Companion to Postmodern American Fiction*, Cambridge: CUP 2017, pp. 181-197.

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THE WRITING NEW BODIES PROJECT – A CASE STUDY

The Method. The core method used for data collection is the feminist participatory action research (FPAR). Participatory action research, also known as community-based participatory research, action research, or co-design turns test subjects into collaborators by giving them full control over the data being produced.[18,19] According to Shira Hassan, PAR is a powerful and highly beneficial method of research, as it:

"[…] allows communities to build collectively with each other to simultaneously do healing and change work while they're also doing research and because it puts the power and control in the hands of the community so that they can identify what's important, when it's important, what we need to get at, how we want to get at it, who we want at the table, and what we're going to do with the data afterwards."[20]

PAR dissolves the boundaries of traditional academic research and puts the participants of a study on the same level as the facilitators. Together, they work towards discussing research problems to find solutions by being inclusive and transformative—in other words, they create a community.[21, 22, 23] A grounding in feminist theory transforms WNB's PAR method into Feminist PAR, a method that expresses "core values of empowerment, transformative action and community

18 Macauley, Ann C.: "Participatory research: What is the history? Has the purpose changed?", *Family Practice* 34 (2017), pp. 256-258.

19 Gustafson, Diana L./Janice E. Parsons/ Brenda Gillingham: "Writing to Transgress: Knowledge Production in Feminist Participatory Action Research" in: *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research* 20 (2019), pp. 1-25.

20 Vera Institute of Justice: "Participatory Action Research," *YouTube* Video, 0:04, September 27, 2016, https://www.youtube.com/watch?v=6D492AP9JP4.

21 D.L. Gustafson: *Writing to Transgress.*

22 Reid, Colleen/Allison Tom/Wendy Frisby: "Finding the 'action' in feminist participatory action research", In: *Action Research* 4 (2006), pp. 315-332.

23 Gatenby, Bev/Humphries, Maria: "Feminist Participatory Action Research: Methodological and ethical issues", In: *Women's Studies International Forum* 23 (2000), pp. 89-105.

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engagement."[24, 25] Based on this research method, four workshops were initiated to collect the data for the digital fiction bibliotherapy between April and May of 2019.

The Participants. The participant pool comprises of 21 women and female-identified individuals ages 18-25 across four two-day-workshops in the three Canadian cities of Toronto, Edmonton, and Guelph. All participants were selected through a screening test prior to the data collection workshops. The selected participants are representative for the following relevant characteristics: gender identity, sexual orientation, racial identity, physical disability, psychiatric disability, body image concerns, disordered eating, and body size. This participant demographic assures a more diverse, inclusive, and appealing digital fiction.

The Workshops. The data was primarily collected with up to three audio recorders. The participants were guided and introduced to the topic of BDD and narrative game design by the leading facilitators of the specific workshop. Presentations and group discussions grounded the contextual knowledge about the common issues and terminologies. Afterwards, these presentations were discussed with the participants. Another method for actively engaging participants were several creative prompts for character and story development. To transform developed characters into stories, creation sessions using the open-source tool for interactive storytelling Twine was used.[26] On the second day of the workshops, participants were also engaged in guided meditations. A trained instructor led the participants on a journey of mindfulness to help them explore their bodies within a safe space. Subsequently, the participants shared how they envisioned their bodies and their individual spaces.

The Results. The approximately 57 hours of audio data were fully transcribed as a preparation step for a qualitative analysis with the MAXQDA software program. The analysis revealed six common themes and topics: health, affect-oriented, identity, embodiment, narrative themes, and technologies and their attributes as can be seen in Table 1 below.

24 D.L. Gustafson: *Writing to Transgress.*

25 Singh, Anneliese A./Kate Richmond/Theodore R. Burnes: "Feminist Participatory Action Research with Transgender Communities: Fostering the Practice of Ethical and Empowering Research Designs", In: *International Journal of Transgenderism* 14 (2013), pp. 93-104.

26 Worth mentioning is that participants even learned new skills on how to use the online platform Twine and gained insights into the game design process.

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Table 1: List of thematic findings and their attributes.

Themes	**Attributes**
Health	Illness, Eating, Disorders, Depression
Affect-Oriented	Femininity/Gender Roles, Social Media, Beauty, Standards, Space, Support, Resistance, Empowerment, Privilege, Sexual Assault, Self-Hate
Identity	Race, Sexuality, Disability, Queerness, Digital Identity, Trans Identity, Indigeneity, Cis Identity
Embodiment	The Body, Weight, Body Parts, Clothing
Narrative Themes	The Gaze, Digital Fictions, Character, Direct Themes, Nonlinear/Rhizomatic/Looping, The Mother, The Father
Technologies	Smartphones, Tablets

THE CRITICAL CO(GAME)-DESIGN

With these six categories and participant input (their Twines, written narratives, and discussions), the WNB project will enter Phase 2 where the DF will be developed. Analogous to almost every game design process, knowing the target development platform of a project is a crucial starting point because the technology behind it enables or limits possibilities.[27, 28] The participants voiced their preference for smartphones and downloadable apps. To address these preferences, the final DF will be developed as a web-based game to allow for maximum accessibility on a spectrum of devices.

From there, an interactive prototype will be developed as a proof of concept before settling and developing final features, settings, stories, and characters. Based on their FPAR participant data, the WNB team decided on abstract protagonists and antagonists to avoid embodied characters and to help players feel more

27 Bates, Bob: *Game Design*. Boston: Premier Press 2004 (2. ed).

28 Schell, Jesse: *The Art of Game Design. A Book of Lenses*. Boca Raton, London, New York: CRC Press 2015 (2. ed).

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represented. The facilitators value having something the players can connect to their real-life experiences within a world of possibilities. Therefore, the game genre will be: beautiful body horror and magical realism. With this, WNB's designer Christine Wilks is currently developing the final game that is set to have an alpha and beta phase during which the participants will be involved once again to express their feedback before the game is pushed for a release to web at some point in 2022.[29]

To summarize, the WNB game design process is not different from what Bates or Schell have said about the video game development industry.[30, 31] However, the WNB team shows the power of research- and community-based development by using FPAR and by working with participants as co-designers. The quality of the final game will reflect their design process. It is clear how every aspect of the game, from genre choice to setting, is chosen to give the player a highly individualized, sandbox-like space where they can project their BDD-related traumas and engage in what-if scenarios. In the safe space of the game, the player has full control over deconstructing their own issues, exploring different options, and potentially finding solutions.[32] Ultimately, the feeling of freedom that is so important for game design is represented in the game and play experience.

Unfortunately, the full extent of this new digital form of bibliotherapy on patients cannot be evaluated before the game releases. However, Sukamto's research on interactive therapy suggests that both interactive (significance = 0.000<0.05) and reading bibliotherapy (significance = 0.012<0.05) are effective methods that reduce BDD issues among high school girls.[33]

Implications for further research. From a professional user researcher perspective, the FPAR method as initiated for the WNB game design process shows that it is possible to engage with your players early in the design process and together create a product that appeals to them. Obviously, the scalability of such user-centered approaches to large video game studios remains unclear, but this study certainly presents an avenue of possibilities.

29 *Writing New Bodies*.

30 B. Bates: *Game Design*.

31 J. Schell: *The Art of Game Design*.

32 Green, Melanie C./Keenan M. Jenkins: "Interactive Narratives: Processes and Outcomes in User-Directed Stories," in: *Journal of Communication* 64 (2014), pp. 479-500.

33 Sukamto, Monique E.: "The Effectiveness of Bibliotherapy in Reducing Body Image Dissatisfaction Among High School Girls", In: *Anima. Indonesian Psychological Journal* 24 (2008), pp. 33-37.

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For the therapeutic setting, the project dares to ask to what extent Feminist Participatory Action Research could constitute its own form of therapy, and calls game researchers to explore further alternative game design methods by including players in the design process.[34]

CONCLUSION

The goal of this paper was to explore the methods, outcomes, and the game design of WRITING NEW BODIES to derive lessons for steering game development towards research-based, therapeutical areas. WNB successfully shows how game design for such settings starts with the research method. The feminist participatory research method transformed participants into co-game designers and vital players of iterative design thinking that allowed them to critically reflect on all steps of the research process. Furthermore, DF is an ideal genre to create narrative-driven games that deal with difficult topics such as depression, suicide, war, and body image issues in a safe and appropriate way. Additionally, DF is easy to learn and develop (for instance, with the open-source platform Twine) and it appeals to younger audiences given the interactive nature of the platform. This alone makes DF a worthy asset for game design. The evolution of game design—first for entertainment purposes, then for critical and artistic purposes, and now for therapeutic purposes—is still in its early stages. If the WNB's DF can confirm positive outcomes in its patients, it will certainly bridge the gap between academic and industry research.

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Gamification and Mobile Apps: Allies in Reducing Loneliness Among Young Adults

ROGÉRIO AUGUSTO BORDINI, OLIVER KORN

INTRODUCTION

In 2016, no one expected that a mobile game could revolutionize how people engage with gaming. Suddenly, gamers were motivated to leave their homes, take long walks and interact with other players at meeting points with just one objective in common: to catch Pokémon. POKÉMON GO, the most played augmented reality and exergame in history,[1] encourages players to explore their local communities,[2] and increases the opportunities to establish new social networks within these spaces.[3, 4] Consequently, it promotes mental health benefits,[5] as social engagement

1 Marquet, Oriol et al., "Examining Motivations to Play Pokémon GO and Their Influence on Perceived Outcomes and Physical Activity" in: *JMIR Serious Games* 5(4)e21 (2017), https://doi.org/10.2196/games.8048.

2 Adlakha, Deepti et al., "Pokémon GO or Pokémon Gone: How Can Cities Respond to Trends in Technology Linking People and Space?" in: *Cities Health* (2017), pp. 89-94, https://doi.org/10.1080/23748834.2017.1358560.

3 Wagner-Greene, Victoria R. et al., "Pokémon GO: Healthy or Harmful?" in: *American Journal of Public Health* 107(1) (2017), pp. 35-36. https://doi.org/10.2105/AJPH.2016.303548.

4 POKÉMON GO (Niantic, 2016: Niantic and Nintendo)

5 Tateno, Masaru et al., "New Game Software (Pokémon Go) May Help Youth With Severe Social Withdrawal, Hikikomori" in: *Psychiatry Res* 246 (2016), pp. 848-849. https://doi.org/10.1016/j.psychres.2016.10.038.

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linked to gaming has been found to decrease perceived loneliness and depression.[6] In a world where loneliness is at an all-time high,[7] the POKÉMON GO phenomenon of 2016 revealed possible digital strategies to diminish the effects caused by loneliness.

Loneliness, emotional distress caused by the lack of meaningful social connections,[8] affects people worldwide across all age groups. Although there has been much focus on the loneliness of elderly people, some studies have indicated that young adults are also a risk group. According to the UK's Office for National Statistics, young adults aged 16 to 24 years reported feeling lonely more often than those in older age groups.[9] A survey conducted by CIGNA with over 10,000 U.S. participants also indicated that young adults have higher rates of loneliness than older adults.[10] A possible explanation is that young people have greater aspirations for social success, like diverse social networks, popularity, and intimate social relations.[11] If these social expectations and goals are not met, young adults tend to experience loneliness.

POKÉMON GO is an example of how games can promote users' immersion, social interaction, and consequently well-being. Research on the benefits of using digital technologies for depression treatment, video games in particular, has

6 Steinfield, Charles/Ellison, Nicole B/Lampe, Cliff: "Social Capital, Self-esteem, and Use of Online Social Network Sites: A Longitudinal Analysis" in: *Journal of Applied Developmental Psychology* 29 (2008), pp. 434-445.

7 World Economic Forum: "The Global Risks Report 2019," 14th Edition, Geneva, (2019), http://www3.weforum.org/docs/WEF_Global_Risks_Report_2019.pdf from 07.06.2022.

8 Rook, Karen S.: "Promoting Social Bonding: Strategies for Helping the Lonely and Socially Isolated" in: *Psychologist 39* (1984), pp. 1389-1407.

9 Office for National Statistics: "Loneliness – What Characteristics and Circumstances Are Associated With Feeling Lonely?" (2018), https://www.ons.gov.uk/people populationandcommunity/wellbeing/articles/lonelinesswhatcharacteristicsandcircumstancesareassociatedwithfeelinglonely/2018-04-10#things-you-need-to-know-about-this-release from 07.06.2022.

10 CIGNA. Global Health Service Company.: "U.S. Loneliness Index," in: Survey of 20.000 American Examining Behaviors Driving Loneliness in the United States (2018), https://www.multivu.com/players/English/8294451-cigna-us-loneliness-survey/docs/IndexReport_1524069371598-173525450.pdf from 07.06.2022.

11 Carstensen, L. Laura/Isaacowitz, Derek M/Charles, Susan Turk: "Taking Time Seriously. A Theory of Socioemotional Selectivity" in: *American Psychologist* 54(3) (1999), pp. 165-181, https://doi.org/10.1037/0003-066X.54.3.165.

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shown the potential of these resources in mental health care settings.[12] These technologies can complement or help circumvent some of the obstacles often found in more conventional treatments for mental illnesses, such as Cognitive Behavioral Therapy (CBT), which faces challenges such as insufficient availability and accessibility to adequate treatment, logistic barriers, and stigma.[13] For example, the digital game SPARX helps young people (12 to 19 years) with mild to moderate depression.[14] This game is based on CBT methods aimed at coping with negative thoughts and feelings by helping the players to think in a more balanced way. Early tests with users showed reductions in levels of anxiety and depression symptoms.[15]

Drawing from this data, Bordini (first author) is developing the gamified social app NONELINESS in collaboration with the Affective & Cognitive Institute (ACI), a cross-faculty institution of Offenburg University. The app provides a safe and collaborative social network for university students, especially those experiencing periods of loneliness while adapting to a new environment with few meaningful friendships. In the context of this project, Bordini and the ACI team conducted studies that investigated the participants' perceptions concerning the design principles of the app's first prototypes. The concepts and relevant studies on gamification and mental health apps that have influenced the design and development of the NONELINESS project are presented in the next section.

GAMIFICATION AND MENTAL HEALTH

Gamification is a task-execution process based on the use of game elements (e.g., rewards, levels, objectives, etc.) in non-gaming settings (e.g., education, business,

12 Granic, Isabela/Lobel, Adam/Engels, Rutger C. M. E.: "The Benefits of Playing Video Games" in: American Psychologist 69 (1) (2014), pp. 66-78, https://doi.org/10.1037/a0034857.

13 Wolters, Lidewij H. et al.: "How Can Technology Enhance Cognitive Behavioral Therapy: The Case of Pediatric Obsessive-Compulsive Disorder" in: BMC Psychiatry 17, 226 (2017). https://doi.org/10.1186/s12888-017-1377-0.

14 SPARX (The University of Auckland, 2015).

15 Merry, Sally K. et al.: "The Effectiveness of SPARX, The Computerized Self-help Intervention for Adolescents Seeking Help for Depression: Randomized Controlled Non-inferiority Trial" in: British Medical Journal 344:e2598 (2012), https://doi.org/10.1136/bmj.e25982012.

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health, etc.) to offer the same degree of involvement and motivation that players can normally experience in games.[16]

This strategy is an attempt to increase excitement and improve commitment regarding technology-mediated interventions for people with mental health issues. SUPERBETTER, for instance, is an application developed to help people afflicted with depression, anxiety, and post-traumatic stress disorder.[17], [18] The app invites users to complete tasks to alleviate stress and promote relaxation (e.g., chug a glass of water, stretch their legs, etc.). A study showed that the depression levels of 31 participants who played SUPERBETTER for a month decreased significantly compared to the control group that did not play the game.[19]

Released in 2013, 7 CUPS OF TEA (7COT) is an example of how an online supportive app can engage users through gamification elements.[20] 7COT supports people who suffer from emotional problems by anonymously connecting them with active volunteer listeners through forums organized by topic (e.g., depression, anxiety, phobias, etc.) or private chat rooms. The service's gamification system is based both on "cheers" (e.g., points that can be given to helpful listeners) and on a progress bar that measures users' emotional level according to their social interactions. A preliminary study showed that users who received psychotherapy in the past marked the 7COT listeners' support to be just as helpful and genuine as a psychotherapist.[21, 22]

16 Korn, Oliver: "Industrial Playgrounds: How Gamification Helps to Enrich Work for Elderly or Impaired Persons in Production" in: *Proceedings of the 4th ACM SIGCHI Symposium on Engineering Interactive Computing Systems* (EICS '12) (2012), pp. 313-316, https://doi, https://doi.org/10.1145/2305484.2305539.

17 Chen, A.: "Health & Wellness: Digital Games Attempt to Treat Depression – Gamification Tools Gain Notice as a Novel Way To Address Mental Health Issues; Treating PTSD" in: *Wall Street Journal Europe* 25 (2014).

18 SUPERBETTER (SuperBetter, LLC, 2015).

19 Ibid.

20 7 CUPS OF TEA (The 7 Cups Foundation, 2013).

21 Baumel, Amit: "Online Emotional Support Delivered by Trained Volunteers: Users' Satisfaction and Their Perception of the Service Compared to Psychotherapy," in: *Journal of Mental Health* 24:5 (2015), pp. 313-320, https://doi.org/10.3109/09638237.2015.1079308.

22 Baumel, Amit/Correll, Christoph/Birnbaum, Michael: "Adaptation of a Peer Based Online Emotional Support Program as an Adjunct to Treatment for People with Schizophrenia-spectrum Disorders" in: *Internet Interventions* 4 (2016), https://doi.org/10.1016/j.invent.2016.03.003.

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Although these approaches have yielded initial evidence to support gamification for mental health, empirical procedures are still in an early stage and larger studies are required—especially when it comes to effective methods for designing these applications. Fleming proposed four key approaches for maximizing the impact of E-therapies and serious games in mental health, both for design and research:[23] 1) explore user-centered approaches to address users' motivations and preferences for their mental health needs; 2) explore and report engagement, effectiveness, and provide sufficient detail regarding the dynamics used; 3) build skills required to develop engaging and effective games through intersectoral and international collaborations, since the acceptance level of a given system is diverse and go beyond many science-focused or clinical teams; and 4) ensure interventions maintain industry best practices through rapid testing and implementation.

These recommendations and others related to the development of high-efficacy mental health apps were taken into consideration in the process of creating the concept of the NONELINESS app, as we will see in the following section.

MENTAL HEALTH APPS

A report conducted in 2017 presented the statistics of mobile app downloads worldwide and a forecast for 2022.[24] The findings showed that in 2017, consumers downloaded 178.1 billion mobile apps to their devices. In 2022, this figure is projected to grow to 258.2 billion. Among these increasing numbers, mental health apps (MHapps) are self-management services to promote wellbeing, fitness, and better health habits. A 2015 World Health Organization survey of 15,000 MHapps revealed that 29% of them focus on mental health diagnosis, treatment, or support.[25] MHapps can be classified into six categories based on functionality: *self-management, cognition improvement, skills training, social support, symptom*

23 Fleming, Theresa M. et al.: "Maximizing the Impact of E-therapy and Serious Gaming: Time for a Paradigm Shift" in: *Front Psychiatry* 7:65 (2016), https://doi.org/10.3389/fpsyt.2016.00065.

24 Cheney, Sam/Thompson, Eric: "The 2017-2022 App Economy Forecast: 6 Billion Devices, $157 Billion in Spend & More" in: *App Annie 2017-2022 Forecast* (2018), https://s3.amazonaws.com/files.appannie.com/reports/1805_Report_2022_Forecast_EN.pdf.

25 Anthes, Emily: "Mental Health: There's an App for That" in: *Nature* 532(7597), (2016), pp. 20-23.

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tracking, and *passive data collection*.[26] These apps can be helpful as a way to engage people who may be unwilling or unable to attend face-to-face therapy, and they can also provide support in between sessions when used in conjunction with medication and/or in-person therapy.[27]

Due to the lack of guides for the development of these resources, some authors have elaborated a set of recommendations for designing high-efficacy MHapps. Chandrashekar proposed characteristics to overcome various challenges of MHapps:[28] inconsistencies in engagement and narrow focus on one disorder per app;[29] high patient engagement, which can be improved by using features such as real-time engagement, usage reminders, and gamified interactions;[30] simple user interface (UI) to reduce cognitive load by using features such as pictures rather than text, reduced sentence lengths and nonclinical language;[31] and self-monitoring features to follow mood oscillations through periodically reporting thoughts, behaviors, and actions that can increase emotional self-awareness.[32]

Based on approaches like the potential effects of gamification and recommendations for developing MHapps, the social mobile app NONELINESS adopted some of these principles for its development, mainly user-centered approaches, rapid testing and implementation, real-time engagement features, and simple UI, as they align more with the social and gamified app's proposal. The next section we will

26 National Institute of Mental Health: "Technology and the Future of Mental Health Treatment," (2017) https://www.nimh.nih.gov/health/topics/technology-and-the-future-of-mental-health-treatment/index.shtml from 23.03.2022.

27 Yuan, Shupei et al.: "Keep Using My Health Apps: Discover Users Perception of Health and Fitness Apps with the UTAUT2 Model" in: *Telemed J E Health* 21:7 (2015), pp. 35-41. https://doi.org/10.1089/tmj.2014.0148.

28 Chandrashekar, Pooja: "Do Mental Health Mobile Apps Work: Evidence and Recommendations for Designing High-efficacy Mental Health Mobile Apps" in: mHealth 4, 6 (2018), https://doi.org/10.21037/mhealth.2018.03.02.

29 Marley, Justin/Farooq, Saeed: "Mobile Telephone Apps in Mental Health Practice: Uses, Opportunities and Challenges" in: *BJPsych Bulletin* 39 (2015), pp. 288-90.

30 Bakker, David et al.: "Mental Health Smartphone Apps: Review and Evidence-based Recommendations for Future Developments" in: *JMIR Mental Health* 3(1) (2016), https://doi.org/10.2196/mental.4984.

31 Ibid.

32 Rickard, Nikki et al.: "Development of a Mobile Phone App to Support Self-Monitoring of Emotional Well-Being: A Mental Health Digital Innovation" in: *JMIR Mental Health* 3:e49 (2016). https://doi.org/10.2196/mental.6202.

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present the app's concept and design strategies, as well as the evaluation processes with the target audience.

NONELINESS APP

The mobile and web app NONELINESS aims to reduce loneliness among university students by creating social opportunities through a gamified quest-based system in a secure and collaborative network of local users, both between students and the university staff. Users can organize meetings, make new friends based on commonalities, set up topic-specific discussion groups, or seek psychological support. The app does not charge users and they must be at least 18 years old.

The current app version (beta) is the result of research started in 2017 as a master's thesis project at the University of Campinas (UNICAMP) and then continued as doctoral research at Offenburg University.[33] Since then, the app has been developed in iterative cycles, whereby different prototypes and versions have been created (Fig. 1) in collaboration with undergraduate students at the university's Media faculty who acted as designers, and frontend and backend developers.

Figure 1: From left to right: versions 1 and 2 (2018-2020), and 3 (current) of the NONELINESS app, all showing the Chat function.

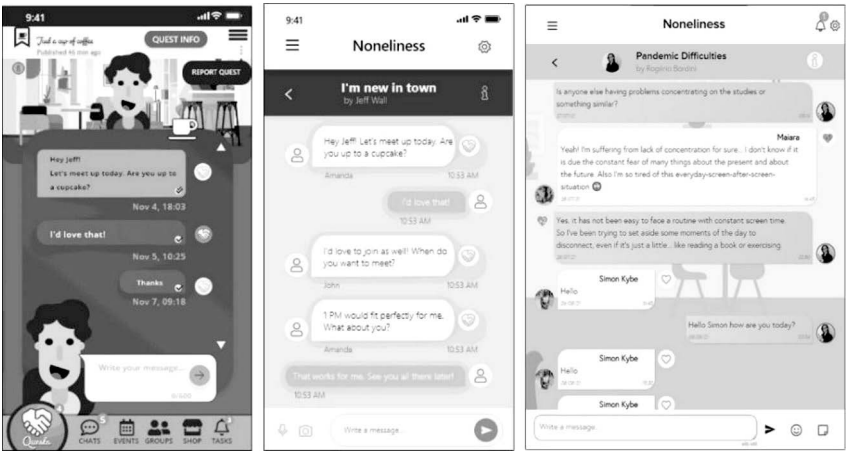

Image rights belong to the authors of the work.

33 Access to the NONELINESS app: https://gratitude.affective-lab.org/ from 07.06.2022

https://doi.org/10.14361/9783839462645 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-SA

Game elements were included following a set of recommendations on gamification in mental health to motivate users to assist people seeking help.[34] Therefore, the core features present in all app versions are:

Quests: as we commonly see in role-playing games and as adopted by the SUPERBETTER app, this option is based on solving a task for someone in the community who needs help, either material, emotional or educational. These Quests are posted in text form and the first user to solve one (via chat room interaction) receives a reward from its creator (e.g., a Gratitude Point (GP), a Shop item, or a real-world gift);
Chats: social interaction through public or private text messaging where GPs can be earned or donated by tapping a heart shaped button displayed next to each message (Fig. 1) to demonstrate appreciation;
Events: allow users to join a local event or invite others to a certain activity at a specified time (e.g., art exhibition, concert, meet up, etc.);
Gratitude Points: as similarly used by the 7COT, GPs are a score that shows empathy in the users' social interactions by assigning a point to a particular post in the chat. Unlike other social networks, these points are spendable and function as an in-app currency for purchasing new add-ons, which attributes another meaning in the way users "like" the platform's posts;
Level Progression: denotes the degree of experience that users have with the application. A user's level can be increased by gaining experience points through social interactions in the application (e.g., exchange of messages, solving Quests, etc.). This game-inspired feedback format was also adopted as a way of offering a sense of progress, personal growth, and greater engagement with the platform;
Shop: an option for purchasing items using GP, such as stickers for chats, picture frames, new chat backgrounds, and gifts to friends (no money is used).

These functionalities were designed according to studies on possible practices to reduce the rate of loneliness in universities, such as providing greater social opportunities for the integration of students (e.g., voluntary study groups, student

34 Fleming, Theresa M.: "Serious Games and Gamification for Mental Health: Current Status and Promising Directions" in: *Frontiers in Psychiatry* 7 (2017), https://doi.org/10.3389/fpsyt.2016.00215.

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associations),[35] creating stronger bonds among international and local students,[36] raising awareness about on-campus psychological services, and strengthening connections with local health services and individuals.[37] These different functions were also strategically conceived to be flexibly used in different scenarios, so that both students and university staff could benefit from the platform.

Therefore, some possible uses could be: setting up support groups for students who are facing difficulties in academic life, offering freshmen orientation, raising awareness for psychological support (crisis lines, counselling centres, etc.), and sharing tips on good practices for mental health care. Online interactions can also facilitate and extend the support that the institution's psychologists provide to students who are seeking counselling, since the face-to-face services can be overstretched and/or understaffed. These elements were also designed to enhance social cooperation, since these interaction mechanics were more beneficial to mental health purposes than mechanics that instigate social competition.[38]

Three evaluations have been conducted with university students: a context study with UNICAMP students (Phase 1);[39] a focus group discussion and AB

35 Masi, Christopher M. et al.: "A Meta-analysis of Interventions to Reduce Loneliness" in: *Personal Soc Psychol Rev* 15(3) (2011), pp. 219-266. https://doi.org/10.1177/1088868310377394.

36 Sawir, Erlenawati et al.: "Loneliness and International Students: An Australian Study" in: *J Stud Int Educ*. 12. (2007) 148-180. https://doi.org/10.1177/1028315307299699.

37 QS Quacquarelli Symonds: "Mental Health in Higher Education: What Role Should Universities Play?," in: *QS*, (2019), https://www.qs.com/mental-health-higher-education-what-role-universities-play/?utm_source=website&utm_medium=blog&utm_campaign=Loneliness from 08.06.2022

38 Cheng, Vanessa Wan Sze: "Recommendations for Implementing Gamification for Mental Health and Wellbeing" in: *Frontiers in Psychology*, 11, (2020) 586379. https://doi.org/10.3389/fpsyg.2020.586379.

39 Bordini, Rogerio Augusto: "Design Process of an Application to Combat Loneliness in Young Depressives" in: *7th Meeting on PhD Design Research – UD18* (2018). Aveiro, Portugal.

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testing between versions 1 and 2 (Phase 2);[40] and usability testing with version 3 (Phase 3) with students in Offenburg.[41] The key results obtained so far are:

(1) Both early app versions considered the adoption of 2D avatars as a way to protect the user's identity who would like to chat about sensitive personal issues, as this was a finding in the context study (Phase 1). However, in Phase 2 avatar usage was rejected by 74.07% of 33 respondents as they stated they could not trust an account without the owner's real photo;
(2) All app versions were designed following guidelines on the importance of simple UIs for gamified and mental health systems. Participants in Phase 2 attested to preferring more minimalist and straightforward interfaces when comparing app version 2 to version 1 (Fig. 1), as the latter featured colorful and childlike elements;
(3) Phase 3 focused on the app's usability and gamification issues. Version 3's interface (Fig. 1), navigation, and features presentation received positive scores. The Events feature was the participants' favourite option, as it can offer more opportunities for social exchange. Regarding the app's gamification, Level Progression and GP were the most favoured aspects. The Shop and Quests options were the least appreciated. Participants understood the purpose of those options but did not understand how to use them.

Since avatar usage was the most problematic aspect raised in the studies, we considered a semi-anonymous approach for the current version appealing to both individuals wishing to remain anonymous and individuals who do not mind sharing their photo and real name. To this end, users can create an account with a fictitious name to discuss personal matters privately with the university staff. For the functionalities that were not clear to the users (Shop and Quests), documentations and tutorials were implemented to facilitate user understanding.

40 Bordini, Rogerio Augusto. et al.: "Strangers in a Strange Land: Designing a Mobile Application to Combat Loneliness and Isolation Among Foreign University Students" in: *J. Technol. Behav. Sci*. (2020), https://doi.org/https://doi.org/10.1007/s41347-020-00171-6.

41 Bordini, Rogerio Augusto/Korn, Oliver: "Noneliness: A Gamified Mobile App to Reduce Loneliness Among University Students" in: *Extended Abstracts of the 2021 Annual Symposium on Computer-Human Interaction in Play (CHI PLAY '21)*, (2021) 87-93. https://doi.org/10.1145/3450337.3483480.

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In the first semester of 2022 a pilot randomized clinical trial (RCT) was conducted to test the new app settings and their efficacy. Offenburg University participants were divided into an experimental group to use NONELINESS (beta) to tackle loneliness, while the control group did not receive the intervention. Participants answered questionnaires about usability and their emotional states before, during, and after app use. Experimental group subjects had a reduction in their rates of loneliness, while control group members did not have the same effect. A new RCT is planned for the second half of 2022 at a German partner university with a larger sample.

CONCLUSION

The health risks of loneliness and social isolation in young adults are dangerous. Research shows that loneliness tends to be experienced more severely by young adults than by other age groups.[42] Since these target groups also tend to have a strong connection with technological trends, online apps offer promising ways of making people more connected.[43] The use of gamification strategies in digital interventions is also a feasible approach to creating stronger engagement with the application. Although this research field still requires further investigation, there is evidence pointing to the positive effects of such approaches.[44]

On the other hand, it must be emphasized that these technologies should not replace face-to-face social interactions. The isolation of the COVID-19 pandemic demonstrated how necessary human-social interaction is to an individual's well-being.[45] Digital technologies, however, can promote, facilitate, and create social opportunities that build more integrated communities. Mobile applications and other virtual environments can shorten the distances between individuals.

42 Office for National Statistics: "Loneliness – What Characteristics and Circumstances are Associated With Feeling Lonely?" (2018).

43 Steinfield, Charles/Ellison, Nicole/Lampe, Cliff: "Social Capital, Self-Esteem, and Use of Online Social Network Sites: A Longitudinal Analysis," pp. 434-445.

44 T. M. Fleming: "Serious Games and Gamification for Mental Health: Current Status and Promising Directions," p. 1.

45 Bu, Feifei/Steptoe, Andrew/Fancourt, Daisy: "Loneliness During a Strict Lockdown: Trajectories and Predictors During the COVID-19 Pandemic in 38,217 United Kingdom Adults" in: *Social Science & Medicine* (1982), 265, (2020) 113521. https://doi.org/10.1016/j.socscimed.2020.113521.

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The NONELINESS app offers a democratic space to motivate the social integration of university community members through gamified elements. Although the app was initially evaluated in a small university setting, it is hoped that the design, gamification, and efficacy data of this research can inspire other institutions and designers to build gamified and technological solutions to strengthen social ties between members of these communities.

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Mental Health of Twitch Streamers During COVID-19

KELLI DUNLAP

Twitch is a live video streaming platform originally developed for streaming gameplay content. However, today's streamers (e.g., individuals who broadcast via Twitch) use the platform to share a variety of content, from talk shows to cooking demonstrations, and foster social communities online. Twitch usage has skyrocketed since the beginning of COVID-19 quarantine and streamers have been bearing the emotional brunt of lockdown stress and anxiety. Caring for their own mental health while simultaneously managing and supporting their own streaming community's well-being, Twitch streamers often find themselves in the position of mental health first responders. Using Twitch, the largest online streaming platform, as a way to find social and emotional support and connection online, however, is nothing new. A sense of community and belongingness is a core motivation for Twitch viewers prior to the pandemic. In fact, enjoying the streamer and the surrounding community plays a larger role in stream viewership than even the content being streamed.[1]

Whether a streamer intends to address mental health issues on their stream or not, viewers use stream chats and communities to get emotional, social, and psychological needs met. Streamers are frequently a touchpoint for persons managing a mental health issue, from feeling disconnected or lonely to struggling with symptoms of mental illness. However, there is a fine line between providing mental health education and support versus offering opinion, treatment, or direct

1 de Wit, Jan/van der Kraan, Alicia/Theeuwes, Joep: "Live Streams on Twitch Help Viewers Cope With Difficult Periods in Life", In: *Frontiers in Psychology*, 11. (2020) https://doi.org/10.3389/fpsyg.2020.586975.

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intervention. The former are within the purview of mental health advocates while the latter are, at best, murky ethical waters. The rallying cry of "I'm not your therapist" is a well-known issue within the streaming community, as evidenced by multiple panels and discussions on the topic (e.g. TwitchCon 2016, 2017, 2018; PAX Online 2020).

In order to have a better understanding of why, even before COVID, Twitch streaming communities frequently served as places for peer mental health support and even crisis intervention, it is important to examine the current state of mental health in the United States.

MENTAL HEALTH IN THE U.S.

Prior to the COVID-19 pandemic, 7.7 million (16%) American children and 47 million (19%) American adults met diagnostic criteria for at least one mental illness.[2,3] Despite the high prevalence of mental illness in the U.S. population, the majority of those experiencing mental illness do not receive professional mental health support.[4] On average, only 43% of those who meet criteria for a psychological disorder obtain treatment z.[5] A general shortage of mental health professionals and systemic obstacles like cost of treatment, insurance coverage, geographic location, and perceived stigma of help-seeking create significant barriers to treatment even in the best of times.[6]

Between January 2020 and September 2020, the height of COVID-19 in the U.S., the number of people seeking help for anxiety rose 634% and the number

2 Whitney, Daniel/Peterson, Mark: "US National and State-Level Prevalence of Mental Health Disorders and Disparities of Mental Health Care Use in Children." in *JAMA Pediatrics*, 173(4), 389-391. (2019), https://doi.org/oi:10.1001/jamapediatrics.2018.5399

3 Substance Abuse and Mental Health Services Administration. "Key substance use and mental health indicators in the United States: Results from the 2018 National Survey on Drug Use and Health. " (2019) https://www.samhsa.gov/data/

4 National Alliance on Mental Illness. "Mental illness by the numbers." (2019) see https://www.nami.org/mhstats

5 Substance Abuse and Mental Health Services Administration. https://www.samhsa.gov/data/

6 Andrade, Laura, Helena et al: "Barriers to mental health treatment: results from the WHO World Mental Health surveys [Article]." in *Psychological Medicine*, 44(6), 1303-1317. (2014) https://doi.org/10.1017/S0033291713001943

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seeking support for depression rose 873%.[7] Despite the pandemic forcing mental health providers to shift from primarily in-person to nearly 100% telemedicine, thus reducing geographical and proximity barriers to treatment, the lack of providers and the cost of care have remained major obstacles.[8]

Given these significant systemic barriers to treatment and the predictable yet still alarming spike in requests for mental health services during the pandemic, it is not a surprise that people seek out and find non-traditional resources, like streamers and streaming communities, for mental health support.[9]

STREAMER MENTAL HEALTH

The amount of academic research on streaming has dramatically increased in the last few years, with over 70 articles being published in the past nine months alone.[10] Research on streamers themselves, however, is extremely limited, especially when compared to other streaming-specific topics like marketing or viewer engagement.[11]

Scholarly work that has specifically addressed streamer mental health has done so through the lens of affective (emotional) labor involved in live streaming, the challenges of being a streamer with a mental illness, and the impact of

7 Mental Health America: "COVID 19 and Mental Health: A Growing Crisis." (2021) See https://mhanational.org/research-reports/covid-19-and-mental-health-growing-crisis

8 One of the most significant barriers to treatment is accessibility. 77% of counties in the United States have a shortage of mental health providers. Rural areas are particularly underserved as 65% of non-metropolitan counties do not have a single psychiatrist and 47% do not have a licensed psychologist (America's Mental Health Rankings, 2020).

9 Panchal, Nirmitaet al. "The Implications of COVID-19 for Mental Health and Substance Use | KFF. Kaiser Family Foundation." (2021) see https://www.kff.org/health-reform/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/

10 Seering, Joseph: "Twitch Bibliography." (2021a) Twitter.

11 Seering, Joseph: "Twitch Bibliography." (2021b) Google Sheets.

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microcelebrity and influencers discussing their own mental health on streams.[12, 13, 14, 15, 16] Outside of academia, the stressors and mental health impact of streaming on streamers has been documented by games journalism as well as streamers themselves, with issues like burnout, parasocial relationships, community toxicity, harassment, and abuse being common topics.

In order to better understand streamer mental health generally as well as the impact of COVID-19 on streamers and their communities, this author along with co-researchers Marie Shanley and Jocelyn Wagner conducted an ethnographic study focused on the mental health of streamers during the pandemic (for the full report, see Dunlap et al., 2022).[17]

Study overview

For this study, participants were recruited via social media posts and were required to have been actively streaming for at least one year to be considered for inclusion. Of the 62 streamers who responded, 19 met inclusion criteria and were able to complete a semi-structured interview with the research team between September 18 and October 15, 2020. Each interview was recorded via Zoom and transcribed using an automated transcription service. The transcript was reviewed for accuracy and the audio recording deleted once confirmed to ensure anonymity. A

12 Ruberg, Bonnie/Cullen, Amanda: "Feeling for an audience: The gendered emotional labor of video game live streaming." in *Digital Culture and Society*, 5(2), (2020) pp 133-148.

13 Taylor, T. L.: *Watch Me Play: Twitch and the Rise of Game Live Streaming* (1st ed.). (2018) Princeton University Press.

14 Woodcock, Jamie/Johnson, Mark R: "The Affective Labor and Performance of Live Streaming on Twitch.tv." in *Television & New Media*, 20(8), 813-823. (2019). https://doi.org/10.1177/1527476419851077.

15 Johnson, Mark R.: "Inclusion and exclusion in the digital economy: disability and mental health as a live streamer on Twitch.tv." in *Information Communication and Society*, 22(4), 506-520. (2019) https://doi.org/10.1080/1369118X.2018.1476575.

16 LaMastra, Nina et al.: "How a Live Streamer's Choice in Played Game Affects Mental Health Conversations." in *CHI Play '20*. (2020) https://doi.org/10.1145/3383668.3419894.

17 Dunlap, Kelli/Shanley, Maria/Wagner, Jocelyn: "Mental Health Live: An Ethnographic Study on the Mental Health of Twitch Streamers During COVID." In A. Brewer, Johanna; Bonnie Ruberg; Christopher J. Persaud; Cullen (Ed.), *Live Streaming Culture*. (2022) MIT Press.

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qualitative methodology was used to systematically approach and gain insight into the rich and complex life experiences of streamers. Each transcript was thoroughly read and reviewed for topics, themes, ideas, and patterns of meaning related to streamer mental wellness. Relevant text segments from each transcription were identified and given a code which generally described the feeling or idea expressed by the text. Codes were analyzed and used to generate broader themes.

The study identified four major themes derived from the narrative analysis of interviews: 1) streamers serve as frontline mental health responders; 2) streamers struggle to find balance between their own mental well-being and the needs of their communities; 3) streamers are unsupported and unprepared to address mental health; 4) streamers and their communities are resilient.

STREAMERS SERVE AS FRONTLINE MENTAL HEALTH RESPONDERS

The phrase "I'm not your therapist" is a common one throughout the streamer community. However, streamers frequently find themselves in situations where they feel pressure to provide psychological, social, or emotional support. Over the course of the pandemic, streamers observed a rise in engagement in both their Twitch chats as well as their private Discord channels regarding "real-life" content, such as financial hardship or stress, being openly discussed in their communities. Some streamers reported a strong sense of personal responsibility for the health and well-being of people in their communities and they themselves could not share or show their own struggles as it would "bring down" the mood of the stream. For example:

- There's definitely been a shift more toward people talking a lot more about stuff that's stressing them out, and things [people] are going through things that are kind of weighing down on them. – K4
- You've had those couple of community members and maybe you had to give a little extra TLC too,18 but now it's all your community members need that little extra TLC. – M4
- There's so many things that are going on and it's really just been a tough time trying to connect with your community because your community has always seen you as a superhero. – M2

18 American slang for "tender loving care."

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- You're leading a community, you're leading people, and so you have this responsibility to help them to be around for them. – J3

Streamers reported a noticeable increase in the frequency and intensity of mental health topics in their streams compared to pre-COVID times. It is important to highlight that the increase in frequency and intensity of interactions reported by streamers closely parallels the experience of mental health professionals during COVID. Like therapists, streamers are navigating what it means to provide a space for expressing and processing of emotions and provide support for others while they themselves are experiencing the same trauma in real time .[19] Comments made by streamers about their struggles managing mental health issues in stream are nearly indistinguishable from comments made by mental health professionals citing their own experience caring for clients during the pandemic.[20]

STREAMERS STRUGGLE TO FIND BALANCE BETWEEN THEIR OWN MENTAL WELL-BEING AND THE NEEDS OF THEIR COMMUNITIES

Most of the streamers interviewed commented on the need to find balance between their own mental wellness and the wellness of their community. Several streamers stated they had taken time off from streaming or adjusted their schedules to be less intense in terms of streaming frequency and/or duration. In general, streamers expressed an understanding that they need to be able to care for themselves in order to care for the community, but that this is a challenging line to walk.

- That has been the biggest struggle of it all, just trying to balance how COVID is affecting me, but also being there for my community and having boundaries, but knowing that in some cases, I need to go the extra mile. But keeping in check that I don't go too far. – K3

19 Madani, Doha: Therapists are under strain in COVID-19 era, counseling clients on trauma they're also experiencing themselves. in NBC News. (2020) https://www.nbcnews.com/news/us-news/therapists-are-under-strain-covid-era-counseling-clients-trauma-they-n1230956.

20 Dunlap, Kelli/Shanley, Marie/Wagner, Jocelyn: Reserach Report: Mental Health of Streamers During COVID-19. *PAX Online*. (2021) see https://www.youtube.com/watch?v=DE4P1wqCyV4&ab_channel=Mxiety.

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- I need the same support, and in some ways I need maybe even a little bit extra attention because I'm trying to help a community and myself, and going through all those things this year at the same time. – J3
- Oh God, it feels like there's a lot of pressure to not be a human being and just be an entertainer, I feel like any time I have any sort of an emotional reaction on the stream, I'm just supposed to hide it because all my viewers need a distraction and I'm supposed to be that distraction, and it's very difficult to just ignore that and try and push those feelings to the side and remind myself constantly that I'm just there to entertain people. – M1

A secondary component of balance was found in regards to ethical boundaries. Many streamers voiced concern about potentially "blurring the lines" between being supportive and "therapizing"; others struggled to balance a perceived duty to provide and fact-check COVID-related information against continuing brand expectations for simple entertainment or "a chill space."

- It is an added level of stress to the streamer because we need to be on top of it and make sure that we are utilizing every possible advantage that we have as content creators to push for that level of awareness, while also ensuring that we are being true to ourselves and engaging in the kind of content that is going to result in the success of our streams in our communities. So it's a balancing act unlike anything I've ever had before. – K6
- Trying to be sensitive to people who wanna talk about COVID and people who don'' wanna talk about COVID… It's a hard balance of trying to meet everybody's needs. – J2
- Yes, I definitely think that a lot of us are dancing the line between therapist and a shoulder to lean on. I don't think it's a bad thing that we're there for people, but I also think that given so many of us are untrained to deal with such serious situations, it may possibly lead to some doing more harm than good without wanting to or realizing that they are. – M1

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STREAMERS ARE UNSUPPORTED AND UNPREPARED TO ADDRESS MENTAL HEALTH

Streamers expressed feeling ill-equipped to handle the increased frequency and intensity of mental health topics and concerns occurring in their streams, chats, and communities. Even streamers whose content focused on mental health and identified as mental health advocates described feeling a sense of unease and self-doubt, and expressed a strong desire for guidance.

- I try my best to help, but at the end of the day, I do remind them that I'm not a professional, so I do lend out those resources the best I can. – M6
- It keeps me up at night, because I'm not a professional, I am constantly paranoid about putting somebody in danger just because I don't know... I'm just so scared of just doing the wrong thing because I know that this is such a delicate subject and it shouldn't be handled so lightly. – K3
- I personally wish I was more well-equipped, as well as my mods. I felt bad asking for one of my mods to check in on [the well-being of a community member] when one, I'm not equipped to handle that situation, he's not equipped, my mod isn't equipped to handle that sort of situation, and... It's just one of those things where you prepare for... But when you're there, it's just like, shit hits the fan, what do we do? How do we handle this? – J6

In some cases, streamers expressed frustration and resentment at finding themselves in scenarios they did not "sign up" for nor have the training to manage.

- I'm not a mental health professional, it's not my responsibility to fix other people's mental health, and coming into my chat and bringing down the mood that I have worked so diligently hard to maintain and to bring up is real frustrating because why would you dump all of that shit on all of these people, but at the same time, I would rather them say something than to say nothing and feel alone, the last thing I wanted someone to feel alone. – K6
- Yeah we can talk about [mental health], but when people constantly come to you while you're streaming, like you're just trying to have a release and they're just trying to put all their problems to weigh it on to you, it's difficult because now you're seen as their therapist. – M2
- We're experiencing more and more instances like that where someone comes around and the vibe is just shot because once again, someone's

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having a bad day, and of course, you wanna be there for that person, but it's just happening more often than normal, and we find ourselves holding more and more space than usual. – J5

STREAMERS AND THEIR COMMUNITIES ARE RESILIENT

During the coding process, one of the most unexpected but most common codes was "positives"-statements reflecting personal growth or being able to "see the brightside." Nearly every streamer commented or shared a story about how the pandemic has brought their communities closer together or how the constraints of lockdown have led to creative solutions for connecting and supporting one another.

- I know that a lot of us didn't sign up for a leadership position, or I hear a lot of people say, "I'm not a therapist, I didn't start streaming to be somebody's therapist," but there's the reality of, you're dealing with people. A lot of people use you as a tool to help them deal with whatever they're going through, just by watching, and... You don't have to be a therapist to be, to have empathy. You don't have to be any type of mental health professional to just bring some type of comfort or reminder to somebody that they're not alone. – K3
- We put a memorial service together for her, for everyone to come into Discord, say a few nice words. We literally held it in ANIMAL CROSSING, we were just running around on ANIMAL CROSSING on an island, having a memorial service because I think that closure is really important and grieving and all that, and with COVID and stuff like we can't go to funerals and it's not like we were all close enough with her family that we felt like... it would have felt intrusive to ask for an invite to the Zoom funeral and stuff like that, so we just did our own thing. – J5
- It has bonded our community in an unexpected way. – K6
- And just sort of togetherness that I think existed before COVID, but now because we're all, most of us are fairly separated, for me, from the people who we would see in our everyday lives, it's like the people who we have via these communities are filling that void. – M3
- I think we've all been learning just not to take each other for granted and to be a little bit kinder to one another, 'cause we're all just dealing with the unimaginable. – J5

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IMPROVING CONDITIONS FOR STREAMER MENTAL HEALTH

A second aim of the study, beyond extracting the major themes of subject responses, was to identify ways of improving or supporting streamer well-being. The main takeaways from the interviews focused on three main strategies: improve access and awareness of available resources, provide alternatives to hotlines and links, and deliver more psychoeducation, training, and professional support.

Improve access and awareness of available resources

One of the major obstacles in streamers accessing and sharing resources was a perceived lack of those resources. The majority of streamers interviewed reported that they curated their own set of links, websites, and hotlines to share with their community. In other words, streamers felt compelled to put in the leg-work to create and recreate lists of resources because they were not aware that such lists already exist. Per J3's experience, "I think every single streamer that I know of is just figuring it out as they go." Many of the resources requested by streamers, from mental health tip sheets to therapist directories, already exist but not in a space where streamers know to look. For example, Twitch Cares (Streamer Square, 2020) is a collection of mental health resources hosted on Twitch that was developed in collaboration with Take This, a mental health non-profit specifically focused on the mental health of game players and game developers. It provides dozens of links to mental health information and resources, but is largely unknown to streamers. When suggested as a resource, many streamers were surprised but also frustrated; as M1 stated "I had no idea that the TwitchCare page existed, I kind of wish that maybe that was more visible."

These experiences highlight the major gap between existing resources and information and those that need them. This gap could—and should – be addressed through collaboration between Twitch and mental health organizations. Furthermore, given the massive reach of platforms like Twitch and the unique stressors faced by streamers, it is in the interest of mental health organizations to actively engage with this community and create support tools and resources that are specific to the needs of the streaming community.

Provide alternatives to hotlines and links

As participant K3 eloquently summarized, "Everybody's kind of tired of just being sent to a website or to a phone line." Streamers wanted to know that their viewers and community members were being taken care of and expressed a strong

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desire for personal and warm hand-offs when connecting others to services. When in crisis, referral to an emergency hotline is the best course of action. Most streamers do not have any kind of mental health crisis training, and even if they did, the very public nature of Twitch makes it an inappropriate venue for managing a mental health crisis. Though managing a crisis is the most obvious and frightening scenario, the majority of incidents streamers reported involved viewers who were in need of supportive, more long-term services, and for whom a crisis hotline was not appropriate.

As discussed previously, navigating the mental health system in the U.S. and connecting with a mental health provider is no small task. And while the state of the mental healthcare system is beyond the purview of any one streamer or platform, there's still opportunities for improvement. For example, Twitch could provide a link to the Twitch Cares page when a streamer makes Affiliate or Partner status or coordinate with peer-support organizations at state or local levels to provide a comprehensive list of peer support resources or free or reduced-cost mental health services.[21]

Deliver more psychoeducation, training, and professional support

Streamers are hungry for mental health streaming education and support. Suggestions from streamers included a desire for training on managing streamer-specific challenges, such as coping with harassment or managing trauma dumping onstream. The goal of these resources would be to improve the streamer's confidence in their own ability to appropriately and effectively manage the most common issues that occur during a stream that negatively impact their mental well-being. Streamers also shared a desire to connect with streaming-proficient mental health professionals or advocates in order to check in and get advice on specific strategies for responsibly discussing mental health content or managing mental health issues that occur during a stream.

21 Streamer Square: Behind the Streams: Mental Health with Mxiety and Dr. Kelli Dunlap. (2020) see https://www.youtube.com/watch?v=Yr6aRmC8AXA.

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CONCLUSION

Live-streaming has served as a medium for discussing mental health issues for over two decades. These conversations can occur organically as part of a normal conversation between streamer and audience member, or, in some instances, streamers intentionally create space for the discussion of mental health content. Since the pandemic, streamers have reported more mental health-related discussions in their streams, especially in-chat sharing of significant "real life" challenges including financial, social, and emotional stressors.

Twitch streamers report experiencing a wide range of stressors that are occurring more often and more intensely compared to pre-COVID times. These stressors include financial instability, loss of income or career opportunities, loss of community members (i.e. burnout, death, etc.), feeling increased pressure to provide social and emotional resources, more emotionally-challenging or draining interactions with and within their communities, and a sense of needing to be a constant source of positivity, support, and information even at the expense of their own well-being. In other words, streamers report frequently finding themselves in situations that strongly parallel the experiences of mental health first responders; providing people in crisis with emergency resources, holding space for emotionally heavy topics, and delivering social support to entire communities. Unfortunately, these additional external demands leave many streamers feeling overwhelmed, anxious, and unprepared. Streamers frequently reported feeling isolated in their role as community leader; to be someone their community relies on and always "shows up" for their members, but struggling simultaneously with the lack of support for themselves.

There is an urgent need for addressing the serious and significant disconnect between existing mental health resources and the accessibility of those resources to live streamers. Improved education, communication, and support around mental health and mental illness, whether that be via outreach campaigns from mental health organizations or through Twitch directly, is a critical missing component in streamers managing their own mental wellness.

One of the most striking and consistent findings from the interviews was the amount of work streamers dedicated to finding and distributing mental health resources. Every single streamer interviewed shared that they had spent time researching and compiling resources to the best of their abilities in order to support the mental health needs of their community. As most streamers are not mental health professionals or advocates, this represents a significant amount of individual labor into researching and sharing information while simultaneously serving as the front-facing social support for an entire community of people. Their efforts

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are significant as are their impacts, but streamers should not have to do this work alone. Collaboration between streaming platforms and mental health organizations is crucial to lightening streamers' emotional and mental load and improving their overall quality of (streaming) life.

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The End is Never The End is Never The End

A Conclusion

MIRUNA VOZARU

ALL OF THIS HAS HAPPENED BEFORE. ALL OF THIS WILL HAPPEN AGAIN

As I start to write the conclusion of this anthology of works centered around the intersection of mental health and video games, I feel a bit overwhelmed. The two topics have had such an intertwined history that it is difficult to even call their meeting point an intersection. Instead, the image of a dual-track roller coaster comes to mind. As the authors in the anthology have shown, the intersections are varied in topic, theme, and tone. Discussions range from the effect of games on the mental health of players, the possibility of using them as tools to increase the well-being of players, or as a means of representing people's psyche and their struggles within. These multiple intersections between games and mental health have been weighed and measured psychometrically, legally, and culturally for decades.

This should come as no surprise. The object of study in the field of psychology and mental health is the behavior of individuals, their affective lives, and cognitive functions. Video games, in turn, provide a virtual space for human behavior to be enacted, for decisions to be made drawing on individual appraisals, and for cognitive capacities to be exercised. Crucially, to the untrained eye, the behavior taking place in video games is separated from the behavior of the flesh and blood individual placed in front of the screen. As arcades first became a popular pastime for the young, psychologists observed that players spent hours staring into the black mirror of the arcade screen, eyes glazed over and hands rhythmically twitching. As an ever-growing number of the youth fell into this seemingly cataleptic state, scientists became concerned. In 1983 in one of the first studies concerning

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the well-being of arcade players, Gwinup et al. stated that"Video-game mania has affected millions of Americans in recent years. "[1] The tone of paternal concern includes a note of panic regarding the spread of this infectious addiction.

Though arcade games have long since lost their cultural relevance, debates surrounding video game addiction as a measurable and diagnosable mental and behavioral condition have carried on. As **Rune Nielsen** discusses in this anthology, in 2022, almost four decades after Gwinup et al.'s study, the World Health Organization (WHO) minted the gaming disorders, which are subsumed under addictive behaviors. The decision follows decades of scholarly debate on the validity of such a diagnosis, and its potential, or lack thereof, as a stand-alone affliction.[2,3] In the dual-track roller coaster of mental health and games, this is one of the shakiest sections of the track. But does the decision made by the WHO mean that this particular ride is over? This question is possibly the only one in this debate that can receive a firm answer, and that answer is no. As Nielsen states, the unknowns of game addiction as a disorder are many, arguably outweighing the knowns. The political pressures under which the WHO may find itself are also part of this complex issue. As the debate surrounding the diagnosis of game addiction will carry on, the political and economic networks within which games, mental health, and the effects that games have on mental health will necessarily play a part in the scholarly debate surrounding the topic. This is currently the case in the discussion around random reward mechanisms and has happened before, with concern to violent video games.

Game-induced violence and game addiction have traditionally been the two horsemen of the gamepocalypse. Like game addiction, game-induced violence and aggression also emerged from the arcade, where players ran over goblins at the skeleton-themed cabinets of DEATH RACE.[4] Named as the source of the first moral panic surrounding video games, DEATH RACE, released in 1976, was the first spark of the fiery debate that has since surrounded the portrayal of violence in video

1 Gwinup, Grant/Haw, Tarek/Elias, Alan. "Cardiovascular changes in video-game players.", in *Postgraduate Medicine*, 74(6), (1983) 245-248. https://doi.org/10.1080/00325481.1983.11698546 (1983).

2 Aarseth, Espen et al.: "Scholars' Open Debate Paper on the World Health Organization ICD-11 Gaming Disorder Proposal", in *Journal of Behavioral Addictions* (2016), pp. 1-4.

3 Ferguson, Christopher, J et al.: "Policy on unreliable game addiction diagnoses puts the cart before the horse." In *Psychology of Popular Media*, 9. 4. (2020).

4 DEATH RACE (Exidy, 1976, Exidy).

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games, and their potentially detrimental effects on the behavior of players.[5] In the decades following DEATH RACE, the research interest in violent games has not ceased but has arguably become more nuanced.

The theme of the preceding edition of the Young Academics Workshop anthology titled VIOLENCE | PERCEPTION | VIDEO GAMES: NEW DIRECTIONS IN GAME RESEARCH is a testament to this diversification of perspectives and growing desire to tackle the representation of violence, and the effects of violent game content in new ways, that treat both the player as a discerning actor and the game as a dynamic, culturally contextualized artifact. In the concluding thoughts of the introduction to the section on violence in games, Chris Ferguson notes that

> Considering all of the above, I argue that it is time to reframe the debate away from the notion of the effects games have on people – a line of research that has seldom borne fruit. Rather, it may be helpful to understand the interactions between games and players, their motivations for playing action oriented games, and how such game play can be understood in the context of a greater milieu of a given individual's life[6]

In this volume, **Nils Bühler** takes the aforementioned different perspective on the debate, to explore not the effects of violent games on youth, but the effects of the paternalistic view on the relationship between the game and the naive player, or, as Bühler puts it, "an imagination of the youth". Such research is necessary in order to reveal the myriad social, political, and cultural networks in which games are embedded, as well as heed the call for more research that acknowledges the player in the broader context of their life beyond the game.

HEY YOU, WOULD YOU HELP ME TO CARRY THE STONE?

While on one hand, the World Health Organization was preparing to warn people about the pandemic of video game addiction, on the other hand, it was advising people to stay inside and play video games to try and guard themselves against an

5 Kocurek, Carly A. "The Agony and the Exidy: A History of Video Game Violence and the Legacy of Death Race.", in *Game Studies*., 12. 1 (2012).

6 Ferguson, Christopher. "Real violence versus imaginary guns. Why reframing the debate on video game violence is necessary", in F. Alvarez , C. Maughan, M. S. Debus (eds.) *Violence | Perception | Video Games: New Directions in Game Research*. (2019), p. 25.

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actual pandemic.[7,8] During the long period of lock-down, unable to socialize as usual with friends and family members, people turned to video games as a source of comfort in uncertainty and socialization without the risk of infection. Games like ANIMAL CROSSING: NEW HORIZONS enabled people who did not belong to the same isolation bubble to share an island where the only uncertainty was the price of turnips.[9,10] While mental health issues were dreadfully exacerbated by the isolation and threat of the pandemic, games provided players with a brief reprieve. This need for an outlet, a community-based support network also influenced the dynamics of, as **Kelli Dunlap** presents, video-game adjacent platforms, such as Twitch. Her discussion of the untrained, ad-hoc mental health carer position in which Twitch streamers found themselves during the uncertain and stressful times of the pandemic illustrates the diverse social networks that games and game platforms form around themselves and the varied roles they play in the lives of players.[11] Throughout the pandemic, the roles of games in the lives of players became more pronounced, as they provided a safe space to congregate and socialize, and sometimes even mourn and hold virtual funerals when they couldn't be near the absent loved one in the real world. However, this shared space and experience of living with and through challenges to mental health and well-being created a unique set of challenges for those who found themselves as the unifying factor in the online community. Dunlap's thoughtful exploration of the lived experience of streamers gives us not only an in-depth look at the roles of community leaders but

7 Canales, Katie: "The WHO is recommending video games as an effective way to stop the spread of COVID-19, one year after adding 'gaming disorder' to its list of addictive behaviors" in The Business Insider, Apr 2, 2020, https://www.businessinsider.com/who-video-games-coronavirus-pandemic-mental-health-disorder-2020-4?r=US&IR=T.

8 World Health Organization: "Online games encourage players to stay mentally and physically healthy at home in World Health Organization Departmental News", November, 2021, https://www.who.int/news/item/16-11-2021-online-games-encourage-players-to-stay-mentally-and-physically-healthy-at-home.

9 ANIMAL CROSSING: NEW HORIZONS (Nintendo EPD, 2020, Nintendo).

10 Zhu, Lin: "The psychology behind video games during COVID-19 pandemic: A case study of Animal Crossing: New Horizons." in *Human Behavior and Emerging Technologies* (2021).

11 Barr, Matthew/Copeland-Stewart, Alicia: "Playing Video Games During the COVID-19 Pandemic and Effects on Players' Well-Being." in *Games and Culture*, 17(1), 122-139. https://doi.org/10.1177/15554120211017036 (2022).

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also an idea of the heterogeneity of game communities and their changing forms depending on the actors involved in them.

While the pandemic has likely increased the volume of day-to-day conversations surrounding the mental health benefits of playing video games, the topic of games and mental health has been going on for decades in academic and industry circles. Amidst these conversations, the genre of serious games has emerged as a lightning rod for both attention and criticism. Part of the criticism surrounding the benefits of games for mental health and well-being revolves around the relatively small amount of time a game requires when compared to other activities in our lives.[12,13] While the easy access to mental health and well-being apps and games promotes awareness and acceptance, it might also dilute the quality of mental health care by lowering the barrier to entry. However, the actor-network dynamic of these apps also appears to be changing. No longer an individual effort of self-development, games like the ones designed and presented by **Rogerio Bordini** and **Oliver Korn** emphasize community, shared experiences, and a space for people to find, if they so wish, a safe environment where their struggles can be recognized by like-minded individuals who can then create a network of support. Clearly, games can function in an online format and can host online communities– this has been the case since the first Multi-User Dungeon. The differentiating aspect however is the focus on the mental well-being of the players.

This approach to game design moves the game into a different position in the relationship between the game, the player and the community. The game is not the central element of the community being formed, but a means through which it forms, and offers the possibility to be an intentional actor in the quest for the betterment of the player's well-being. This approach can also be seen in other well-being-centered games, such as Lumi Interactive's A KINDER WORLD.[14] While most mobile apps apply various strategies to secure user retention, A KINDER WORLD takes the opposite approach, making the player fully aware that they can leave and come back at any time. In the game world, players can send messages of encouragement or advice to one another, or simply describe their day, emphasizing the notion that the journey to mental well-being is not necessarily a solitary

12 Johannes, Niklas/Dienlin, Tobias/Bakhshi, Hasan/Przybylski, Andrew, K.: "No effect of different types of media on well-being." in Scientific Reports 12, 61. https://doi.org/10.1038/s41598-021-03218-7 (2022).

13 Fanfarelli, Joseph: "Games and Dementia: Evidence Needed. " In C. Ferguson, Video Game Influences on Aggression, Cognition, and Attention (1st ed., pp. 163-171). Springer. (2018).

14 A KINDER WORLD (Lumi Interactive, 2022, Lumi Studios).

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one. Both A KINDER WORLD and the NONELINESS app that Bordini and Korn discuss in this anthology deemphasize the relationship between the player and path-enlightening technology. Rather, these innovative games make room for human interconnectivity and enable players to help each other.

Much like the debate surrounding the malicious effects of video games, the discussions surrounding their potential benefits will go on, as it should, because science is iterative, and looking for the last word on the effects of such a complex artifact is bound to produce an incomplete perspective. This section of our anthology is not meant to fall on one side or the other of the debate. What is worth showcasing here, rather, is the ever-evolving role that games have in our lives. They can, and arguably should, be more than self-improvement devices. Instead, they can be a place to congregate, a means to form networks of support. Rather than searching for the ghost in the machine, we instead find other, like-minded individuals both within and beyond the gamewold, just using it to reach out and connect.

GO ASK ALICE, I THINK SHE'LL KNOW

As discussed in the previous section, creative works often reflect back at us an unexpected version of our own mental state filtered through the constraints and the possibilities of technology. Perhaps the most exemplary and holistic version of this process can be found in the representation of mental spaces, as discussed by **Ahn-Thu Nguyen**. It's difficult to address the work on the representation of mind spaces without paralleling the previously discussed chapter concerning the therapeutic use of game development. Both concern the visible, creative representation of mental processes that are are, by their very nature, obscured, private and unseen. And both concern the communication of this mental process in an audio-visual interactive medium. But the role of the human in this process differs. While in one, the developer takes on a creatively introspective role, with the aim of outward communication, in the other, the player is an explorer of a stranger's representation of their most intimate thoughts and dreams. The voyeuristic role afforded to the player is hard to decouple from the experience, particularly in an interactive space, where the individual's psyche hosts their actions. This discordance is exacerbated by what Ngyuen notes as frequent themes of mindspaces, namely trauma, emotions, and dreams. There is an undeniable sense of wonder in mindspaces, of a fantasy within a fantasy, but when we are not the authors there is a nagging question that can persist—is it our white rabbit to follow?

The question, of course, can branch into further discussions of ownership of the actions and narratives that are performed and created within a game. The thesis

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Miruna Vozaru puts forward in the chapter concerning the agency of playable figures is that a feeling of shared agency demonstrated by the mechanics afforded to the player in the game can act as a bridge towards a more open and inclusive outlook on experiences that are acknowledged as being one of another. As Nguyen points out in her discussion of mindspaces, aside from the audiovisual representation of the person's psyche, games also provide mechanical changes and representations which reflect the mental states intended to be shown. There is thus, a link, an invitation extended to the player to exert effort to understand this matter. But representation is not necessarily enough. It is perhaps a looming necessity that developers should contextualize well/designed and descriptive mechanics into the roles attributed to each actor taking part in the interaction. This is likely a very difficult task that I, in the comfort afforded by this conclusion, can push on game developers without practicing the preaching and without awareness of my own role in the conversation. It is a task that requires introspection, the evaluation of our roles in relation to one another, and further, in relation to a virtual other. It is a task that cannot be done from a position of comfort, but only by reaching out and collectively deciding to make better representations of a concept as elusive and as important as the human psyche and mental health. But efforts are already being made to include both mental health professionals and people who live with mental health issues in the development of games that touch on this theme. While perfection may not be achieved, it can be strived for. In the meanwhile, we should keep in mind that we are entering a mind palace, and we should probably take our boots off.

CONCLUSION

Though I started this chapter by discussing the various debates that have accompanied mental health and video games over the years, I do not wish to leave the reader with the impression that such a history should be seen in a negative light. On the contrary, it is certainly a positive sign for a field of research that boasts dedicated academics who are willing to argue for and debate the merits and foundations of their work, and their implications in our day to day lives. The president of the American Psychological Association ended his 2003 speech with the hope that the introduction of digital games research into the field of psychology will be an innovative and productive endeavor, and above all else, academic. The debates surrounding the field—featured in this volume—are proof that his wishes were not unrealistic. Moreover, the contributions in this anthology demonstrate the possibility for ever more perspectives and innovative approaches to tackle the topic

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of mental health in video games. The end is never the end, but who would ever want it to be?

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LUDOGRAPHY

A KINDER WORLD (Lumi Interactive, 2022, Lumi Studios)

ANIMAL CROSSING: NEW HORIZONS (Nintendo EPD, 2020, Nintendo)

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Atmospheres

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Introduction: Slow Play

Notes on Enveloping Ambience in Video Games[1]

SONIA FIZEK

INTRODUCING PLAYABLE ATMOSPHERES

In its foundational years, the field of game studies preoccupied itself predominantly with questions of operationality and computability. We were looking for the heart of gameness,[2] devising methodological toolkits and approaches to game analysis, and juxtaposing narration against rules and mechanics.[3, 4]

1 This text is based on a chapter "Ambient Play", originally written by the author as part of a monograph *Playing at a Distance. Borderlands of Video Game Aesthetic* (forthcoming from the MIT Press in 2022).

2 Juul, Jesper: "The Game, the Player, the World: Looking for a Heart of Gameness", In: Marinka Copier and Joost Raessens (eds.), *Proceedings of the 2003 DiGRA International Conference*, pp. 30-45.

3 Eskelinen, Markku: "The Gaming Situation. Game Studies", In: *The International Journal of Computer Game Research*, 1(1) (2005).

4 Aarseth, Espen: "Playing Research: Methodological Approaches to Game Analysis." Paper presented at the *5th International DAC Conference*. RMIT University, Melbourne, Australia, May 19-23, 2003; Konzack, Lars: "Computer Game Criticism: A Method for Computer Game Analysis", In: Frans Mäyrä (ed.), *Proceedings of Computer Games and Digital Cultures Conference*, Tampere: Tampere University Press 2002; Consalvo, Mia, Dutton, Nathan: "Game analysis: Developing a methodological toolkit for the qualitative study of games", In: *Game Studies* 6/1 (2006); Zagal, José P.: „Towards an Ontological Language for Game Analysis". Paper presented at the

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Perhaps it is fair to say that there was a need in the scholarly community to develop methods and perspectives able to capture the essence of computer play. In the last few years, the affective, bodily, and performative dimensions of video gaming have gained considerable attention.[5] This anthology then may be read as a symptom of its time and an attempt to pin down one of the most volatile aspects of video games and video gaming.

Thinking about video games in terms of playable atmospheres opens diverse interpretational pathways. The term 'atmosphere' itself remains highly ambivalent. A short etymological excursion lays bare its meteorological origins (from Latin *atmosphaera*, composed of Greek *atmós* "vapor, steam" and *sphaîra* "ball, globe, terrestrial or planetary sphere").[6] In her exploration of ludic wind in this volume, **Magdalena Leichter** notices how in the eighteenth century the literal weather-related meaning of atmosphere extended toward a more figurative dimension, referring to social moods and ambiances. Philosopher Gernot Böhme, whose work is central to this publication, conceptualizes atmospheres as affective spaces. Despite their high subjectivity or "quasi-objectivity,"[7] atmospheres in Böhme's sense are reproduced by different agents as "sound, illumination, or the geometry of the room."[8]

Although the majority of contributions on the pages to follow link the concept of atmosphere to the question of aesthetic posed by Böhme, they all remain diverse in their theoretical approaches and examples. And so, Magdalena Leichter looks at atmospheres predominantly as simulated meteorological phenomena, which have the capacity to immerse players in the gameworld. **Katja Aller** seeks to understand uncanny atmospheres in the walking simulator genre. **Anh-Thu Nguyen** gives the readers a glimpse into a futuristic noir atmosphere of CYBERPUNK 2077 (2020) and the 13th century war-driven gameworld of GHOST OF TSUSHIMA (2020),

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5 Anable, Aubrey.: *Playing with Feelings: Video Games and Affec*t, Minneapolis: Minnesota Press 2018; Jayemanne, Darshana: *Performativity in Art, Literature and Video Games*, London: Palgrave McMillan 2017; Keogh, Brendan.: *A Play of Bodies: How We Perceive Videogames*, Cambridge, MA: MIT Press 2018; Bösel, Bernd, Möring, Sebastian: "Affekt", In: *Philosophie des Computerspiels: Theorie – Praxis – Ästhetik*, Daniel Martin Feige, Sebastian. Ostritsch, and Markus Rautzenberg (eds.), Stuttgart: J.B. Metzler 2018, pp. 193-204.

6 See: https://www.dictionary.com/browse/atmosphere.

7 Böhme, Gernot: *The Aesthetics of Atmospheres*, London, New York: Routledge 2017.

8 Ibid., p. 3.

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and discusses the political dimension of deploying Japanese visual aesthetic in pop culture. **Jonathan Jung Johansen** brings a systemic dimension to light. He sees atmospheres in video games as predominantly generated by circular player/game reciprocity and game mechanics. **Vadim Nickel** and **Björn Redecker** shift the attention towards the auditive character of atmospheric gameplay. While Redecker develops a theoretical framework of the interrelationship between sound, music, and atmosphere, Nickel looks at ambient modes of experiencing video games, departing from the concept of ambient music.

In this short opening text, I would like to contribute to the above-mentioned diverse body of work on playable atmospheres by sketching the emerging practice of *slow play*, which is regarded as a reaction to the ever more present bombardment of digital stimuli and a way to carve out spaces to think and contemplate within the oversaturated digital sphere.

Slow play is embedded here within an ambience—rather than atmosphere—centered discourse. Although the two terms, especially in their colloquial meaning, may be used interchangeably, they open different analytical horizons.[9] Working with ambience allows me to integrate both the affective dimension as well as the computational character of digital media and video games. And so, I would like to differentiate here between two different and yet interconnected types of ambience: *affective* and *operational*. While affective ambience is framed within the concepts of atmosphere and mood, its operational counterpart is understood as a media function. Affective ambience points towards a relaxing practice of slow play manifested by aimless wandering in the gameworld or contemplating its surroundings rather than engaging in the challenges of structured and/or competitive gameplay (as opposed to hard core gaming, speed running, or highly rhythmized professional gaming). It also characterizes sensory engagement with soothing software (self-care, meditation, and ambient music game applications). Operational ambience, on the other hand, relies on background operations, which are to a large degree executed automatically by the gaming algorithms rather than the human player. Here, we are dealing with ambience as a quality of computational media. Ambience, then, seems much more capacious a term than atmosphere.

9 See also Felix Zimmermann's conclusion in this volume, p. 243-254.

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AMBIENCE ACROSS MEDIA

The conceptual origin of ambience is difficult to pinpoint. Eric Satie's looped piano music of the 1890s and Furniture Music of the Muzak Corporation of the 1920s tend to be mentioned as the precursors of ambience in the domain of sounds. It was, however, with Brian Eno's album AMBIENT 1: MUSIC FOR AIRPORTS (1978) that the concept entered popular discourse.[10],[11] Ambient music was supposed to be "as ignorable as it is interesting," accommodating many levels of listening attention without enforcing one in particular, as well as inducing "calm and a space to think," to put it in the words of Eno himself.[12] The genre was also practiced outside of Europe. For instance, in Japan in the 1980s Hiroshi Yoshimura released his first ambient album GREEN. In recent years, sound ambience has been ever more influenced by algorithms. The popular music platform Spotify, for instance, quantifies the listener's taste by collecting data regarding their music choices and in effect suggesting suitable music lists and artists. This pattern-driven content optimization has transformed the music listening, from reaching out for concrete albums, artists, or songs to content streaming.[13]

Despite the strong ambient predisposition toward sound, vision-driven ambient forms also pervade the media landscape. Visual arts, film, television, even literature often "act" as surrounding media, fading in and out while we are busy doing something else. In her monograph AMBIENT TELEVISION, Anna McCarthy explores the pervasive dimension of television, going beyond the household fixture it is historically associated with. TV screens are all around us: in bars, shops, waiting rooms, at airports, sport events, and in a variety of workspaces. [14]

The Ambient Literature project poses a similar question regarding how the aesthetics of reading changed through pervasive and ubiquitous computing.[15] The project's website curates literary works that manifest alongside our daily routines between the ethereal and the magical, oscillating between foreground and

10 See also Vadim Nickel's paper in this volume on this topic, p. 193-206.

11 AMBIENT 1: MUSIC FOR AIRPORTS (Eno, Brian. Polydor, 1978. Vinyl LP).

12 The words appear as liner notes on the cover of Brian Eno's 1978 Ambient 1: Music for Airports / Ambient 1 album.

13 An in-depth critical analysis of Spotify and the transformation from music files into streamed experience can be found in the monograph *Spotify Teardown: Inside the Black Box of Streaming Music* by Maria Eriksson et al. (Cambridge, MA: MIT Press, 2019).

14 McCarthy, Anna: *Ambient Television: Visual Culture and Public Sphere*, Durham, NC: Duke University Press 2001.

15 For details, see https://research.ambientlit.com.

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background experience. To paraphrase the authors of the project, it engages within a wider paratextual world, extending beyond the materiality of the written word.

The resurgence of interest in ambience covers many fields, theoretical and applied alike. Even hardware manufacturers have responded to the ambient "hype." Ambient mode is a feature supposed to merge Samsung television sets organically with living spaces, blending the TV screen with its environment. Amazon's voiced-controlled "smart" speaker Alexa is perhaps the most tangible commercial manifestation of the enveloping aesthetic. Placed in our living rooms, bathrooms, and bedrooms, it constantly operates in the background, listening for potential commands to play favorite tunes, browse the Internet, or read emails. It is seamless and seeming; harmoniously blending within its surroundings and creating an illusion of absence, or rather presence on demand.

Ambience then, can denote varying phenomena depending on the specificity of the medium. In optical media (television and graphic displays), it is often concomitant with being physically surrounded by screens and imagery, which have the capacity to create a certain atmosphere (e.g., through the relaxing influence of smoothly changing lighting in the sauna or an airplane cabin). In literary texts, ambience may manifest itself in terms of intertextuality, a huge network of associations and references a given text can generate outside of itself or in its background.

Computational media are different. They not only can produce representational affect-inducing ambience (by imagery, association, or physical presence) but more importantly they trigger what I have already mentioned in the opening paragraphs as *operational ambience* (by algorithmic background operations). Alexander Galloway's *ambient act*, one of the first interpretations of ambience within the context of video games, serves as a fitting example here. This act depicts the operationality of the machine and its state of "waiting" for the player to come back to the system and engage with it as an agent. Galloway differentiates between a game pause and an ambient act, which is usually accompanied by visible micromovements, signaling that a game software is "running" although no gameplay is happening: "The ambience act is the machine's act. The user is on hold, but the machine keeps on working."[16] In Galloway's interpretation, ambience expresses a visual representation of the operationality of software.

16 Galloway, Alexander R, *Gaming: Essays on Algorithmic Culture*. Minneapolis: University of Minnesota Press, 2006.

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VIDEO GAMES AS AMBIENT MEDIA

Even though video games are a native ambient medium, relying on background computer operations, constantly processing data necessary for sustaining gameplay, they have remained relatively underexplored and underrepresented within the ambience discourse. The few previous attempts to pin down ambience at play have predominantly looked at pervasive gaming practices like transmedia and augmented reality, which combine the virtual with the real creating a dispersed experience and pervading into spaces typically devoid of play.[17] In many ways, the concepts of gamification,[18] ludification of culture,[19] or the interference of work and play[20]—extensively discussed in media and game studies—connect to an ambient character of digital play. Also, Paolo Rufino's attempt to see self-optimization applications as "games to live with" exemplifies their ever present and surrounding dimension.[21] More recently, Larissa Hjorth and Ingrid Richardson have studied ambient play within the context of mobile gaming, grounding their research in ethnographic analysis of play practices of selected media users.[22] For Hjorth and Richardson, ambient play expresses the all-pervasive character of games and playful media, which become an inherent part of our everyday media routines. Ambience captures the constant movement between the digital, material, and social worlds.

17 Hjorth, Larissa, Richardson, Ingrid: "Ambient Play", In: *Gaming in Social, Locative and Mobile Media*, London: Palgrave Macmillan 2014, pp. 59-75.

18 Deterding, Sebastian. et al.: "Gamification: Toward a Definition", In: *The ACM CHI Conference on Human Factors in Computing Systems*, Vancouver, BC, Canada, May 7-12 2011: http://gamification-research.org/wp-content/uploads/2011/04/02-Deterding-Khaled-Nacke-Dixon.pdf.

19 Dippel, Anne, Fizek, Sonia: "Ludification of Culture: The Significance of Play and Games in Everyday Practices of the Digital Era", In: Gertraud Koch (ed.), *Digitalisation: Theories and Concepts for Empirical Cultural Research*, London: Routledge 2017, pp. 276-92.

20 Kücklich, Julian: "Precarious Playbour: Modders and the Digital Gaming Industry", In: *Fibreculture Journal* 5 (2005), https://five.fibreculturejournal.org/fcj-025-precarious-playbour-modders-and-the-digital-games-industry.

21 Ruffino, Paolo: "Games to Live With: Speculations Regarding NikeFuel", In: *Digital Culture & Society* 2 (1): "Quantified Selves and Statistical Bodies", March 2016), pp. 153-60.

22 L. Hjorth, I. Richardson: *Ambient Play*.

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Many video games, like other ambient media, neither sit in the forefront asking for our full attention, nor blur out recede completely into the background. They float "between irrelevance and relevance,"[23] allowing perception to be dispersed, distributed, or nondirected. This dispersion questions traditional views of video game aesthetics, which assume that the player is supposed to pay close attention to an aesthetic object and its surroundings. Ambient play seems to have little to do with a fully immersive gaming experience. It does not require an intense and deep focus from its players, who plunge into the gameworld just to be out of it the next minute if need be. We could go even further by assuming that ambient media produce a very different type of aesthetic, what Jens Schröter and others call "background aesthetic."[24] It remains in contrast with a traditional aesthetic experience. While the latter requires the audience's undivided attention towards the aesthetic object, background aesthetic relies on experiences of dispersion, distribution, and distraction. Surprisingly, many gameplay sessions are enjoyed at a slow pace, from a distance, indirectly or intermittently; on an on-and-off basis, while other activities are taking place. Think of such ludic practices as aimless wandering in walking simulators, observing others at play, or letting the game run in the background like a Tamagotchi.

By now, we can observe that ambience relates to a variety of play styles and ludic phenomena, some depicting in-game actions, others pointing towards adjacent practices. I do not necessarily perceive this diversity as problematic, but rather see it as a media symptom of its time. Ambience envelops play and players in many complex ways. Most of the examples, however, can be subsumed under the two broad categories I introduced at the beginning of this text: *affective* and *operational* ambience.

For instance, the intermittent play rhythms in idle games (semi-automated games, which do not require the player's constant attention and action) are a manifestation of the operational aspect of digital games. Because they can "run" without human input, their ambience (similar to Galloway's *ambience act*) becomes a media function. Moreover, the pervasive character of mobile games (as mentioned with reference to research on ambient play by Hjorth and Richardson) relies on the capacity of digital media to continue operating in the background.

23 Ernst, Christoph: "Achtsames Ambient: Über Ambient-Ästhetik, Medienökologie und Medienpraktiken der Achtsamkeitsmeditation", In: Jens Schröter, Gregor Schwering, Dominik Maeder and Till A. Heilman (eds.), *Ambient: Ästhetik des Hintergrunds*, Wiesbaden: Springer Fachmedien 2018, p. 221.

24 Schröter, Jens, Schwering, Gregor, Maeder, Dominik, Heilmann, Till. A. (eds.): *Ambient: Ästhetik des Hintergrunds*, Wiesbaden: Springer Fachmedien 2018.

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The in-game practices of meditative slow walking in game spaces in the next section may seem very different from semi-automated idling or pervasive mobile gaming. However, all are depictions of ambience; the first two of operational ambience, while the latter of its affective counterpart. And although in this text I focus primarily on slowness and the affective side of ambient play (or the atmospheric side, to make a bow towards the research presented in this volume), I see it as crucial to grasp ambience at play in its entirety. Only then are we able to embed and understand all the diverse practices (in-game and peripheral to gameplay) within the contexts of ambience or atmosphere.

SLOWNESS AT PLAY

We are living in an era of "dromocracy," of acceleration, notes Paul Virilio.[25] The world around us is speeding up: faster cars, faster broadband, faster lifestyles. Companies are overtaking one another in delivering new versions of the same old smartphone or laptop. Gaming consoles are marketed based on their ever more efficient computational capacities. However, as technology accelerates, many players feel the need to decelerate. This trend is, for instance, reflected in a slow approach to design, one that would limit the player's or user's agency in ways that promote a more contemplative mode of engagement.[26] In their work on *Slow Technology*, for instance, Hallnäs and Redström argue that the increasing availability of technology in environments outside of the workplace requires the expansion of interaction design practice from creating tools to make people's lives more efficient to "creating technology that surrounds us and therefore is part of our activities for long periods of time."[27] Slow technology incorporates a design agenda aimed at inverting the values of efficient performance and emphasizing the creation of technologies that support moments of reflection, mental rest, slowness, and solitude. As computers are becoming more ubiquitous, they turn from tools being used in specific situations to continuously present assistants enveloping their users in their everyday rhythms, such as speech recognition algorithms built into our

25 Virilio, Paul: *Speed and Politics*, trans. Mark Polizzotti, new ed. 1977; Cambridge, MA: MIT Press 2006.

26 Hallnäs, Lars: "On the Philosophy of Slow Technology", *Acta Universitatis Sapientiae-Social Analysis* 5 (1) (2015), pp. 29-39, http://www.acta.sapientia.ro/acta-social/C5-1/social51-03.pdf

27 Hallnäs, Lars, Redström, Johan: "Slow Technology – Designing for Reflection", In: *Personal and Ubiquitous Computing* 5, no. 3 (August 2001), p. 201.

https://doi.org/10.14361/9783839462645 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-SA

smartphones or meditation apps like HEADSPACE.[28] Envelopment allows for a deeper understanding of technology design, going beyond its immediate use to solve a concrete problem or meet an objective. Enveloping design is more holistic because it allows for mapping of an expressional landscape.[29]

Another way to grasp slowness in technology is to focus on its ubiquitous calmness or what Paul Roquet names the "aesthetics of calm."[30] Roquet's work is embedded within the context of Japanese culture and its use of technologies of mood-regulation as modes of self-care and healing strategies. He looks at ambient music, film, video installations, and, as paradoxical as it may seem, literature. He writes: "like ambient music, ambient literature is an artistic response to the demand for transposable calm. Ambient literature rethinks the novel as a mood-regulating device."[31] An ambient novel is supposed to exert a calming effect on its readers by building an enveloping space around them and providing a nurturing, safe, and predictable space to think while guarding its "drifting readers" from the intense seriousness of their everyday lives.[32] Ambient media in general provides deep affective experiences with the ability to induce calmness amidst the instability and uncertainty of contemporary life.

Roquet claims that the ambient aesthetics of calm extends beyond the borders of any single national culture or region and beyond the borders of any single medium.[33] Although video games are traditionally associated with the military-entertainment complex or management-like optimization strategies, they can also feature calming environments with soothing and mood-inducing qualities.[34] This imaginary, however, fails to acknowledge video games as deeply affective spaces or what Aubrey Anable calls "affective systems."[35] Their architecture exterts as calming and enveloping an effect on players as ambient literature has on its readers. While ambient and calming literature often manifests itself via an easy-to-read style or safe everyday world settings known to its readers,[36] comfort and safety

28 HEADSPACE (Headspace Inc. 2010).

29 L. Hallnäs, *Philosophy of Slow Technology.*

30 Roquet, Paul: *Ambient Media: Japanese Atmospheres of Self*, Minneapolis: University of Minnesota Press 2016.

31 Ibid., 89.

32 Ibid., 106.

33 Ibid., 92.

34 Pias, Claus: *Computer Game Worlds*, translated by Valentine A. Pakis, Berlin: Diaphanes 2017.

35 A. Anable, *Playing with Feelings*.

36 P. Roquet, *Ambient Media*, p. 99.

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within ludic spaces may be achieved by limiting the player's agency, using calming and ambient soundscapes, or making use of the enveloping character of computation, letting the game play in the background, assisting the player seamlessly in their everyday rhythms.

Many video games and play styles speak to this vision of slow and calm digital technology. The gameworlds of ABZU, DEAR ESTHER, THE LEGEND OF ZELDA: BREATH OF THE WILD, RED DEAD REDEMPTION 2 or TINY BOOKSHOP all address the slow turn in different ways.[37, 38, 39, 40, 41] The first two examples are especially interesting as they remove the element of direct challenge, metaphorical death, or the well-known game over. By doing this, they present players with gameworlds devoid of simulated uncertainty, a quality that usually defines the core of video games.[42] The easy-to-play style of walking simulators, affective games, or the so-called "non-games" is a fitting ludic illustration of Paul Roquet's argument regarding the ambient style of Haruki Murakami's novels characterized by an easy-to-read style.

ABZU is a videogame that follows in the footsteps of FLOW, FLOWER and JOURNEY, all deeply meditative titles whose rewarding experience stems from moments of contemplation combined with calming gameplay rhythms and accompanied by a relaxing sound layer (in the case of JOURNEY, sounds are reduced to the minimum).[43, 44, 45] ABZU starts by inviting the player to dive underneath the blue surface of endless water glittering in the sunrays. A few gentle notes of a bassoon merge with the background sounds of the marine life as the player submerges deep into the sea. Classical music accompanies the player throughout the whole game, setting an emotional tone and a calming rhythm of play. Although ABZU does

37 ABZU (Giant Squid, 2016: 505 Games).

38 DEAR ESTHER (The Chinese Room/Curve Digital 2012, O: The Chinese Room / Robert Briscoe).

39 THE LEGEND OF ZELDA: BREATH OF THE WILD (Nintendo Entertainment Planning 2017, O: Nintendo).

40 RED DEAD REDEMPTION 2 (Rockstar Studios, 2018: Rockstar Games)

41 TINY BOOKSHOP (David Abel Wildemann / Raven Rusch 2021, O: Cologne Game Lab)

42 Rautzenberg, Markus: *Framing Uncertainty: Computer Game Epistemologies*, London: Palgrave Macmillan 2020.

43 FLOW (Sony Interactive Entertainment 2006, O: Thatgamecompany / Jenova Chen / SuperVillain Studios).

44 FLOWER (Sony Interactive Entertainment 2009, O: Thatgamecompany).

45 JOURNEY (Sony Interactive Entertainment 2012, O: Thatgamecompany / Santa Monica Studio).

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involve faster-paced moments where acceleration and swift turns are necessary to avoid enemy objects, most of its gameplay resembles a meditation session or a cathartic dance. Meditation in this case is not only a metaphor for gameplay. ABZU allows the player to enter twelve meditation modes. Once the meditation statues are discovered in the game, the corresponding meditation zones are unlocked in the menu and may be accessed independently of the main gameplay. In those moments, ABZU morphs into affective meditation technology. While in the mode, we can observe fish schools, while slowly turning the camera around the scene. While playing in the meditation mode it is impossible to actively exert influence upon the surrounding world. Immersed in the audiovisual spectacle, the player may let go following the ambient rhythm of the game. ABZU is a game which could as well be referred to as a mood medium, one that not so much mediates between two states but surrounds the player like air does.[46]

DEAR ESTHER slows the player down by stripping the interactive experience to its minimum-walking. Perhaps that is why the game is said to have given rise to the now common 'walking simulation', a genre that has become part of a long tradition of "gendered wandering", a term introduced by Melissa Kagen."[47] We cannot run, speed up, or jump; even picking up objects, one of the most common interactions in first-person adventures, is not an option. All that can be done is drifting through the atmospheric gameworld, choosing the direction of the stroll, and contemplating the melancholic surroundings while listening to the narrator. Most of the game happens in the player's head as they admire the gameworld or succumb to the stream of thoughts while wandering around the island. Slow walking as a central mode of experience brings back to life the Romantic figure of the *flaneur*. In the 19th century many used to stroll the streets of busy modern cities and observe the pace of life from a distance, as if refusing to succumb to its rhythms. Digital wanderers, just like 19th century flaneurs, pass through the gameworld at their own pace, leaving no trace of their existence.[48] The deeply contemplative character of moving through gameworlds such as DEAR ESTHER's has also

46 Media and air have a lot in common. Paul Roquet traces the ambient character of media in Newtonian physics, which sees air as a medium. Media and air took different paths just to reunite conceptually again.

47 Kagen, Melissa: "Walking Simulators, #GamerGate, and the Gender of Wandering", In: Jonathan Eburne and Benjamin Schreier (eds.), The Year's Work in Nerds, Wonks, and Neocons, Bloomington: Indiana University Press 2017, pp. 275-300.

48 For more on digital flânerie in video games, see: Maughan, C. L. *The Return of Flânerie*, 2021.

https://doi.org/10.14361/9783839462645 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-SA

inspired the emergence of the new term "ambience action game."[49] Felix Zimmermann and Christian Huberts argue that it makes for a much more fitting depiction of the affective landscape experience, as it leaves behind the purely functional understanding of gameworlds. Ambience, as opposed to walking, allows virtual spaces to exist without succumbing to an array of gameplay functions.

THE LEGEND OF ZELDA: BREATH OF THE WILD offers the player a vast open world to explore and interact with in seemingly endless ways. Cooking illustrates the complexity of the emergent gameplay awaiting the player. Almost anything that can be picked up, hunted, fished, or found may end up in the hot pot. There hardly seems to be a prescriptive way of mixing the ingredients. Despite the highly complex and interactive world, BREATH OF THE WILD provides enough space for calm solitary moments, strolling through the high grass, listening to the wind, or getting lost in the vastness of the world. In "The Rise of the Ambient Video Game," Lewis Gordon describes BREATH OF THE WILD as sensory soothing software:

> "In the evening I sit on the couch, letting the colours and sounds of the digital world wash over me, allowing my brain to slowly decompress. It's a relaxation activity that slips nebulously into self-care, the video game equivalent of putting an ambient record on."[50]

Many other games not mentioned in this chapter tap into the ambient slow experience, especially a mobile genre of "cozy" games or self-care and meditation games such as ZEN KOI (2016), rewarding the player's engagement with soft music and minimalistic relaxing audio background, calm gameplay, and a soothing aesthetic.[51]

The final example I would like to mention within the context of slowness is TINY BOOKSHOP. This wonderful, playful experience was developed as a BA project by two students of the Cologne Game Lab—David Wildemann and Raven Rusch. The game was originally conceptualized as a playful interpretation of an anti-capitalist or post-capitalist bookshop management. Instead of multiplying profits from book sales in the town of Bookstonbury, the player is encouraged to

49 Zimmermann, Felix, Huberts, Christian: „From Walking Simulator to Ambience Action Game. A Philosophical Approach to a Misunderstood Genre", In: *Press Start* 5 (2019), https://press-start.gla.ac.uk/index.php/press-start/article/view/126.

50 Gordon, Lewis: "The Rise of the Ambient Video Game", Outline (blog). Post published April 17, 2018: https://theoutline.com/post/4181/ambient-video-game-legend-of-zelda?zd=1&zi=hq33dwfd.

51 ZEN KOI (Land Shark Games, 2018).

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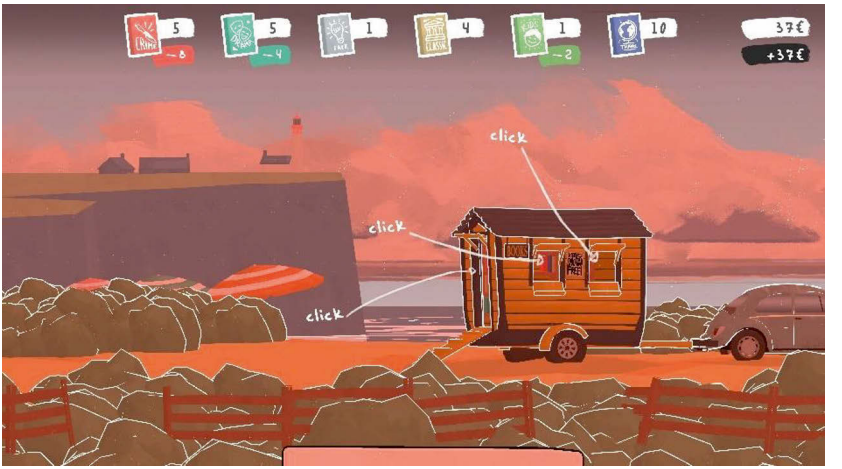
enjoy the ritual of stocking up books and watching as the non-player characters visit the bookshop caravan. Ocassionaly, we can engage in a dialogue and diversify the slowly progressing gameplay by reading the local "Bookstonbury Review" newspaper or customizing our caravan. The slow-paced gameplay is accompanied by gentle background music, which sets the tone for the relaxing experience.

Figure 1. A screenshot from TINY BOOKSHOP, a game developed by students of the Cologne Game Lab.



Credit: David Abel Wildemann and Raven Rusch.

Slow play is a manifestation of the strategy of living/playing in an age of speed. It creates pockets of stillness in an ever more accelerating digital everyday. The desire for slow ambience may be interpreted as a defensive mechanism to stimuli overload; in other words, a "coping mechanism for life under neoliberal capitalism."[52] Slow technology in general, and slow play in particular, promote moments of reflection, calm, and rest in rapidly changing environments.

52 Roquet, Ambient Media, 21.

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AMBIENCE AS A NEW AESTHETIC CATEGORY

Ambience is a fertile media-theoretical concept. It provokes many interpretational pathways and allows seeing gaming culture as a vital part of a larger ambient media landscape. Ambience understood within the context of slowness opens a discussion about the sort of play that is characterized by distance rather than close and focused engagement; moments of ludic ambience rather than almost undisturbed, hands-on participation; and perhaps safe enveloping calmness rather than simulated uncertainty. More importantly, ambience complicates the usual story of an aesthetic video gaming experience, which is usually regarded as a foreground activity, requiring undivided attention and almost uninterrupted action from its audience. And yet, as I have demonstrated in this text, alongside highly-focused gaming practices, other digital play formats and habits have emerged. Video games, and by extension digital media, cannot be fully understood without considering their ambient character.

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Cool Games, Cool Japan

Staged Atmospheres in CYBERPUNK 2077 and GHOST OF TSUSHIMA

ANH-THU NGUYEN

INTRODUCTION

The presence of East Asian aesthetics in popular culture is nothing new. Ridley Scott's BLADE RUNNER is perhaps the most prominent example, featuring Japanese neon signs, billboards, advertisements, and food stalls in the Hong Kong-inspired cityscape of 2019 Los Angeles.[1] The cyberpunk genre turned these elements into genre-marking motifs, from current television shows such as ALTERED CARBON, to mainstream video games such as CYBERPUNK 2077 or indie titles such as CLOUDPUNK.[2,3,4] With gameworlds becoming grander and more explorative in their nature, video games—open world games in particular—are marketed as unique experiences enacted within staged spaces and distinct atmospheres. Open world games emphasize this experience by encouraging free traveling, exploring, and even sightseeing in their gameplay. The space these actions take place in, and the atmosphere that surrounds them, become a centerpiece. As I argue here, the *staged atmospheres*—following Mikkel Bille, Peter Bjerregaard and Tim Flohr Sørensen—are commodities and, as such, are deeply embedded in power relations

1 BLADE RUNNER (US/HK 1982, D: Ridley Scott).

2 ALTERED CARBON (US 2018).

3 CYBERPUNK 2077 (PL 2020, O: CD Projekt Red).

4 CLOUDPUNK (DE 2020, O: Marco Dieckmann, Ion Lands).

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and cultural-social dynamics, such as tourism or nation branding.[5] To address the nature of these commodified staged atmospheres, I consider two games: CYBERPUNK 2077 and GHOST OF TSUSHIMA.[6] The former will demonstrate how staged atmospheres build cyberpunk cities with themes of post-human technology, multiculturalism, and rapidly changing society. GHOST OF TSUSHIMA, on the other hand, is an example of how staged atmospheres in an open world game function as a marketing tool, in this case Japan's soft power diplomatic strategy.

CYBERPUNK: STAGED ATMOSPHERES AS EXPRESSIONS OF POWER

From the beginning of CD Projekt Red's marketing campaign for its open world game CYBERPUNK 2077, they emphasized free-form gameplay, including the exploration and experience of the game's metropolis, Night City. An official promotional video described its gameplay as: "[…] a glimpse into the world of perils and possibilities that is Night City – the most vibrant and dangerous metropolis of the future."[7] Its vibrancy and danger are shown through its cyberpunk setting: street food vendors, bustling streets, various shop fronts and neon signs across towering buildings, and crowds of people live their lives among many others. Fractions of dialogues from passing strangers, police sirens, and announcements in various languages fill the soundscape. The player is promised a video game city more organic and livelier than ever before, a promise built on a captivating cityscape that uses its cyberpunk setting to explore themes of technology in contention with what it means to be human, or consumer capitalism and corporate power. The game does not sell Night City the game, but Night City the experience.

It is here concepts of experience, tourism, and atmospheres collide. Almost too naturally do video games fall into the "experience economy" as defined by Joseph Pine and James Gilmore.[8] In this sense, they are commodified products that aim to provide "time enjoying a series of memorable events that a company stages – as in a theatrical play – to engage [a person] in an inherently personal

5 Bille, Mikkel et al.: "Staging Atmospheres: Materiality, Culture, and the Texture of the in-between", In: *Emotion, Space and Society* 15 (2014), pp. 31-38.

6 GHOST OF TSUSHIMA (US 2020, O: Sucker Punch Productions).

7 Cyberpunk 2077.: "Gameplay Reveal – 48-minute Walkthrough." YouTube, 28 Aug. 2019. https://youtu.be/vjF9GgrY9c0.

8 Pine, Joseph/Gilmore, James: *The Experience Economy*. Updated Edition. Boston: Harvard Business Review Press 2011.

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way."[9] Tourism is directly tied to these commodified products, as John Urry and Jonas Larsen observe, because experiences need staged places, and thus, tourist places are designed to provoke what they call the tourist gaze.[10] They explore venues that make full use of their space to tell a story and follow a visual and architectural narrative to guide their guests through its space, such as Disneyland or the hotel and casino resort Luxor in Las Vegas. Similarly, atmosphere is closely tied to these spaces, emphasizing not the structure of the place itself but what can be felt there:

"atmospheres can be produced consciously through objective arrangements, light, and music [...]. But what they are, their character, must always be felt: by exposing oneself to them, one experiences the impression that they make. Atmospheres are in fact characteristic manifestation of the co-presence of subject and object."[11]

The purposeful creation of atmospheres for entertainment has become a dominant strategy to make experience-based products such as video games appealing. This can be referred to as a staged atmosphere, as Mikkel Bille, Peter Bjerregaard, and Tim Flohr Sørensen describe:

"Still, architects and designers intentionally shape the experience of, and emotional response to, a place through the material environment, seeking-with various degrees of success-to affect people's moods and guide their behavior for aesthetic, artistic, utilitarian, or commercial reasons."[12]

Although they shape the material environment to create a place, video games seek the very same in their spatial architecture. Indeed, the spatial dimension is inherent to video games, as they share an infatuation with theming of their spaces by "[finding] a spatial and architectural form that will resonate with people," an "architecture of persuasion."[13] Perhaps because video games lack a physically real space, they are even more obsessed with creating it digitally—a kind of "spatial fetishism," as Rolf Nohr describes. Traveling, exploring, observing, and conquering space becomes the primary drive in open world games: "the experience of a vast

9 Ibid., p. 3.

10 Urry, John/Larsen, Jonas: *The Tourist Gaze 3.0*. Los Angeles: SAGE 2011, p. 120.

11 Böhme, Gernot: "Atmosphere as an Aesthetic Concept", In: *Daidalos* 68 (1998), pp. 112-115, here p. 114.

12 Bille, Mikkel et al.: *Staging Atmospheres*, p. 33.

13 Lukas, Scott: *Theme Park*, London: Reaktion Books 2008, p. 69.

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landscape becomes an end in itself."[14] Just as tourist spaces are intentionally designed to create atmospheres that serve as commodified products, video games design atmospheres to deliver unique experiences in a similar fashion. Night City's allure is the vibrancy, liveliness, and cyberpunk themes embedded in its environment. Thus, a closer look at its environment will yield insight into how atmospheres are staged.

In its endeavor to give players a unique cyberpunk city experience, the game uses well-known cyberpunk visual tropes to create its cityscape. Comparing CYBERPUNK 2077 to one of the most well-known and genre-defining cyberpunk films BLADE RUNNER, both emphasize their respective city's atmosphere. First, Night City and the futuristic Los Angeles of BLADE RUNNER embody the dominance of technology in almost all aspects of life. This is reflected visually in the city through its holographic billboards, advertisements, and high-rise apartment buildings. Second, the same billboards also suggest the multicultural aspects of the city, particular Asian-themed places such as "Masala Studios," "Kabayan Foods," or "Kiroshi Optics." The cityscape and the social spaces "borrow from Asian motifs, albeit vague and general ones" to create a "futuristic noir atmosphere."[15] This includes both city's frequent depiction of Asian food stalls: BLADE RUNNER's protagonist Deckard visits an Asian noodle stall with a Japanese-speaking owner and CYBERPUNK 2077's protagonist V meets their friend Jackie, who is slurping away on noodles at a similar stall. Although Night City is nowhere near as noir as BLADE RUNNER's Los Angeles—particularly the bright and colorful views of daytime Night City—both cities have strong similarities in their shared fictional locations with real cultural currents of California. The cityscape builds its atmosphere not only through specific visual tropes, but also on cultural themes.

One of these recurring themes is techno-orientalism in cyberpunk cities. Although otherwise not an overt theme of BLADE RUNNER, certain scenes set the tone of the film and thus the atmosphere of futuristic Los Angeles:

"Indeed, one of the most iconic images from the film is of a giant electronic advertising billboard featuring a woman made up to look like a Japanese geisha (played by American

14 Cf. Nohr, Rolf, F.: "Raumfetischismus. Topografien des Spiels", In: *Repositorium Medienkulturforschung* 3 (2013), pp. 2-24; Bonner, Marc: "On Striated Wilderness and Prospect Pacing: Rural Open World Games as Liminal Spaces of the Man-Nature Dichotomy", In: *Proceedings of DiGRA 2018*, p. 1-18, here p. 3.

15 Kin Yuen, Wong: "On the Edge of Spaces: 'Blade Runner', 'Ghost in the Shell', and Hong Kong's Cityscape", In: *Science Fiction Studies* 27 (2000), pp. 1-21, here p. 4.

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actress Alexis Rhee). This image, and the film in general, combines the exoticism of Japan with its electronic (and western) commodification."[16]

In CYBERPUNK 2077, these tropes are still present. Kiroshi Optics, for instance, is an eye implants manufacturer. On the other hand, The Arasaka Corporation is the game's antagonistic security and banking megacorporation which manufactures vehicles and military equipment for global distribution. Thus, BLADE RUNNER offers the most well-known example of the continuation of techno-orientalism in pop culture. However, techno-orientalism also refers to Western cultural anxiety of being overtaken socially, culturally, and economically by Asia. Although techno-orientalism is mainly associated with Western dependence on Japanese manufacturing and technology, it should also be further contextualized within the broader immigration history of the US. [17] It is no coincidence that both Night City and futuristic Los Angeles are in California, a state with a long history of East Asian immigrants. From Chinese immigrants who first came to California during the 'Gold Rush' period in the 19th century and built North America's first transcontinental railroad, to the detention of Japanese American citizens in WWII internment camps, and finally Vietnamese refugees escaping a communist regime after the fall of Saigon in 1975. Indeed, techno-orientalism is the embodiment of a larger cultural anxiety. As part of the staged atmosphere, technology expresses the tension between the foreign and the US cultural landscape through Asian-themed motifs present in the staged atmosphere of the cityscape. Techno-orientalism also expresses radical cultural change: when BLADE RUNNER's protagonist Deckard sees the billboard, it represents the exoticizing beauty of an American woman donned in Japanese clothes and make-up-an allegorical expression of the US taken over by other, foreign cultures.

However, techno-orientalism alone does not constitute Night City's staged atmosphere. Whilst techno-orientalism has established itself as a cyberpunk visual trope, Night City amplifies its techno-orientalism to evoke a sense of grandeur, exemplified by the city's fittingly named Japantown district, along with neighboring (sub-)districts Kabuki or Little China. CYBERPUNK 2077's game database gives the following description of Japantown:

16 Ruh, Brian: "Japan as Cyberpunk Exoticism", In: Anna McFarlane, Graham J. Murphy, Lars Schmeink (eds.), *Routledge Companion to Cyberpunk Culture*, London and New York: Routledge 2020, pp. 401-407, here p. 404.

17 Cf. Morley, David/Robins, Kevin: *Spaces of Identity*, London and New York: Routledge 1995, pp. 148-149.

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"Given its popularity with tourists, it's no wonder Japantown feels like it's constantly buzzing with life. Crowds occupy the local bars, upscale restaurants, the famous Cherry Blossom Market and especially the Shinto Shrine that's a must-see if you're in the area. Every corner holds a luxurious backdrop for a photo op – Japantown doesn't disappoint."[18]

The game not only posits Japan as a site of advanced technology, but also the center of tourism. The popularity of its district—according to the game's database—is due to its attractions, hospitality, and other sightseeing spots. Tourism is at the forefront of this district's popularity, a reflection of Japan's continuous rise as a popular tourist destination, rather than only exporting tourists.[19] With the Japanese economy nowhere near the threatening force it was by the end of the 1990s, the country's reputation as a technology powerhouse has dimmed somewhat.[20] Only in 2014 did Japan succeed in generating a positive tourism balance of payments for the first time in 55 years, in part due to several government campaigns to improve the country's image overseas.[21] Night City itself encapsulates Japan as attraction through visually stimulating points of interests: torii gates (gates signaling the entrance to a shrine) placed in urban areas, food markets such as Cherry Blossom, and a Shinto shrine. To add another layer to the staged atmosphere, many non-playable characters walking in these areas speak Japanese and announcements ring through the city in Japanese as well.

An important shift is taking place in games and in popular media generally: in the context of Japanese culture, the tourist experience has shifted from tense to celebratory. This is reflected in the game's architecture, language found on billboards and spoken in the streets, or other cultural aesthetics integral to their narratives. Western media seems to have found an (often superficial) infatuation with Japan-themed narratives. WESTWORLD, a sci-fi television series, sets its initial plot around a Western-themed park and later reveals another area called Shogun World, stylized after the Edo period of Japan.[22] In another animated film, BIG HERO 6, protagonist Hiro lives in San Fransokyo—a fusion of Tokyo and San Francisco not only in name but also in architectural style.[23] Numerous other

18 Game's database, Japantown entry. CYBERPUNK 2077 (PL 2020, O: CD Projekt Red)

19 Cf. Jimura, Takamitsu: *Cultural Heritage and Tourism in Japan*, London and New York: Routledge 2022, p. 4.

20 Cf. ibid., p. 405; cf. D. Morley and Robins, K.: *Spaces of Identity*, p. 173.

21 Cf. Jimura, Takamitsu: *World Heritage Sites. Tourism, Local Communities and Conservation Activities,* Wallingford: CABI 2019, p. 82.

22 WESTWORLD (US 2016).

23 BIG HERO 6 (US 2014, D: Don Hall and Chris Williams).

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popular, Western films are heavily influenced by Japanese aesthetics: KILL BILL: VOLUME 1, THE LAST SAMURAI, LOST IN TRANSLATION, THE FAST AND THE FURIOUS: TOKYO DRIFT, or THE WOLVERINE to name a few.[24, 25, 26, 27, 28] As far as video games are concerned, CLOUDPUNK is another cyberpunk title that uses nearly the same strategies as CYBERPUNK 2077 and BLADE RUNNER to portray its own cyberpunk city, Nivalis.

These titles commodify the aesthetics of a specific culture, incorporating this into the respective media's environment to create a particular experience. Undoubtedly, this process is deeply embedded in power relations perhaps integral to staged atmospheres as described by Mikkel Bille, Peter Bjerregaard and Tim Flohr Sørensen:

"[…] we want to question the role of staging atmospheres in the formation of power, and instead explore atmosphere as a space of political formation that underlies the realm of discursive politics, but cannot be controlled in any simple and unambiguous way by political agents."[29]

Indeed, the Japanese government pushed the appeal of Japan under the umbrella term of "Cool Japan"—a slogan to describe Japan's influence on pop culture. Particularly, it is the "global appeal of Japanese popular culture," with the country's government recognizing its potential to promote, export, and develop national branding strategies.[30] After all, many Japanese video game titles and companies

24 KILL BILL: VOLUME 1 (US 2003, D: Quentin Tarantino).

25 THE LAST SAMURAI (US/NZ 2003, D: Edward Zwick).

26 LOST IN TRANSLATION (US/JP 2003, D: Sofia Coppola).

27 THE FAST AND THE FURIOUS: TOKYO DRIFT (US/JP 2006, D: Justin Lin).

28 THE WOLVERINE (US/UK 2013, D: James Mangold).

29 Bille, Mikkel et al: *Staging Atmospheres: Materiality, Culture, and the Texture of the in-between*, p. 33; Whilst the cyberpunk genre uses general motifs from Asia, the primary focus in this essay will lie on those borrowing from Japanese culture. Whilst other Asian cultures may be found in the cyberpunk genre too, this essay cannot address all these relationships without oversimplifying them. Moreover, this would risk leaving the impression of all Asian countries being similar or alike, disregarding their own social and cultural histories often at odds with Western powers.

30 Kimura, Tets: "Evolution of the Perceptions of Japanese Culture in the West: From Unknown, Mysterious, Exotic to Cool", In: Tets Kimura, Jennifer Anne Harris (eds.), *Exporting Japanese Aesthetics. Evolution from Tradition to Cool Japan*, Brighton: Sussex Academic Press 2020, pp. 12-39, here p. 12.

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achieved global success, with Nintendo as one of the country's most influential video game producers. In recent years, games not only produced in Japan but also taking place in Japan have found global success, such as SEKIRO: SHADOWS DIE TWICE, the SHIN MEGAMI TENSEI: PERSONA or YAKUZA series.[31, 32, 33] Tets Kimura even speaks of a new-found "supremacy" of Japan, one that exceeds the economic power the country held before.[34] Staged atmospheres play an integral role in delivering this global appeal, whether consciously through active governmental policies or subconsciously through Western media indirectly inferring to Japanese culture. Staged atmospheres can express this kind of power:

"All measures of direct and indirect urban design that influence the change, overlapping or construction of atmospheres unfold power in a specific sense over the *experiences* of the city and over the being-in [*Ergehen*] a city."[35]

As Jürgen Hasse further observes, this power can be used "to impress, for directing attention, for subtle suggestions, [and] for ideology-constitution."[36] Thus, staged atmospheres can be a practice of soft power, that is, the political power to shape outcomes in a country's favor through means of culture, political values, and foreign policies.[37] In the context of Japan, soft power is primarily associated with the country's rising cultural influence. The staged atmosphere in Night City not only reflects this change but it is also a subtle marketing tool reinforcing Japan's position as a cultural powerhouse.

31 SEKIRO: SHADOWS DIE TWICE (JP 2019, O: FromSoftware).

32 SHIN MEGAMI TENSEI: PERSONA (JP 1996-2020, O: Atlus).

33 YAKUZA (JP 2005-2021, O: Sega).

34 T. Kimura: *Evolution of the Perceptions of Japanese Culture in the West: From Unknown, Mysterious, Exotic to Cool*, p. 12.

35 Hasse, Jürgen: "Atmospheres as Expressions of Medial Power. Understanding Atmospheres in Urban Governance and under Self-Guidance", In: *Lebenswelt. Aesthetics and philosophy of experience* 4 (2014), pp. 214-229, here p. 223.

36 Ibid., here p. 224.

37 Cf. Nye, Joseph: *Soft Power. The Means to Success in World Politics*, New York 2005: Public Affairs, p. 11.

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PROMOTING TOURISM: GHOST OF TSUSHIMA AND COOL JAPAN

It is here where GHOST OF TSUSHIMA comes into play, a game truly capturing staged atmospheres as a marketing tool for Cool Japan. An open world game set in the Edo period of Japan, the game's story focuses on samurai Jin battling the invading Mongol forces. Aside from this inherently specific setting, the game also affords many explorative activities tied to Japanese culture: composing haiku poetry, bathing in a hot spring, and visiting shrines and temples across the island. Before diving into these cultural aspects tied to gameplay, however, it is important to understand GHOST OF TSUSHIMA in the overall context of an open world game.

As Night City is defined by its density of people and buildings to explore, the island of Tsushima is defined by its wilderness and landscapes often void of any humans. The few man-made structures that exist are either abandoned or occupied by hostile forces that must be cleared before villagers can return. Despite the absence of an urban city and a lively population, the staged atmosphere is just as pervasive: "the very idea of wilderness as pristine and untamed nature derives from the man-nature dichotomy and thus mankind's progression away from nature towards an artificial environment."[38] Further, Marc Bonner stresses the importance of appropriating this wilderness in gameplay through the staging of nature. Leaning into Jay Appleton's prospect-refuge theory, Bonner uses the term prospect-pacing to describe a player's exploration from one landscape to another, always on the lookout for the next aesthetic experience of landscape.[39]

GHOST OF TSUSHIMA offers many opportunities for the player to savor its experience of landscape by offering places of refuge or "opportunities to hide […]."[40]Although, like other open world games, the world of Tsushima is pristine wilderness, it is filled with quests and points of interests to guide the player from one landscape experience to the next.[41] The places may be man-made structures, yet deeply tied to nature or its experience: hot springs, for instance, are places of

38 Ibid., p. 2.

39 Ibid., p. 5.

40 Appleton, Jay: *The Experience of Landscape*, i.a.: John Wiley & Sons 1975, p. 73.

41 To navigate to these places, the game forgoes indicators through its user interface, such as arrows or a mini map on the heads-up display (HUD) that might intrude on the experience. Instead, following golden, singing birds will lead the player to a variety of interesting locations, foxes lead to their dens with a small shrine, and when the player looks for directions of their next place they need to go to, wind will indicate it (also see Magdalena Leichter's chapter in this volume on this).

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relaxation. These places are signified visually through a colorful tree, such as a red maple tree that frames the steam of the hot springs. As player-character Jin relaxes in the water, he will often contemplate recent events related to the game's story through an inner monologue. At other times, the player can also find circular straw mats surrounded by candles, a place for the player to compose a haiku. To do this, they must observe their surroundings, usually a serene landscape. After gazing at particular sights, several options for each line of the haiku appear for the player to choose from. As if traversing the landscape alone is not enough, GHOST OF TSUSHIMA's places of refuge are meant as a counterweight to Jin's often fast-paced and rather brutal fights. Felix Zimmermann and Christian Huberts describe these spaces as "action-reduced experiences," as they are an opportunity to savor the staged atmosphere without being disrupted by enemies or other hostile forces.[42] In the context of Cool Japan, these action-reduced experiences promote experiences akin to tourism in Japan, as will be illustrated more clearly later.

Activities with emphasis on exploring and appropriating spaces culminate in the numerous shrines found in the gameworld. Whilst exploring Tsushima, players may come across torii gates in the landscape. Unlike the decorative torii gates in Night City used to denote an area's cultural theme, the gates in GHOST OF TSUSHIMA indicate a nearby temple. The shrines follow Shinto, "polytheism based on Japanese myths, nature, and natural phenomena. Fundamentally, Shintoism equates our nature with deities (*kami*)."[43] Each shrine honors its deity and to receive the deities' blessing, one must offer prayers at the shrine. In the game, these are often hidden, for instance on top of a mountain ridge or in the middle of a small lake surrounded by rocks. After following the path indicated by the gates, the player will usually see the shrine itself but the direct path to it is destroyed or blocked. Instead, the player must find other ways to reach the shrine by means of climbing, scaling, or jumping across obstacles. The otherwise open spaces in the game that allow for freedom of movement become momentarily restricted. Hence, shrines afford a gameplay challenge akin to spatial puzzles in which the correct path must be found. Reaching the top shrine is rewarded by both an item but also a brief cutscene in which the camera zooms out, giving the landscape together with the shrine a full exposition shot. This is what Christopher Totten describes as a rewarding vista: "[they] attract players to linger at them by offering interesting

42 Zimmermann, Felix/Huberts, Christian: "From Walking Simulator to Ambience Action Game: A Philosophical Approach to a Misunderstood Genre", In: *Press Start 5* (2019), pp. 29-50, here p. 37.

43 T. Jimura: *Cultural Heritage and Tourism in Japan*, p. 28.

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or unique game art to look at […].”[44] Indeed, the rewarding vista may invite the player to stay longer, perhaps to scout for their next point of interest indicated by rising smoke, or use the game’s sophisticated photography function. GHOST OF TSUSHIMA offers many of these action-reduced refuges as opportunities to experience the landscape and hence consciously engage with its atmosphere.

Takamitsu Jimura identifies pilgrimages to shrines and visiting hot springs as part of cultural heritage tourism in Japan.[45] Video games, particularly games like GHOST OF TSUSHIMA and CYBERPUNK 2077 that emphasize exploring places and spaces, already have a particular relationship with tourism. Urry and Larsen describe tourist relationships as “movement of people to, and their stay in, various destinations,” which necessitate movement through space.[46] These destinations and places are “chosen to be gazed upon because there is anticipation, especially through daydreaming and fantasy, of intense pleasures […].”[47] Many video games are tourist experiences: players become travelers seeking out unique experiences and landscapes. The cultural context of GHOST OF TSUSHIMA’S anticipation, daydreaming, and intense pleasures is informed by both real-life tourism like visiting cultural heritage sites and popular culture. Concerning popular culture’s influence, developer Brian Fleming comments:

“So much of our inspiration comes from samurai cinema – not just Akira Kurosawa, but just movies in general, including movies that were inspired by samurai movies like westerns, STAR WARS, all these other different types of Western media that have been inspired by it. It’s hard to divorce the two, right, because they're so embedded in the way that we think about samurai.”[48]

Additionally, Sucker Punch Productions worked closely with Japanese consultants, historians, and a local tourist organization during the game’s development. The collaboration with the Nagasaki prefecture tourist organization resulted in a promotional website for both the game and the actual island of Tsushima,

44 Totten, Christopher W.: “Designing Better Levels Through Human Survival Instincts,” in: *Gamasutra*, June 21, 2011, http://www.gamasutra.com/view/feature/134779/designing_better_levels_through_.php.

45 Cf. T. Jimura: *Cultural Heritage and Tourism in Japan,* pp. 23-46, pp. 87-107.

46 J. Urry, J. Larsen: *The Tourist Gaze 3.0*, p. 16.

47 Ibid., here p. 17.

48 Tapsell, Chiris: “Sucker Punch talks GHOST OF TSUSHIMA's Inspirations, Cultural Authenticity, and the Studio's Growing Identity”, In: *Eurogamer*, July 21 2020, https://www.eurogamer.net/articles/2020-07-21-ghost-of-tsushima-interview.

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informing prospective visitors of various cultural sites on the island. A player of GHOST OF TSUSHIMA may be inclined to eventually visit the island of Tsushima – a kind of tourism that has been described as "contents tourism" in Japanese contexts. This term refers to a practice aiming to "increase international visitor numbers and energize the tourism industry" with "the addition of a 'narrative quality' […] or 'theme' […] to a region – namely an atmosphere or image particular to the region generated by the contents – and the use of that narrative quality as a tourism resource."[49] It is no coincidence that atmospheres are mentioned in this definition of contents tourism. On the contrary, staged atmospheres in GHOST OF TSUSHIMA serve as a commodity to promote tourism to Japan and are therefore an integral part of Cool Japan.

ATMOSPHERE AS POWERFUL TOOLS FOR EXPERIENCES

In what sense can staged atmospheres express power? How can they become commodities and then serve as part of a larger marketing strategy? Both CYBERPUNK 2077 and GHOST OF TSUSHIMA make their spaces and their exploration the main selling-point: they are sold as experiences. Staged atmospheres create these experiences and their staging is essential to understanding their inherent power relations. The consequences go beyond game and gameplay in effecting the way players think or imagine spaces and places. By identifying themes of techno-orientalism but also tourism in the Night City of CYBERPUNK, this chapter demonstrates that staged atmospheres not only express power but also signify changing dynamics of power. In GHOST OF TSUSHIMA, a similar power is expressed through its staged atmosphere. However, in this game the staged atmosphere is deeply tied to Japanese culture: a dense network that entails popular culture, history, and tourism. Staged atmospheres can also serve as powerful tools in international politics, such as nation branding or as marketing strategies for tourism. Just as atmospheres themselves are difficult to grasp analytically, so is the dense network of staged atmospheres.

Undoubtedly, understanding the concept of atmosphere is an interdisciplinary challenge. Rather than only concerning video games, staged atmospheres influence a wider array of cultural currents not bound to one medium but the entire landscape of experiences.

49 Seaton, P. et al.: *Contents Tourism in Japan. Pilgrimages to "Sacred Sites" of Popular Culture*, Amherst: Cambria Press, p.2.

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“Wind's howling.” Meteorological Phenomena as Atmospheres in Digital Games

MAGDALENA LEICHTER

INTRODUCTION

When Geralt of Rivia, the protagonist of the open-world game THE WITCHER 3: WILD HUNT, mutters the above-quoted “wind’s howling,” the line seemingly functions as little more than a throwaway comment, one of many remarks Geralt makes about his environment.[1] In a different light, however, his comment can be understood as an indicator of the game's approach to atmospheres, along with other utterances about environment and weather. In this sense, the line acts as a recentering element, further immersing players in the game’s world, reminding them that Geralt feels the atmosphere surrounding him and is affected by it. The line verbalizes the game’s intradiegetic atmosphere, initially in a literal and physical sense as it references meteorological phenomena, but it also alludes to the game’s worldbuilding, in which the weather makes up an important part of experiencing the playable world.[2]

In GHOST OF TSUSHIMA, wind, breath, and air hold an important role in story and gameplay right from the beginning.[3] A breath of wind, depicted as a

1 THE WITCHER 3: WILD HUNT (Warner Bros. Interactive 2015, O: CD Project RED).

2 My use of the term “phenomenon” as well as the plural „phenomena“ predominately refers to the field of meteorology. However, seeing as the study of atmospheres is closely tied to the philosophy of phenomenology, I also employ the term in this sense and seek to make it clear when the respective meanings apply.

3 GHOST OF TSUSHIMA (Sony Interactive Entertainment 2020, O: Sucker Punch Productions).

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multisensory sensation consisting of noise and visual markers, reawakens the seemingly murdered protagonist, Jin Sakai. This wind, as a stream of air, carries leaves and dirt, foreshadowing the vital role of airborne phenomena for navigation and orientation in the game's vast open world. The atmosphere serves as a life-giving force and as a connector of player and game. In this vein, the game uses meteorological phenomena in a similar way to THE WITCHER 3. The game world's atmosphere exhibits a physical dimension (in the sense of referencing/depicting real-life meteorological phenomena), but at the same time this physical element becomes, in the case of GHOST OF TSUSHIMA, a gameplay mechanic and, in both games mentioned above, a signifier for plot and narration that exceeds a sheer reference or a simple attempt at realism.

The atmosphere thus exceeds its status as a purely physical phenomenon, in that it becomes an "atmosphere […] with which we can resonate aesthetically and of which we can feel a part."[4] This 'feeling a part' is, as philosopher Angelika Krebs describes it, a result of the "aesthetically attractive, i.e., functionally beautiful, sublime or absolutely beautiful" expressed by landscapes or architecture.[5] Similarly, I argue in this paper that players experience this aesthetic sense of being a part of the gameworld and thereby enjoy what Katie Salen and Eric Zimmerman describe as meaningful play.[6]

At its core, meaningful play occurs "when the relationship between actions and outcomes in a game are both *discernable* and *integrated* into the larger context of the game."[7] More relevant to this paper's approach to atmosphere in game-worlds is the following addition: "The word 'meaningful' in this sense is less about the semiotic construction of meaning (how meaning is made) and more about the emotional and psychological experience of inhabiting a well-designed system of play."[8] The focus on in-game atmospheres taken here, then, slightly shifts from only analyzing subjectively attributed semiotic meaning to a given meteorological phenomenon. Instead, the emphasis lies on the question of how in-

4 Krebs, Angelika.: "Stimmung: From Mood to Atmosphere", In: *Philosophia* 45 (2017), pp. 1419-36.

5 Ibid.; Krebs is mainly interested in applying different concepts of atmosphere to landscapes and architecture. While her article makes no connection to digital games, I hold that her conceptualization of atmosphere as a spacial phenomenon applies quite seamlessly to the game-worlds examined in this paper.

6 See: Salen, Katie/Zimmerman, Eric: *Rules of Play. Game Design Fundamentals*, Cambridge, MA / London: MIT Press 2004.

7 Ibid., p. 34 [emphasis in original].

8 Ibid.

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game atmospheres, both in a meteorological and an aesthetic sense, contribute to creating the gameworld as an environment for meaningful play.

What has now become evident is a multilayered approach to in-game atmospheres. The following entanglement of these layers will therefore encompass two meanings of the term *atmosphere*: a scientific one (games referencing real life meteorology and dynamic weather changes) and an aesthetic one (games employing meteorological phenomena as a device for creating beautiful spaces).

More specifically, I seek to untangle different approaches to a gameworld's atmosphere. I intend to do so by examining the use of wind in four popular digital games that depict it as a physical phenomenon while at the same time using it to create aesthetic atmospheres, which in combination result in the possibility for meaningful play. Defined as "a current of air,"[9] the wind is semantically close to a scientific definition of the atmosphere as a gas-filled domain surrounding a planet.[10] While the wind may not be the 'moodiest' or traditionally most aesthetically pleasing meteorological phenomenon, I argue that it is an especially relevant source of aesthetic atmospheres in digital games.[11] In its creation of movement, sound, physical resistance, and friction, the wind illustrates in-game atmospheres as navigable spaces more so than most other meteorological phenomena. The wind exposes avatar and player alike to atmospheric phenomenon, while also representing movement and direction.

In a first step, a short overview of the tradition of the term atmosphere will show how it is used both in meteorology and aesthetics/phenomenology for describing our primary world as well as landscapes, architecture, and spaces in the arts. The subsequent section will compare different concepts of atmospheres and how they can be applied to the experience of meteorological phenomena in digital games.

Therefore, the following observations are less concerned with (changing) climates but rather focus on immediate and short-term effects, evident in the

9 "wind", In: *Cambridge Academic Content Dictionary*, Cambridge University Press https://dictionary.cambridge.org/de/worterbuch/englisch/wind.

10 "atmosphere", In: *Cambridge Academic Content Dictionary*, Cambridge University Press https://dictionary.cambridge.org/de/worterbuch/englisch/atmosphere.

11 For an analysis of more 'atmospheric' (in an aesthetic sense) meteorological phenomena see i.e. Mathias Fuchs' work on Phantasmal Spaces: Fuchs, Mathias: *Phantasmal Spaces. Archetypal Venues in Computer Games*, New York/London: Bloomsbury Academic 2019. Neither meteorology nor a critical approach to the term atmosphere are on the forefront of his analysis concerning archetypical spaces in digital games. Both however play an inherent role in most of his chapters (i.e. "The Cloud", pp. 53-67).

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connections between weather and its phenomenological experience. Following Angelika Krebs' findings, I reference these short-lived phenomena as transitory atmospheres.[12] Therefore, my paper will not engage with the growing body on ecocritical research on digital games. Still, this research is a productive avenue for a further and wider analysis of in-game atmospheres.[13,14]

ATMOSPHERES AND THE IN-BETWEEN

Conceptualizing the phenomenon of 'atmosphere,' even in a basic or everyday context, is no easy feat. Its diffuse and in-between status is especially evident when we talk about mediated atmospheres, which are already two-fold in their attempt to combine natural phenomena and aesthetic experience. By going back to the basics, this section will disentangle the different meanings and uses of the term, at least when it comes to the intersection of natural-scientific (here: meteorological) and aesthetic and philosophical approaches to atmospheres in digital games.

In its Greek etymology, the term atmosphere is composed of "atmós"-"steam, vapor, breeze"-and "sphairos" -"sphere,"[15] and describes the body of air or gas surrounding a planet. In meteorology, then, atmospheric phenomena account for any physical process taking place in layers of air reaching up to 15 km in height.[16] The scientific and cultural knowledge production connected to the atmosphere and the institutionalization of said knowledge are therefore traditionally

12 Krebs, Angelika: *Stimmung: From Mood to Atmosphere*, p. 1423.

13 For a first overview, see for example: Chang, Alenda.: *Playing Nature: Ecology in Video Games* (Volume 58) (ElectronicMediations). 1st ed., Minneapolis: Univ. of Minnesota Press 2019; Chang, Alenda and Parham, John: "Green Computer and Video Games: An Introduction", In: *Ecozona: European Journal of Literature*, Culture and Environment 8 (2017), pp. 1-17. https://doi.org/10.37536/ECOZONA.2017.8.2.

14 Möring, Sebastian/Schneider, Birgit: "Klima – Spiel – Welten: Eine medienästhetische Untersuchung der Darstellung und Funktion von Klima im Computerspiel", In: *PAIDIA, Zeitschrift für Computerspielforschung* (2018), https://www.paidia.de/klima-spiel-welten-eine-medienaesthetische-untersuchung-der-darstellung-und-funktion-von-klima-im-computerspiel/.

15 Heibach, Christiane: „Einleitung", In: Heibach, Christiane (eds.), *Atmosphären. Dimensionen Eines Diffusen Phänomens*, Munich: Wilhelm Fink 2012, pp. 9-24, p. 9.

16 Roth, Günther: *Die BlV-Wetterkunde*, München: BLV 2009, p. 31.

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linked to the study of meteorology—including both weather and climate. Evidence of the term atmosphere describing moods or ambiances dates back to the eighteenth century, where the connection to the physical origin is still apparent: atmosphere is attributed to the mood in the air surrounding people or spaces.[17] This adaptation marks the beginning of the ambivalence of the term: As philosopher Madalina Diaconu remarks, a meteorological and an aesthetic description of atmosphere run more or less parallel without much interconnection.[18]

Bridging this growing gap, mainly by reintroducing nature to aesthetics, is one of Gernot Böhme's concerns for his *New Aesthetics*. Heavily influenced by thinkers like Hermann Schmitz and Martin Heidegger, Böhme emphasized the importance of materiality and bodily/sensual experience relating to atmospheres.[19] As the connector between the physical and the aesthetic, he recognizes meteorological phenomena:

"The mediating link obviously is the weather: the weather is affecting my mood – a rising thunderstorm may frighten me; bright weather may raise my spirits. Today, the atmosphere may be defined briefly as […] a space with a certain mood. From here, two more traits of the theory of atmospheres can be advanced: atmospheres are always something spatial, and atmospheres are always something emotional."[20]

Critics like Tim Ingold would describe Böhme's emphasis on connecting nature and aesthetics as reinforcing the mutual indifference between discourses of atmospheres as 'tuned spaces' (Ger.: *gestimmter Raum*) and meteorological phenomena. Ingold claims "[b]oth meteorologists and aestheticians, from their respective sides, are inclined to say that their particular meaning of atmosphere is primary, and the other is merely metaphorical."[21]

17 Büttner, Urs/Theilen, Ines: *Phänomene der Atmosphäre. Ein Kompendium Literarischer Meteorologie*, Stuttgart: J.B. Metzler 2017, p. 2.

18 Diaconu, Mădălina.: "Wetter, Welten, Wirkungen. Sinnverschiebungen der Atmosphäre", In: Heibach, Christiane (eds.), *Atmosphären. Dimensionen Eines Diffusen Phänomens*, Munich: Wilhelm Fink 2012, pp. 85-99, p. 85.

19 Böhme, Gernot.: *Aisthetik. Vorlesungen über Ästhetik als allgemeine Wahrnehmungslehre*, München: Fink 2001, S. 31f.

20 Böhme, Gernot: "The origin of the term atmosphere and its original use as a concept in science and humanities," in: Böhme, Gernot and Jean-Paul, Thibaud: *The Aesthetics of Atmospheres* (Ambiances, Atmospheres and Sensory Experiences of Spaces). 1st ed., New York: Routledge, 2016, p. 17.

21 Ingold, Tim: *The Life of Lines*, New York: Abingdon 2015, p. 74.

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Scholars have attempted to connect physical and aesthetic atmospheres in different contexts.[22] Many of these studies strive to mediate between physical realities and metaphorical or mediated atmospheres by showing how scientific, artistic, and cultural means of creating knowledge feed into one another. All of these approaches shape our acquisition of knowledge about worldliness and culture.[23] In the opening chapter of this paper, I similarly connected a physical (albeit mediated) in-game atmosphere with an aesthetic atmosphere, arguing that their interaction creates meaningful play. The following observations seek to illustrate how different kinds of media reference different concepts of atmosphere and how, in the case of digital games, these different modes of referentiality overlap in the immediate gaming experience.

ATMOSPHERES AND REFERENTIALITY

In the following, I will limit my observations to literature and film, where the reference to physical atmospheres and meteorological phenomena holds a long and established tradition. The above-mentioned volume *Phantasmal Spaces* by Mathias Fuchs follows a similar route in emphasizing how literature and art influence (western) perception of and engagement with spaces in the arts.[24] My approach excludes other media, such as performance art or virtual reality (both certainly fertile ground for further research), but builds on a similar tradition of depicting meteorological atmospheres. To further narrow the subjects of analysis, the games analyzed below share similarities in their approach to simulating a gameworld that creates the impression of existing as a self-sufficient physical atmosphere independent of player input.

This approach differs from literary meteorological phenomena with text-immanent functionality, i.e., motifs for characterization or reference to text-external

22 I.e.: M. Diaconu: *Wetter, Welten, Wirkungen*; U. Büttner, I. Theilen : *Phänomene der Atmosphäre*.

23 A few examples being: Barnes, Jessica/Doce, Michael R: *Climate Cultures: Anthropological Perspectives on Climate Change*, New Haven/Connecticut: Yale University Press 2015., Boia, Lucian: *The Weather in the Imagination*, London: Reaktion Books 2005., Griffiths, M. et al. (eds.): *The New Poetics of Climate Change: Modernist Aesthetics for a Warming World*, London: Bloomsbury Academic 2019. Hulme, Mike: *Weathered: Cultures of Climate*, London: SAGE Publications Ltd 2017.

24 Fuchs, Mathias: *Phantasmal Spaces*, pp. 1-10.

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elements.[25] In addition to these predominantly symbolic references, McKim describes weather in cinema as "a spectacle twice over, this moving art of cinema that both contains and mimics atmospheric dynamism."[26] McKim's observation is especially relevant in comparison to digital games:

"Cinematic experience of weather invites a way of being surprised by the beauty of what we perceive to be controlled by artifice: as innumerable film weather examples illustrate, cinema can transform any sunlight, rain shower, hailstorm, snowfall, or cyclone into not only character or setting but also a pause or an attraction in its own right."[27]

Similarly, digital games, especially photorealistic titles, aim for this kind of 'surprise'—in simulating dynamic weather changes—while trying to conceal the artifice of in-game weather. The simulation of a meteorological atmosphere within an open world design invites players to equate in-game weather (and for that matter, in-game nature) with its game-external counterpart. The convergence of real-life atmospheres and simulated ones encourages a 'blended' view of physical atmospheres and their aesthetic perception. This seems especially evident in Krebs' approach, where real-life landscapes are never devoid of atmospheres in an aesthetic sense either:

"When nonhuman entities such as landscapes, cities, buildings, or rooms are said to have aura or atmosphere, they are regarded not only as integrated wholes [...] but also as full of feeling, e.g. as full of peace or melancholy [...]. The atmospheres of landscapes for example change with the weather, the time of day, and the season. These transitory atmospheres can be distinguished from the more enduring atmosphere, gestalt, or *character* of landscapes."[28]

Compared to literature and cinema, digital games not only create aesthetic atmospheres that are meaningful for a player's interaction with story and gameworld, but also reference pre-existing atmospheres that are already inherent to our connection with the primary world.

The spatial representation of atmospheres in literature and film are closely related to the respective symbolic structures of these media. In light of these textual

25 Delius, Friedrich Christian: *Der Held und sein Wetter. Ein Kunstmittel und sein ideologischer Gebrauch im Roman des bürgerlichen Realismus*, Hanser: Munich 1971.

26 McKim, Kristi: *Cinema as Weather: Stylistic Screens and Atmospheric Change* (Routledge Advances in Film Studies). 1st ed., New York: Routledge 2013.

27 Ibid., p. 192.

28 A. Krebs: *Stimmung: From Mood to Atmosphere*, p. 1423.

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and visual means (and perhaps limitations) of representation, the unique means of referentiality of digital games becomes clear. This becomes especially evident when we think back to the example of wind, so closely tied to dynamic movement. It is this interaction, the player's agency to *experience* atmospheres within a navigable world, that gives digital games the means to simulate the arbitrariness and contingency of meteorological atmospheres while also inviting an implicit aesthetic confrontation. In this intersection and interaction of meteorological and aesthetic atmospheres with the agency to experience them that allows for meaningful play.

PLAYER EXPERIENCE AND ATMOSPHERES

If the experience of atmospheres in digital games is central to understanding how atmospheres contribute to meaningful play, we also need to investigate how we experience games in the first place. The implications of atmospheres and the player-avatar connection could fill volumes—as well as how different perspectives or game-genres might affect this connection. In this paper, a basic concept of player involvement and a small number of examples will have to suffice. The games analyzed below, namely THE WITCHER 3: WILD HUNT, GHOST OF TSUSHIMA, and THE LEGEND OF ZELDA: BREATH OF THE WILD, all share similar characteristics: a third-person perspective with relative freedom and agency in exploring open worlds that simulate dynamic weather changes.[29] These games also focus parts of their thematic and narrative layers on atmospheric phenomena. To conceptualize the presence of the avatar and the player in the game, I will follow Britta Neitzel's category of spatial involvement, which describes the "interweaving of the material and virtual world."[30] Here, the avatar serves as a digital extension and 'data-body,'[31] doubling the player in the gameworld and thereby connecting the experiences of player and avatar in a unique way. This enables the player to experience atmospheres in a way that structurally resembles the experience of atmospheres in the primary world:

29 THE LEGEND OF ZELDA: BREATH OF THE WILD (Nintendo 2017, O: Nintendo EPD).

30 Neitzel, Britta: "Involvierungsstrategien des Computerspiels," in *GameScoop* (eds.): Theorien des Computerspiels zur Einführung. Hamburg: Junius Verlag 2017, pp. 75-103, p. 99 (translated by the author).

31 Ibid., p. 100 (translated by the author).

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"Connected to the virtuality of the game via the avatar or a cursor and a hardware interface, a player can understand the gameworld as an extension of his or her action space, so that an entanglement takes place; spatial, sensorimotor, and visual involvement enter into a strong connection. The player's body is involved in the virtual reality or the game in different forms."[32]

Conceptualizing the player's involvement in this way not only allows for the above-mentioned multilayered approach to in-game atmospheres, but also for another connection to Gernot Böhme's definition of experiencing atmospheres. In his phenomenology, the nature of the experience neither consists of direct physical contact nor is it exclusively a sensory perception (that is, the reception of sensual data), but it is rather a 'bodily sensing.' This sensual-bodily (Ger.: *leiblich*) experience of atmospheres "investigates the connection between the qualities of environments and the states of mind. It asks how certain, quite objectively ascertainable qualities of environments modify our state of being in these environments."[33]

When we think of the wind as a 'quality of the environment,' our bodily experience of being exposed to it will have an effect on our mind and our experience of these phenomena as a whole. We might be hot, and a cool breeze will change our mood for the better, in turn making us experience our natural surroundings in a more enjoyable state. We might be cold, with the wind making us freeze even more, and thereby we might view our surroundings as harsher or more unpleasant. Or we might play READ DEAD REDEMPTION 2 to experience the howling wind as an audiovisual phenomenon, as well as physical barrier, which makes us move at a slower pace, more aware of our protagonist's surroundings and the way in which we interact with the gameworld.[34]

These connections are not the straightforward A to B (wind leads to being cold, leads to an outcome of preferring or disliking this new state) sketched out here. Rather, these experiences are inseparable and immediate, creating, in this connection, the multilayered atmosphere surrounding our body.

32 Ibid., p. 99-100 (translated by the author).

33 Bohme, Gernot: *Atmosphäre. Essays zur neuen Asthetik*. Berlin: Suhrkamp 2014, p. 16.

34 RED DEAD REDEMPTION 2 (Rockstar Studios, 2018: Rockstar Games).

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REPRESENTING THE INVISIBLE: WIND AS ATMOSPHERE IN DIGITAL GAMES

THE WITCHER 3: WILD HUNT

CD Projekt Red's open world game THE WITCHER 3: WILD HUNT, published in 2015, marks the third title in the studio's WITCHER SERIES (2007-2015), based on the novels by Andrzej Sapkowski. THE WITCHER 3 offers the first openly navigable world in the series. Often praised for its scenic landscapes and the aesthetic atmospheres/moods (both terms are used synonymously in this analysis) created by the weather, the game features wind as one of the most vivid and dynamic meteorological phenomena. It does not have immediate effects on gameplay mechanics and so, on a structural level, it mostly blends into the backdrop atmosphere. Out of all the games referenced here, the wind has the least impact on gameplay and movement within the gameworld, serving primarily as an intensifier of mood and landscape aesthetics. On a larger narrative scale, these transitory atmospheres also have little impact, even though a more general change in climate (a dooming Ice Age-like apocalypse) lingers in the background of both the source material and the grand scheme of the game's narrative world.

What brings the wind to the forefront, however, is a surprising focus on its immediate experience, namely on the audiovisual impact it has both on the player and the surrounding (in-game) nature. While games typically represent the wind by means of its howling sound alone, THE WITCHER 3 often includes the noise made by the objects the wind affects—like creaking wood, rustling leaves or grass, or a crushing sound when the wind picks up near large bodies of water. While background music is quite omnipresent, it never overpowers the natural phenomena—remarkably, even the weakest breeze is audible over the score.

The wind in THE WITCHER 3 also references the dynamics of meteorological atmospheres by (1) being ever-present in its visualization concerning vegetation and surroundings in outside-spaces and (2) by intensifying and increasing shortly before weather changes, i.e. before developing into more forceful storms, or before it starts to rain. It is this focus on the representation of believable atmospheres that *can* make the weather and thereby the wind an important factor for interaction in this game. In the game's structure, long periods of time can be spent away from civilization, where the weather enforces Geralt's exposure to nature and the open world. The titular line "Wind's howling" comes up during these exploration or travel periods, recentering the player in the game's meteorological atmosphere and reminding them of the implication the wind has for meaningful play through its effects on Geralt as a subject. This can be bypassed by using the fast travel

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mechanic, where signposts mark the goals and are never far from villages or cities. As the exploration of the continent is a strong selling point for the game, the weather proves to be an important factor for creating a believable, dynamic, and realistic open world, where it is both a source of meaningful play in an aesthetic sense but also a force of nature to live with or to survive.

GHOST OF TSUSHIMA

GHOST OF TSUSHIMA is an open world action game set in 13th century Japan. Visually it was inspired by Japanese samurai films, such as the films of Akira Kurosawa. The game features an open world that does away with visible waypoints on the HUD and replaces these navigational tools with an omnipresent wind. After selecting a location on the map, the player can swipe up on the controller's touchpad to summon a gust of wind that points them in the right direction. When looking at different meteorological phenomena in GHOST OF TSUSHIMA, the wind is clearly paramount both to the gameplay and the aesthetic background, recurring as a *leitmotiv* throughout the game. It is, in this sense, a mediator between aesthetic and meteorological atmospheres. Furthermore, it connects gameworld to gameplay by serving as a means of orientation (by replacing waypoints) as well as serving as a factor for narrative world building and plot, as it permeates both cutscenes and play on a structural level, and the past and the present on a temporal level.

Visually, the wind is represented by the objects it moves and carries-mostly leaves, grass, or other fauna, and occasionally hair, both on animals and humans. The audio covers a spectrum from soft noises to roaring, depending on the weather or transitory atmosphere of a given landscape.

Finally, on a thematic level, the above-mentioned layers converge. GHOST OF TSUSHIMA's story entails themes of grief, as our protagonist Jin loses his uncle in the Mongol invasion but also of revenge, as Jin tries to avenge him. The game deals with themes of moving on, and moving in the right or honorable direction. But the game also offers Jin the chance to depart from traditional pathways by no longer ascribing to the Samurai code and instead becoming the titular ghost: A protector of the island of Tsushima and a carrier of hope for its people. Since his movements are dependent on the wind, Jin does not only move with nature, but with the one meteorological phenomenon that in itself represents change and transition. In the dynamics and varying intensity of the weather, depending on whether the moral direction of our protagonist is right (honorable) or not, the thematic underpinnings of the game find their representation in the player's surroundings. Thus, the visual surface of GHOST OF TSUSHIMA creates an aesthetically pleasing

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atmosphere, as the wind shows both the dynamism and the fragility of the game-world. If we look beyond the sensual experience, we find the atmosphere to be tied strongly to inner characteristics of the world represented in the game, as well as the narrative we experience along with it.

THE LEGEND OF ZELDA: BREATH OF THE WILD

As the connection of 'breath' and 'wilderness' in the title suggests, the wind plays an important role in THE LEGEND OF ZELDA: BREATH OF THE WILD (henceforth: BOTW). The game was published by Nintendo in 2017 and marks the latest installment in THE LEGEND OF ZELDA franchise (established in 1986).[35] Controlling the protagonist Link, players are encouraged to explore the kingdom of Hyrule in a nonlinear and experimental fashion. The climate heavily effects gameplay here, as meteorological atmospheres can have either detrimental or beneficial effects on Link's health and constitution.

Instead of global observations, I would like to analyze a specific quest titled "Master of the Wind shrine." As a part of a series of quests in which Link can find shrines and master different puzzles and objectives to gain abilities, this quest showcases the role that wind mechanics play within the game. In BOTW, the wind is visually represented by flowing white streams in the air, almost iridescent at times, evoking images of the wind carrying dust or other particles. Interestingly enough, the wind is relatively quiet in this quest, at least without any tweaks to the audio. Any action you take to reach the goal (destroying rocks, swimming, running on stone) makes more noise than the constant howling of the wind in the background.

The quest sends you through an ocean bay scattered with large rocks. The objective is to destroy or move any obstacles blocking the wind's path, so the air can flow. Once the air can flow freely along the given path, Link can ride the wind with his kite to reach the shrine that marks the end of the quest. Again, the wind serves as a metaphor for movement and direction, as well as acting in its physical ability to move the player forward. This is especially evident in the last action of the quest: If you simply cancel riding your kite and drop on the target, the desired shrine does not appear. Instead, the player must learn to ride the wind according to the game's meteorological atmosphere and adapt to its movement. Only by landing *with* the wind and not *against* it, can Link successfully finish the quest. As the player, you can feel the wind's resistance but you cannot overcome or

35 THE LEGEND OF ZELDA (Series, 1986-: Nintendo).

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control it: In order to advance in the game, you must surrender part of your agency to Link's natural environment.

While it is obvious that this audiovisual representation is far from a purely realistic approach to the weather, it makes sense within BOTW's gameworld. As meteorological phenomena play an important role in gameplay, a heightened representation blends in and does not seem out of place. It is vital for the player to know its force and direction to enable movement, as Link's kite is an important and quick mode of transportation within the game. The wind, like other meteorological phenomena such as thunder and frost, is not only an aesthetic component of the game-it is also a central game mechanic that directly influences player behavior.

CONCLUSION

This paper has positioned the concept of atmospheres as diffuse but valuable to approach the analysis of gameworlds. Theoretical considerations and case studies alike have shown how the atmospheres created by meteorological phenomena in digital games are characterized by a specific form of referentiality. In-game weather creates an atmosphere by simulating and referencing meteorological phenomena we encounter not only in the game-external reality but also in other art forms. Depictions of the weather are thereby never an objective simulation of a physical atmosphere devoid of meaning. The weather is a meaningful part of creating involvement as our being-there in the gameworld and does so by attempting a realistic depiction of extradiegetic meteorological atmospheres.

In all three analyzed examples, the wind is found to be a multisensory phenomenon, making the gameworld a navigable space with meteorological (air-filled) atmospheres as well as an aesthetic realm. These atmospheres can be more of a background phenomenon or an active part of gameplay, but in either case their existence and interaction possess the opportunity for meaningful play, as multiple layers of atmosphere create an immediate and aesthetic experience of fictional spaces. The wind in this sense was found to be more than decor in all three games. While heavily invested in weather as a 'dramatic' and mood-inducing effect, the games analyzed in this chapter also demonstrate (to different extents) the potential for the wind to convey meaning within narrative world-building.

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I Don't Feel at Home in this Game Anymore

A Closer Look at Uncanny Atmospheres in Walking Simulators

KATJA ALLER

INTRODUCTION: "IS THIS GAME REALLY SCARY?"

"Is this game really scary?"[1] asks steam user *Ybnal* on the community forum of the game distribution platform *Steam*. "I want to try [it] but seeing [the trailer] I see it has a scary/horror type feel. Is it really scary?" The game in question is Fullbright's first-person adventure GONE HOME which received critical acclaim for its concept and narrative.[2] However, it apparently failed to impress fellow steam user *Chrow*. "This is not a horror game," writes *Chrow* in response to *Ybnal*'s pressing question, "this is a mediocre love story delivered in a[n] awkward way with the pretense of being a spooky mystery to unravel."[3]

Discussions like these can be frequently observed in the discourse around so-called walking simulators (short: walking sims). The originally derogatory term walking simulator applies to a body of (usually independently-produced) first-person adventure games with minimalistic gameplay mechanics and a strong focus

1 Ybnal (User): "Is This Game Really Scary?", post on the Steam Community Forum (Discussions), 27.12.2013, https://steamcommunity.com/app/232430/discussions/0/648814843329531162?l=german.

2 GONE HOME (Steve Gaynor, 2013: Fullbright).

3 Ibid.

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on narrative, atmosphere, and environmental exploration.[4] Games on the walking simulator spectrum tend to be slow-paced and forego aspects of competition, puzzle-solving, and combat.[5] In walking simulators, the player's actions and agency are limited. Their journey through the (often psychologically-charged) game space is a lonesome one. There are no opponents to beat, no monsters to slay, and often not even a visually-represented NPC with which to interact. In this paper, I argue that these factors provide an ideal ground for the emergence of uncanny atmospheres.

The player community seems to be aware of the genre's inherent uncanniness. There is a notable number of entries on gaming-related websites and forums such as Reddit or the Steam discussion boards where players express hesitancy to play walking simulators because they are generally not fond of horror games.[6] On the Steam store page, players and developers can categorize games and software through the application of various (self- or pre-defined) keywords-so-called tags. This tagging system can provide information about players' perception of games.

4 Cf. Muscat, Alexander/Duckworth, Jonathan: "WORLD4: Designing Ambiguity for First-Person Exploration Games.", In: *Proceedings of the 2018 Annual Symposium on Computer-Human Interaction in Play* (2018), pp. 341-351; Scholars and developers have attempted to come up with more adequate names for the genre, such as Ambience Action Game (Cf. Huberts, Christian and Zimmermann, Felix: "From Walking Simulator to Ambience Action Game: A Philosophical Approach to a Misunderstood Genre.", In: *Press Start* 5 (2019), pp. 29-50.); Cf. Sinclair, Brendan: "5 Things Devs Should Know Before Trying a Narrative Exploration Game", In: gamesindustry.biz, 17.11.2016, https://www.gamesindustry.biz/articles/2016-11-17-5-things-devs-should-know-before-trying-a-narrative-exploration-game). While these terms are certainly better suited to point out the genre's key mechanics, walking simulator is still the most widely known term and will therefore be used here.

5 Cf. Grabarczyk, Pawel.: "It's like a Walk in the Park – On Why are Walking Simulators so Controversial: Reasons Why Study of Walking Simulators is Needed", In *Transformacje* (2016), pp. 241-263, here p. 245.

6 Cf. Vinnygyny (User): "Will is Scare Me?", post on *GameFAQs*, 26.02.2021, https://gamefaqs.gamespot.com/boards/656674-dear-esther/62074309;
Cf. (Deleted Account): "(No Spoilers Please) Is This a Horror Game?", post on reddit (r/Firewatch), 24.02.2016, https://www.reddit.com/r/Firewatch/comments/47d6bo/no_spoilers_please_is_this_a_horror_game/; Cf. AnotherMemory (User): "Is this a Scary Game?", post in the Steam Community Forum (What Remains of Edith Finch / General Discussions / Topic Details), 05.03.2019, https://steamcommunity.com/app/501300/discussions/0/1843566500534330830/

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The top 15 tags appearing together with the tag "Walking Simulator" suggest a connection between walking sim games and the horror genre: In January 2022, the top 4 tags players connected with the tag *Walking Simulator* were *Adventure* (1532 titles), *Singleplayer* (1441 titles), *Indie* (1312 titles), and *Atmospheric* (1244 titles). However, further down the list the tags *Horror* (rank 10, 686 titles), *Mystery* (rank 12, 585 tiles), and *Psychological Horror* (rank 15, 531 titles) can be found. Consequentially, this poses the question of *why* exactly a notable number of players perceived games on the walking simulator spectrum as scary or at least unsettling.

Like film scholar Dominic Arsenault, I understand genre as the "temporary crystallization of a common cultural consensus."[7] Based on my observations of the player discourse, *the uncanny*—which is also commonly used in horror media to evoke feelings or terror and uneasiness in the audience—can be understood as a core element of the walking simulator genre on both the diegetic level and the level of player discourse.

Due to this paper's scope, I will only focus on the manifestation of the uncanny aesthetic in the form of the atmosphere with a particular emphasis on game spaces and the player's relation to them. Furthermore, I will reflect on how these atmospheres embody both traditional and contemporary ideas of the uncanny, namely the aesthetics and symbolism of the Freudian uncanny and the disruptive spatiotemporal patterns of Mark Fisher's theory of Hauntology.

Based on Gernot Böhme's phenomenological concept of the atmosphere, I explore how walking simulators can produce uncanny atmospheres through genre-specific traits such as: 1) the subversion of hegemonic game mechanics and player roles; 2) the use of solitary protagonists; 3) a lack of NPCs; 4) a focus on small, interior game spaces (particularly the space of the home); and, finally, 5) a preference for emergent narratives (conveyed through the material world) that entail a spatiotemporal pattern of subversion.

7 Arsenault, Dominic: *Des Typologies Mécaniques à L'expérience Esthétique. Fonctions et Mutations du Genre dans le Jeu Video*. Unpublished Dissertation, Montréal 2011, http://hdl.handle.net/1866/5873, here p. 333-334.

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CONJURING THE UNCANNY: FROM BÖHME TO FREUD

Spatial Feelings: Atmospheres as (Re-)Producible Media

In his essay on atmospheres of the past, media scholar Felix Zimmermann defines the atmosphere as a medium that "connects perceiving subjects with their surroundings on a phenomenological level" and is "used to produce certain feelings in certain contexts"—in our case, feelings of uncanniness in the context of walking simulators.[8]

Zimmermann bases his idea on the work of philosopher Gernot Böhme, who understands atmospheres as affective spaces. Böhme's approach draws its methodology from the fields of scenography and architecture, thus proving particularly useful for the application onto the spatial medium of the (3D) digital game. The interpretation of an atmosphere is always connected to the subjective feelings of the individuals who constitute its audience. However, despite this subjectivity, Böhme understands atmospheres to be "objective or, better, inter-subjective."[9] This means that atmospheres can be produced "by certain agents or factors, particularly by sound and illumination, but also by the geometry of a room" and that well-crafted atmospheres are able to evoke identical feelings in different individuals.[10] After all, "if everyone in the auditorium perceived the atmosphere on stage in a different way, the whole scenography would be meaningless."[11] Böhme calls the creators of atmospheres "aesthetic workers" which can refer to anyone involved in the production of any aesthetic object—in our case, a digital game.[12]

8 Zimmermann, Felix: "How Atmospheres of the Past Satisfy Needs of Authenticity", In: Marc Bonner (ed.), *Game | World | Architectonics: Transdisciplinary Approaches on Structures and Mechanics, Levels and Spaces*, Aesthetics and Perception, Heidelberg: Heidelberg University Publishing 2021, pp. 19-34, here p. 24-25.

9 Böhme, Gernot: "The Theory of Atmospheres and its Applications" (transl. by A.-Chr. Engels-Schwarzpaul), in *Interstices: Journal of Architecture and Related Arts* 15 (2014), pp. 93-100, here p. 94.

10 Böhme, Gernot: *The Theory of Atmospheres and its Applications*, here p. 94.; Cf. Böhme, Gernot: The Aesthetics of Atmospheres, London, New York: Routledge Taylor & Francis Group 2017, here p. 3.

11 Böhme, Gernot: *The Theory of Atmospheres and its Applications*, here p. 94.

12 Böhme, Gernot: *The Aesthetics of Atmospheres*, here p. 73.

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Somewhere in Between: The Freudian Uncanny

Among other things, the term uncanny refers to both an aesthetic concept and a quality of feeling. In premodern society, the uncanny had a spiritual and social place and was associated with the otherworldly and supernatural.[13] In the Western world, the uncanny presumed its modern form in the 18th century—a time "heavily influenced by the breakdown of established social values and structures."[14] Typical themes, structures, and motifs of the modern uncanny can be found in the works of Edgar Allan Poe or E.T.A Hoffmann.[15] Sigmund Freud drew on those literary sources when he wrote his essay *Das Unheimliche* (The Uncanny), published in 1919,[16] and popularized the idea of a modern, psychological uncanny which has been expressed in a plethora of genres and media since then. In turn, an analysis of the uncanny in Western media—such as the walking simulators examined in this essay—will benefit from knowledge of Freudian symbolism.

When it comes to aesthetic expression (production) and audience reaction (perception), Böhme's atmosphere and Freud's uncanny share one key feature: ambiguity. Freud defines the uncanny as an ambivalent psychological state shaped by the return of the repressed, and Böhme's concept of the atmosphere can itself be interpreted as uncanny in the Freudian sense. After all, atmospheres exist in the space between subject (audience) and object (medium). Due to their connection to individual emotions, their essence is one of ambivalence.

According to Freud, the uncanny emerges when the past penetrates our perception of the present and the familiar (the known, the safe, the light, the home) is slowly but surely permeated by the unfamiliar (the suppressed, the dead or mechanical, the dark, the unknown or supernatural). The uncanny is the return of the repressed. As Freud writes with reference to Friedrich Schelling: "one calls

13 Cf. Botting, Fred: *Limits of Horror: Technology, Bodies, Gothic*, Manchester: Manchester University Press 2008, here p. 26.

14 Botting, Fred: *Limits of Horror*, here p. 7f.

15 Cf. Apter, Terri E.: "The Uncanny. Freud, E.T.A. Hoffmann, Edgar Allan Poe", In: T. E. Apter (ed.), *Fantasy Literature: An Approach to Reality*, London: Palgrave Macmillan UK 1982, pp. 32-47.; Cf. Schlipphacke, Heidi: "The Place and Time of the Uncanny", In: Pacific Coast Philology (2015), pp. 163-172, here p. 164.

16 Cf. Freud, Sigmund: "The Uncanny", In: Sigmund Freud et al. (eds.), *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, London: The Hogarth Press 1955 (Reprint), pp. 219-253.

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uncanny all that which should have remained in secret, hidden, dormant, but has come to light."[17]

When confronted with the uncanny, we enter a state of in-betweenness structured by the slow yet uncontrollable transition between two parts of a split space: a space of normality and a space of alienation.[18] Entering the psychologically-charged split space of the uncanny can have a powerful impact on audience members. During their exploration of walking simulator game spaces, users like *Ybnal* may have experienced what psychiatrist Thomas Fuchs calls *Bangnis* (fearfulness): "the atmospherically encompassing, undivided whole of the uncanny."[19] *Bangnis* is a multi-layered emotional state caused by the constant fluctuation between familiar and unfamiliar.[20] In the beginning of this essay, I highlighted the fact that many players connect walking simulators and the horror genre to the point of downright refusing to play certain walking sim titles because they "seem scary." This reluctance becomes understandable when we engage with the idea that *Bangnis* is often "experienced with a mixture of terror and curiosity."[21] Creators of horror media have long since desired to cultivate this effect in their audience and use elements of the uncanny to achieve it.[22] Actual horror walking simulators like the AMNESIA series, SOMA, or VISAGE embrace the unsettling qualities of uncanny atmosphere to amplify their horror elements.[23, 24, 25, 26] However, unlike horror, which is threatening and "condenses around certain objects, the uncanny

17 For original quote, see: Schelling, Friedrich W. J. von: *Philosophie der Mythologie*, Darmstadt: Wiss. Buchges. 1990, here p. 649.; my translation.

18 Cf. Leitgeb, Christoph.: *Topologische Unheimlichkeit: Unheimliche Topologie*, Paderborn: Brill | Fink 2020, p.1.

19 Fuchs, Thomas: "The Uncanny as Atmosphere", In: Gianni Francesetti and Tonino Griffero (eds.), *Psychopathology and Atmospheres. Neither Inside nor Outside*, Newcastle upon Tyne: Cambridge Scholars Publishing 2019, pp. 101-118, here p.104.

20 Cf. Fuchs, Thomas.: The Uncanny as Atmosphere, p. 104.

21 Ibid.

22 Steven Jay Schneider examines the relations between horror and the uncanny in depth in: Schneider, Steven J.: *Horror Film and Psychoanalysis: Freud's Worst Nightmare*, Cambridge: Cambridge University Press 2004.

23 AMNESIA: THE DARK DESCENT (Frictional Games, 2010: Frictional Games).

24 AMNESIA: A MACHINE FOR PIGS (Frictional Games, 2013: Frictional Games).

25 SOMA (Frictional Games, 2015: Frictional Games).

26 VISAGE (SadSquare Studios, 2020: SadSquare Studios).

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does not arise abruptly or forcefully."[27] Instead, the uncanny slowly creeps in; "ominous things at first only shine vaguely through the familiar."[28]

HOW WALKING SIMULATORS CREATE UNCANNY ATMOSPHERES

Making Strange: The Subversiveness of the Walking Simulator

For aesthetic workers, the (subtle) defamiliarization of the familiar is a powerful technique for the production of uncanny atmospheres, and walking simulators offer the perfect medium. The most prominent characteristic of the walking sim is its subversion of ludic mechanics and player agency. The Chinese Room's DEAR ESTHER is the paradigm of the walking simulator, and the discourse surrounding it did, in fact, yield the formerly derogatory genre name.[29, 30] In the game, the player roams an uninhabited Hebridean island where the unstable and ever-changing memories of a troubled protagonist confront her. This very first "official" walking simulator was a potentially uncanny defamiliarization of the first-person shooter (short: FPS) genre and, in a more radical way, the medium of games itself. DEAR ESTHER's original 2009 rendition was a modification of the widely beloved FPS HALF LIFE 2.[31] It was, according to media philosopher Pawel Grabarczyk, "consciously crafted as an experiment inspired by an academic question-the question of how minimalistic game design could get—of how many mechanics could possibly be stripped from a typical First-Person Shooter."[32]

DEAR ESTHER consciously undermines the ludic conventions of the FPS and thereby gains the capability to alienate. It keeps HALF LIFE 2's first-person

27 Fuchs, Thomas: The Uncanny as Atmosphere, p. 104.

28 Ibid.

29 While the actual term walking simulator came into popularity around the time of DEAR ESTHER's standalone release in 2012, the roots of the genre can be tracked back to the earlier days of digital games. One example of an early walking simulator is Asmik Ace Entertainment's PlayStation-exclusive LSD DREAM EMULATOR (Asmik Ace, 1998: Asmik Ace) wherein the player slowly, solitarily, and aimlessly explores the surreal space of a playable dream from a first-person perspective.

30 DEAR ESTHER (The Chinese Room and Robert Briscoe, 2012: The Chinese Room and Curve Digital).

31 HALF LIFE 2 (Valve, 2004: Valve).

32 Grabarczyk, P.: It's like a Walk in the Park, here p. 245.

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perspective but foregoes combat-related goals and mechanics such as running, climbing, jumping, or shooting. There are no enemies to defeat, no territory to conquer, no physics puzzles to solve, and no points to score. Neither interface nor inventory are needed, as the player's main task consists of deliberate exploration, observation, and (narrative) analysis of the in-game environment. However, Grabarczyk remarks that even this 'goal'—the active investigation of the game-world and the story bits it yields—is optional.[33] DEAR ESTHER can be rushed through without paying attention to the unfolding narrative, because the semi-randomly occurring story bits are not linked to the player's actions.

With this in mind, it is not difficult to see why DEAR ESTHER and its descendants have sparked controversy—especially in the male-dominated sphere of hardcore gamers who, as game studies scholar Melissa Kagen writes, "dismissed [these games as walking simulators] for their lack of affective interactivity."[34] Walking simulators provide alternative spaces within the game industry; their tendencies towards defamiliarization and "subversive appropriation" are not limited to audience and ludic mechanics but also the game industry as a whole and to the field of what Dean Bowman calls "orthodox game studies."[35]

A tendency towards ambiguity and defamiliarization is present on the diegetic planes of many walking sims. As a genre leaning towards the slow and thorough exploration of the hidden, strange, and mysterious, the walking sim often focuses on underrepresented narratives and utilizes themes and motifs related to subjective emotions and experiences. An exemplary look at the popular titles GONE HOME, FIREWATCH, and WHAT REMAINS OF EDITH FINCH reveals the genre's preference for protagonists who, in exploring parts of their identity, subvert the social norms of their surroundings and the long-established heteronormative characteristics of digital games, especially the traditionally male-oriented FPS.[36, 37] In GONE HOME, a young woman explores the past of her estranged lesbian sister; FIREWATCH invites its player to perform "care-oriented masculinity" instead of "toxic, traditional videogame hypermasculinity;" and WHAT REMAINS OF EDITH FINCH offers a

33 Cf. Ibid, here p. 244.

34 Cf. Kagen, Melissa.: "Walking, Talking and Playing With Masculinities in Firewatch.", in *Game Studies: The International Journal of Computer Game Research 18* (2) (2018), http://gamestudies.org/1802/articles/kagen.

35 Cf. Bowman, Dean: "Domesticating the First-Person Shooter", in *Press Start 5* (2019), pp. 150-175, here p. 150.

36 FIREWATCH (Campo Santo, 2016: Campo Santo).

37 WHAT REMAINS OF EDITH FINCH (Giant Sparrow, 2017: Annapurna Interactive).

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glimpse into the eccentric lives and deaths of a family in which intergenerational trauma blurs the boundaries of time, space, and identity.[38]

Wandering Haunted Grounds: Ordinary Protagonists and Unfamiliar (Home) Spaces

A noticeable trait of many walking sim protagonists is their ordinariness. This ordinariness—and its gradual disruption—is a key element in the production of the uncanny atmosphere.[39] Usually, the protagonist we play in walking sims is a regular person. A park ranger in FIREWATCH or a young woman returning to her family home in WHAT REMAINS OF EDITH FINCH, GONE HOME, and THE SUICIDE OF RACHEL FOSTER.[40, 41] While these protagonists have their own stories (and active voices to tell them), not one of them possesses special powers or supernatural abilities. On one hand, this mundaneness provides room for the player's personal identification with the protagonist. On an emotional level, Edith Finch's wish to get in touch with her family history or Henry's (the protagonist of FIREWATCH) attempt to deal with the trauma of his wife's early-onset dementia might be experienced as more relatable than the fight against literal monsters in HALF LIFE 2. On the other hand, the same mundaneness mirrors the Freudian uncanny with its deep rootedness in "the world of common reality."[42]

Walking simulators tend to isolate the player-character, meaning that the protagonist is usually alone while roaming their surroundings. NPCs are either nonexistent or, quite literally, not present. The crew members we meet in TACOMA are holograms of people long gone, the same goes for the light orbs in EVERYBODY HAS GONE TO THE RAPTURE.[43, 44] In DEAR ESTHER only ghosts and a faceless narrator keep us company on the deserted island, and IT'S WINTER lets us explore an apartment complex that seems simultaneously abandoned and inhabited, personal,

38 Kagen, Melissa.: Walking, Talking and Playing with Masculinities in Firewatch.

39 The terms (player-)character and protagonist are used interchangeably here. Non-playable side characters are rare in walking sims and therefore simply referred to as NPCs.

40 FIREWATCH (Campo Santo, 2016: Campo Santo).

41 THE SUICIDE OF RACHEL FOSTER (One-O-One-Games, 2020: Daedalic Entertainment).

42 Cf. Kirkland, Ewan: "Horror Videogames and the Uncanny", In: *DiGRA'09. Proceedings of the 2009 DiGRA International Conference: Breaking New Ground: Innovation in Games, Play, Practice and Theory* (2009), pp. 1-4, here p.1.

43 TACOMA (Fullbright, 2017: Fullbright).

44 EVERYBODY'S GONE TO THE RAPTURE (The Chinese Room, 2015: Sony Computer Entertainment).

https://doi.org/10.14361/9783839462645 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY

and strange.[45] While this diegetic isolation of the protagonist adds to the overall ghostliness of the walking sim, it also puts the player in the role of the solitary wanderer who explores her inner environment through the physical act of walking. In this regard, the walking sim digitally continues the psychogeographical practice of the literary dérive[46]—a revolutionary 19th century practice that its creator Guy Debord described as "a technique of rapid passage through varied ambiences."[47]

The spaces we explore in walking simulators tend to be comparatively small, interior spaces. This genre-specific characteristic is yet another re-emergence of the Freudian uncanny. It is also a powerful agent in the creation of uncanny atmospheres. Just like the atmosphere itself, the walking simulator emphasizes subjectivity and emotions through the central medium of architecture.[48] Architecture plays a major role in the staging of uncanny atmospheres, as it can act "as an instrument for its narrative and spatial manifestations."[49] In digital games, architecture is central to the medium as it determines how players move through space by offering (and sometimes predetermining) suggestions of movement.[50]

The walking sim is a narrative-heavy genre and small game spaces tend to be beneficial to the conveyance of narrative information (particularly embedded narratives), as game designers possess a higher degree of control over the temporal order in which the player receives narrative information.[51] Players who explore the vast game space of an open world game are confronted with a plethora of narrative elements and they "can't be expected to find or recognize the importance of any given element."[52] The small and often linearly structured game spaces of

45 IT'S WINTER / ШХД: ЗИМА (sad3d, 2019: GRüN STUDIO)

46 Cf. Carbo-Mascarell, Rosa: "Walking Simulators: The Digitisation of an Aesthetic Practice", In: *DiGRA/FDG '16. Proceedings of the First International Joint Conference of DiGRA and FDG* (2016), pp. 1-15, here p. 1.

47 Cf. Debord, Guy: "Theory of the Derive", In: Tom McDonough (ed.), *Situationist International Anthology: Revised and Expanded Edition*, Berkeley CA: Bureau of Public Secrets 1958, pp. 62-63.

48 Cf. Montembeault, Hugo: "The Walking Simulator's Generic Experiences", In: *Press Start 5* (2019), pp. 1-28, here p. 19.

49 Cf. Ibid. Kirkland cites: Vidler, Anthony: *The Architectural Uncanny: Essays in the Modern Unhomely*, London: MIT Press 1999.

50 Cf. Böhme, Gernot: The Aesthetics of Atmospheres, here p. 19.

51 Cf. Jenkins, Henry: Game Design as Narrative Architecture, retrieved from: https://web.mit.edu/~21fms/People/henry3/games&narrative.html.

52 Ibid.

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walking simulators, however, can create a stage to condense and spotlight all narrative information.

On another level, smaller spaces can trigger different emotions in the player which may fuel the uncanny atmosphere's desired emotional mixture of "terror and curiosity." Depending on architecture and context, small spaces can feel claustrophobic, eerie, lonely, or confusing. Notable examples include DEAR ESTHER's island with its glowing caves, sublime cliffside, and withered cottages; the snowed-in apartment block in IT'S WINTER; the rotting, labyrinthine hotel in THE SUICIDE OF RACHEL FOSTER; the architecturally impossible Finch residence with its sealed rooms and self-made shrines; and, of course, GONE HOME'S horror-movie-trope-turned family home.

The home has a close and long-standing connection to uncanny aesthetics. The English term uncanny derives from the Anglo-Saxon *ken*, meaning "knowledge." The un-canny, in turn, refers to something unknown, something beyond one's understanding or mental perception. Here, the term's connection to the hidden and the unknown becomes obvious. Its German counterpart, however, emphasizes the concept of the home. In German, *unheimlich* derives from *heimlich*, a word with two opposing meanings that captures the contrasting essence of the concept perfectly. It can mean both homely and in secret, or hidden. The ideal of the home—a safe, private, and familiar place for most people—and its creeping disintegration are key features of the uncanny atmosphere of several walking sims.

Hauntology: Broken Time and Hauntings from the Past

WHAT REMAINS OF EDITH FINCH is a particularly uncanny gaming experience, especially with regards to architecture and general environmental design.[53] In the Finch residence, the past permeates the present. The sealed-off bedrooms serve as shrines and museums for their former inhabitants. Narratives of lives long gone emerge from everyday objects, handcrafted artifacts, personal trinkets, and heaps of books.

Like the other walking simulators mentioned in this paper, WHAT REMAINS OF EDITH FINCH is, as anthropologist Shane Snyder writes, an "exploration of what

53 Kirkland writes in-depth about this topic in: Kirkland, Ewan: "'He Died a Lot.' Gothic Gameplay in What Remains of Edith Finch", In: Matt Coward-Gibbs (ed.): *Death, Culture & Leisure: Playing Dead (Emerald Studies in Death and Culture)*, Bingley: Emerald Group Publishing 2020, pp. 95-107.

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has been left behind."[54] This central role of the past is typical of walking simulators and makes the genre particularly well suited for analytical approaches through the lens of Hauntology. Hauntology is a philosophical approach focusing on the return or persistence of elements from the (personal or cultural) past—often (but not always) in the form of a ghost. In his definition, the author and cultural theorist Mark Fisher writes that hauntology entails that both "the past and the future can be experienced and understood as hauntings."[55] When the past haunts the present of a place, such as the Finch residence or the Village in EVERYBODY'S GONE TO THE RAPTURE, time is out of joint. Haunted (game-)spaces become pockets of broken linear time in which "the virtual agency of the no longer" manifests.[56] The Freudian uncanny, with its deep-rooted symbolism of the resurfacing repressed, reemerges in the concept of hauntology. Even the atmosphere itself is a spatial form of hauntology.[57] After all, atmospheres always carry a vague and irrational component at their core which "haunts the middle ground between subject and object."[58]

On the diegetic level of walking sims, hauntings can occur in thematic and intertextual references. While the spatiotemporal heterogeneity of haunted spaces can certainly be experienced as negative or frightening (mainly due to mixture of the living and the dead), haunted spaces can also provide spaces of multi-perspectivity. The walking simulator genre is filled with underrepresented voices. A possible reason for this tendency lies in the idea of the haunting and the haunted space itself: the ontological status of hauntings is always unclear, and it is precisely this ambivalent ontological status which offers possibilities for the disruption of dominant views.

Sometimes, the genre's uncanny conjuring of the 'no longer' and the 'not here' even transcends the diegetic borders of a single game space. This is the case whenever multi-temporality is produced through intertextuality. One notable example is THE SUICIDE OF RACHEL FOSTER. While the hotel in this game does not seem to

54 Snyder, Shane: „The Impossible Relationship: Deconstructing the Private Space in Gone Home.", in *Journal of Gaming and Virtual Worlds* 10 (2) (2018), pp. 7-20, here p. 9-10.

55 Fisher, Mark: "What is Hauntology?", In: *Film Quarterly* 66 (1) (2012), pp. 16-24, here p. 16.

56 Ibid, here p. 20.

57 Buser, Michael.: "The Time Is Out of Joint: Atmosphere and Hauntology at Bodiam Castle", in *Emotion, Space and Society* 25 (2017), pp. 5-13, here p. 6.

58 Ibid.

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host any literal ghosts, it is clearly haunted by Stanley Kubrick's THE SHINING.[59] GONE HOME is set in the 1990s and emphasizes the inclusion of iconic period-specific media such as cassettes and VHS tapes. This nostalgic setting reproduces tropes of slasher and/or haunted house movies. Such references are medial hauntings as they merge different times, diegetic spaces, and media forms. This calculated utilization of the audience's (pop-)cultural knowledge influences its expectation towards the game and the game's level of (felt and/or presumed) uncanniness.

CONCLUSION

The initial question of why audiences perceive so many non-horror walking simulators as "scary" can be answered with the fact that the genre possesses certain (diegetic and non-diegetic) qualities well-suited as frames for the creation of uncanny atmospheres. At its essence, the uncanny atmosphere lacks clear ontological status. It draws its power from the psychological and emotional impact of ambiguity, defamiliarization, and subversion which—when well-crafted—can evoke a sense of *Bangnis* in the audience. The games discussed in this paper reflect these properties on both the non-diegetic and the diegetic level.

The walking simulator is a comparatively young game genre which will certainly continue to develop and refine its language of form. However, its roots will always lie with the subversion of the status quo. DEAR ESTHER defamiliarized not only the FPS but the entire medium of the digital game at the time. The genre's inherent subversion of the hegemonic status can be understood as a non-diegetic continuation of the (Freudian) uncanny. It furthermore opens up a sphere to tell and experience underrepresented narratives.

The genre's uncanny subversion extends to the themes, tropes, and narratives on the diegetic level of many walking simulators when players continue the literary tradition of the dérive: the passage through various ambiences for the sake of (emotional or psychological) self-reflection. The walking sim protagonist is often an ordinary person exploring a small (usually interior) space in which the material world is symbolically charged. Their journey often entails a return to the home space, a confrontation with a resurfacing past, and a struggle with (both individual and collective) identity. All of these elements are agents in the creation of the uncanny atmosphere as they continue both the Freudian tradition of uncanny symbolism and disruptive spatiotemporal structures of Hauntology.

59 THE SHINING (USA 1980, D: Stanley Kubrick).

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The goal of this paper was to shed a little light on the topic of uncanny atmospheres in walking simulators. While I was hopefully able to provide some theoretical entry points and impulses to the topic, further research needs to be conducted, especially about walking simulators that convey non-Western ideas of the uncanny. It would certainly be compelling to investigate if, how, and why walking simulators from non-Western cultures differ in their narrative use and structural creation of uncanny atmospheres. After all, fear of—and fascination with—the dark, the dead, and the unknown is universal.

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Generative Atmospheres

Ambient Modes of Experience in Digital Games

VADIM NICKEL

INTRODUCTION

Playing computer games is an active pastime: players are presented with a dynamic scenario that requires various inputs in order to engage with its core game loop. To do so, the player must constantly pay attention to the game while performing actions to propel gameplay. However, some games can be experienced over multiple levels of engagement. Such games may not require the constant provision of input to offer a meaningful experience. In these games, atmosphere often reveals itself as the underlying structure, intricate enough to be experienced in its own right.

Ambient music, a term coined by musician Brian Eno, is a genre that is meant to allow for different levels of engagement. This may reach from ambient music being a background accompaniment in a given setting, to being the center of listener attention. This article will identify a type of game that offers ambient modes of experience that unfold across varying levels of engagement and intensities of interactions.

The term *ambient game* is relevant in this context, since it references the homonymous music genre. This article will present existing definitions of ambient games to identify parallels between the creation and perception of ambient music and various modes of experiencing digital games. Based on these findings, this article will propose three ambient modes of experience that represent the varying intensities of player interaction within the diegetic boundaries of games.

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AMBIENT MUSIC

On a rainy afternoon in early 1975, Brian Eno, hospitalized and recovering from an accident, was listening to a record of 17th-century harp music. A friend had put it on for him, albeit at a low volume. Bed-ridden, Eno was not able to reach the record player to turn up the volume. This resulted in the music being just loud enough to be heard above the rain, converging with the sounds of the falling drops of water and ambience in the room.[1] The experience contributed to Eno's realization that immersion was the reason to engage in music: "[people] were making music to swim in, to float in, to get lost inside."[2] In the decades following this realization, Eno would produce numerous records that helped define and establish the genre of ambient music in public recognition.

Around 50 years prior, composer Erik Satie had written music to be background accompaniment for a social setting. His 1917 work MUSIQUE D'AMEUBLEMENT (furniture music) was created as intermission music for a play, where the audience was urged "[…] to take no notice of it and to behave during the intervals as if it did not exist."[3, 4] It was meant to "[…] make a contribution to life in the same way as a private conversation, a painting in a gallery, or the chair in which [one] may or may not be seated."[5]

In the 1930s, MUZAK emerged. This type of music featured low-key instrumental versions of popular songs, and was intended to promote spending in stores and increase productivity in office spaces.[6] The term is derived from the name of the first company to specialize in offering functional, light background music. With ambient music, however, Eno intended to provide an auditory texture for varying levels of listener engagement and transcend the merely functional qualities of MUZAK.

1 Eno, Brian: *A Year With Swollen Appendices*, London: Faber and Faber 1996, here pp. 294-295.

2 Ibid., p. 294.

3 Templier, Pierre-Daniel: Erik Satie, Cambridge, MA: MIT Press 1969, here p. 45.

4 MUSIQUE D'AMEUBLEMENT (Satie, Eric. Éditions Durand-Salabert-Eschig, 1917-1923. Musical score).

5 Ibid.

6 Baumgarten, Luke: "Elevator Going Down: The Story Of Muzak", in *Red Bull Music Academy Daily*, September 27, 2012, https://daily.redbullmusicacademy.com/2012/09/history-of-muzak.

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Eno mentioned the term ambient music for the first time in the liner notes of his album AMBIENT 1: MUSIC FOR AIRPORTS.[7] Here, Eno identifies a certain type of music as ambience. He defines ambience "as an atmosphere, or a surrounding influence: a tint."[8] This statement implies that atmosphere is something that does not emanate from a particular object, but emerges from the totality of a given setting, coloring everything that takes place within it. This shows parallels to the concept of atmosphere according to philosopher Gernot Böhme, who states that "[…] atmospheres imbue everything, they tinge the whole of the world or a view, they bathe everything in a certain light, unify a diversity of impressions in a single emotive state."[9] Therefore, in the following I will use atmosphere and ambience as different terms referring to the same phenomenon.

MUSIC FOR AIRPORTS was designed to be played at airports in order to defuse the often tense and anxious atmosphere of the terminal, and to provide a soothing counterpoint to busy activity. In this vein, ambient music according to Eno is meant to enhance environments, while retaining a sense of uncertainty: "Ambient Music [sic] is intended to induce calm and a space to think."

Furthermore, Eno stated that "[ambient music] must be able to accommodate many levels of listening attention without enforcing one in particular; it must be as ignorable as it is interesting."[10] This definition focuses on the level of attention the listener might pay to the music. Beyond music, however, there have already been attempts to apply Eno's philosophy to digital games. These approaches focus on possible modes of perception as well as the emotive qualities of ambient music and will be described in the following section.

AMBIENT GAMES

The term ambient games first appeared in a paper by creative technology researchers Mark Eyles and Roger Eglin titled "AMBIENT ROLE PLAYING GAMES: TOWARDS A GRAMMAR OF ENDLESSNESS" (2007). The authors describe the term using Eno's definition of ambient music as a reference point: they define ambient games as

7 AMBIENT 1: MUSIC FOR AIRPORTS (Eno, Brian. Polydor, 1978. Vinyl LP).

8 Eno, Brian: Liner notes for Ambient 1: Music for Airports, Polydor 1978, 1 LP.

9 Böhme, Gernot: *The Aesthetics of Atmospheres*, New York, NY: Routledge 2017, here p. 29.

10 Ibid.

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games "[…] that the players can dip in and out of […]; that the game is running in the background while they are engaged in other activities."[11]

They further distinguish ambient games from traditional games through the context of pervasive games. Pervasive games are "games that are controlled by everyday actions […] in everyday, real-world environments that have gameplay consequences in a virtual game world."[12] Such games use digital technologies as a technical support structure integrated into a real-world environment. Eyles and Eglin refer to such an augmented environment as an "[…] ambient intelligent environment […]."[13] Furthermore, pervasive games may omit the use of traditional input methods, such as the gamepad, mouse, or keyboard.

For example, a pervasive game may incorporate the use of a device, such as a pedometer, to track the amount of player movement. The player may actively engage with the game, adjusting their movement consciously in order to influence its outcome. On the other hand, the player can become unaware of the device they are carrying and the game that is running, while their movement still affects the outcome of the game. This is the case in AMBIENT QUEST, Eyles' own implementation of an ambient game.[14] In this role-playing game, players transmit their step count via e-mail to the game administrator. Their movement is mapped onto a virtual 2d representation of the game environment, formed by a grid of various tiles. These tiles may hold enemies that are fought or items that are picked up automatically.[15] While transmitting the player's step count and movements requires an active effort in this example, today's smartphones are equipped to fully automate this process: always connected to the internet and equipped with various sensors, they allow for a fully automated engagement by evaluating sensor input and transferring data.

Eyles and Eglin take from ambient music the variability of its reception. A game's embeddedness in the player's environment allows for multiple levels of player engagement: a game can hold the full attention of the player, as they engage with it according to its ruleset, or it may linger within their surroundings, devoid of their attention, while ready for interaction. Eyles and Eglin further state that

11 Eyles, Mark, Eglin, Roger: "Ambient Role Playing Games: Towards a Grammar of Endlessness", in *Women in Games Conference* (2007), here p. 25.

12 Ibid.

13 Ibid., p. 18.

14 Eyles, Mark: "AMBIENT QUEST version 1.0", In: Mark Eyles Ambient Quest Website, https://www.eyles.co.uk/ambientquest/AQv1.html

15 Eyles, Mark/Eglin, Roger: *Ambient Role Playing Games: Towards a Grammar of Endlessness*, p. 27.

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"[…] the key component of an ambient game is that the player may choose their level of interaction with the game."[16] Here, they indicate a shift of focus from attention as in Eno's definition of ambient music, towards interaction. This shift appears reasonable in the context of digital games, as video game studies researcher Espen Aarseth identifies most games as simulations, i.e., "[…] complex systems based on logical rules."[17] Therefore, games cannot "[…] be read as texts or listened to as music, they must be played."[18]

Journalist Lewis Gordon approaches ambient games from a different perspective, one that focuses on traditional computer games and the emotive qualities of ambient music. In an article titled "THE RISE OF THE AMBIENT VIDEO GAME" (2018), Gordon draws parallels between Japanese ambient music and the THE LEGEND OF ZELDA franchise.[19] The debut of the first THE LEGEND OF ZELDA game coincided with the release of several Japanese ambient music records, such as GREENand SURROUND by Hiroshi Yoshimura, as well as MERCURIC DANCE by Haruomi Hosono.[20, 21, 22] He asserts that both the game franchise and the ambient records channel the natural elements water, earth, and air, and identifies them as "[…] phenomena of increasing rarity in the modern Japanese city."[23]

However, this may not be restricted to Japanese society. Cultural and literary scholar Hartmut Böhme makes a similar observation from a Western perspective, stating that the average urban citizen is shielded from the direct experience of the elements, as they inhabit largely artificial environments.[24] In fact, the elements are also present in Eno's AMBIENT series (1978-1982): natural elements appear across all album covers in the form of maps: schematic illustrations of mountains (earth) and rivers (water) from an aerial (air) perspective.

16 Ibid., p. 4.

17 Aarseth, Espen: "Computer Game Studies, Year One", in *Game Studies*, Volume 1, Issue 1 (2001).

18 Ibid.

19 THE LEGEND OF ZELDA (Nintendo R&D4, 1986: Nintendo).

20 GREEN (Yoshimura, Hiroshi. AIR Records Inc., 1986. Vinyl LP).

21 MERCURIC DANCE (Hosono, Haruomi. Monad Records, 1985. Vinyl LP).

22 SOUNDSCAPE 1: SURROUND (Yoshimura, Hiroshi. Misawa Home, 1986. Vinyl LP).

23 Gordon, Lewis: "The Rise of the Ambient Video Game", in *The Outline*, April 17, 2018, https://theoutline.com/post/4181/ambient-video-game-legend-of-zelda.

24 Böhme, Hartmut: "Die vier Elemente: Feuer Wasser Erde Luft", In: Christoph Wulf (ed.), *Vom Menschen. Handbuch der Historischen Anthropologie*, Weinheim: Beltz 1997, pp.17-46, here p. 19.

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According to Gordon, life in the city tends to produce distressing or overwhelming sensory situations that create the need for mood-regulating devices. In Japan of the 1980s and 1990s, such devices came in the form of consumer electronics such as the Sony Walkman and the Nintendo Game Boy. They were often used because "[…] the rhythm of music or the video game was frequently preferable to that of the train or bus."[25] This parallel examination implies that some games and ambient music offer ways of escaping one's immediate reality in favor of what Gordon identifies as a "[…] reflective mood and atmosphere."[26] This mirrors Eno's assertion that ambient music "[…] induces calm and space to think."[27]

Gordon views games such as THE LEGEND OF ZELDA: BREATH OF THE WILD or SHADOW OF THE COLOSSUS as "[…] the video game equivalent of putting an ambient record on."[28, 29, 30] He identifies repetition as a common structure in these and other ambient games. As games become predictable, he argues, they leave mental space for other subconscious activities. Gordon establishes a connection between this repetitive structure and Eno's *generative* process for Music for Airports.[31] The generative process will be discussed in the context of the generative atmospheric ambient mode of experience below.

The descriptions by Gordon as well as Eyles and Eglin demonstrate that there can be different interpretations of the term ambient game. Both interpretations use Eno's conception of ambient music to shed light on how ambient games can be experienced. However, each approach treats the ambient aspect differently: according to Eyles and Eglin, ambient games can fade completely into the background and disappear from the player's perception. In contrast, Gordon does not consider the option of leaving the game unattended; rather, he sees the ambient aspect as emphasizing atmosphere and informing about possible modes of play, i.e., "coded atmospheres [that] offer a space for reflection."[32]

It should be noted that, by adapting Eno's definition of ambient music to games, both Eyles and Eglin as well as Gordon apply a theory that is meant for a linear, non-interactive medium (music) to a non-linear, interactive medium (digital games). Unlike recorded music, games are usually intended to receive input

25 Gordon, Lewis: *The Rise of the Ambient Video Game*.

26 Ibid.

27 Eno, Brian: Ambient 1: Music for Airports.

28 THE LEGEND OF ZELDA: BREATH OF THE WILD (Nintendo EPD, 2017: Nintendo).

29 SHADOW OF THE COLOSSUS (Team Ico, 2005: Sony Computer Entertainment).

30 Gordon, Lewis: *The Rise of the Ambient Video Game*.

31 Ibid.

32 Ibid.

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from the player. Paying attention is not enough. Games demand interactions of varying intensity.

Media scholar Alexander R. Galloway identifies video games as an action-based medium "[…] whose foundation is not in looking and reading but in the instigation of material change through action."[33] Such actions are not exclusive to the player: the machine can also take actions either as a "[…] response to player actions … [or] independently of them."[34] Here, Galloway distinguishes between operator actions, i.e., "acts performed by players,"[35] and machine actions, i.e., "acts performed by the software and hardware of the game computer."[36] Operator and machine actions are not mutually exclusive, but their ratios may change resulting in player interactions of varying intensity.

Galloway further proposes a classification system of action in video games that, in addition to the above distinction, regards diegesis as a factor: certain actions may be diegetic, i.e., embedded in the ludonarrative environment of the game, or non-diegetic, i.e., outside the ludonarrative environment of the game.[37] The shifting ratio between machine and operator actions informs the *ambient modes of experience* proposed in the next section. While my analysis only regards modes of play within the ludonarrative context of a game, Galloway's classifications are still applicable and will be referenced throughout.

AMBIENT MODES OF EXPERIENCE

Various intensities of interaction may inform different modes of the game experience. In the following, I propose three modes of experience that accommodate different intensities of interaction.

The ludic experience

The *ludic experience* features the highest intensity of interaction in a game. In this mode of play, the player engages with the core gameplay loop.

33 Galloway, Alexander R.: *Gaming. Essays on Algorithmic Culture*, Minneapolis, MN: University of Minnesota Press 2006, p. 4.

34 Ibid.

35 Ibid., p. 5.

36 Ibid.

37 Ibid., p. 7.

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The core gameplay loop depends on the genre. For instance, it could consist of aiming and shooting in an action game or solving puzzles in a puzzle game. This mode of play also allows the player to achieve progress in the game, e.g., advance in the story, or unlock a new area by performing the required actions. The ludic experience may also feature loss conditions, such as when the player character dies in a firefight or when a timer runs out.

Some games may not offer significant means of interaction beyond the core gameplay loop. In this case, to leave the ludic mode of interaction would imminently lead to a loss condition, i.e., 'game over,' and thus the interruption of the game flow and diegetic experience. Mark Eyles and game developer Dan Pinchbeck describe such games as having "low degrees of ambience."[38]

This is especially prevalent in early video games and arcade games. For example, in most variants of TETRIS, the core gameplay loop consists of the player having to align perpetually spawning bricks of various shapes to create gapless rows.[39] A gapless row will disappear immediately. When the player stops actively providing input to make rows disappear, the bricks will eventually pile up beyond the upper border of the play field, triggering a loss condition and stopping the game flow.

In RED DEAD REDEMPTION 2, the ludic mode of experience is represented by the many missions throughout the game. During a mission, the player must follow clear instructions to ensure a continuation of the game flow. Such instructions may entail moving to a specified position or surviving a firefight by shooting and killing enemies. Otherwise, the mission will fail, and the game will be interrupted.

The explorative experience

In the *explorative experience*, the focus lies on spatial exploration of the game environment. This is achieved by changing the position of the player character or camera angle. Galloway refers to this type of player interaction as *move acts*.[40]

Some games focus entirely on this mode of play, and do not go beyond the interaction intensity of movement and exploration. In some cases, they may incorporate an environmental narrative. Since the release of games such as DEAR

38 Eyles, Mark/Pinchbeck, Dan: "Playful Ambience" in *DiGRA '11 – Proceedings of the 2011 DiGRA International Conference: Think Design Play*, Volume 6, Utrecht 2011, here p. 13.

39 TETRIS (Alexey Pajitnov, 1984: Alexey Pajitnov).

40 Galloway, Alexander R.: *Gaming. Essays on Algorithmic Culture*, p. 22.

https://doi.org/10.14361/9783839462645 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-SA

ESTHER and GONE HOME, the term *walking simulator* has been established to describe several games that predominantly reside in the explorative experience.[41, 42, 43] Cultural studies scholars Zimmermann and Huberts describe a similar concept using the term *explorative game*.[44]

In RED DEAD REDEMPTION 2, when not playing a mission, the player can freely explore the game environment on foot or horseback. They may pass through the game's diverse environments, and possibly discover areas that they would not have otherwise encountered during missions. Following Eyles and Pinchbeck, RED DEAD REDEMPTION 2 could therefore be described as a game with "high levels of ambience" because it "allow[s] different levels of engagement, including the ability to have a very low level of engagement."[45] In other words: the game allows players to *not* follow the core gameplay loop if they so desire.

The generative atmospheric experience

In the *generative atmospheric experience*, the intensity of player interaction is reduced to a minimum: the player has stopped actively providing input. However, they are still present to witness what Galloway refers to as the *ambience act*: "the user is on hold, but the machine keeps on working. […] While the machine pauses in a pause act […], it is the operator who is paused in an ambience act, leaving the machine to hover in a state of pure process."[46] In the ambience act, the "world of the game exists as a purely aesthetic object."[47]

Here, the machine offers a dynamic aesthetic experience that may include a spontaneously emerging narrative without player participation. As Zimmermann and Huberts note in the description of their *awareness game*, "[t]he game world is

41 DEAR ESTHER (The Chinese Room, 2012: The Chinese Room).

42 GONE HOME (The Fullbright Company, 2013: The Fullbright Company).

43 Kill Screen Staff: "Is It Time to Stop Using the Term Walking Simulator?", in *Kill Screen*, September 30, 2016, https://killscreen.com/previously/articles/time-stop-using-term-walking-simulator/.

44 Zimmermann, Felix, Huberts/Christian: "From Walking Simulator to Ambience Action Game. A Philosophical Approach to a Misunderstood Genre", in *Press Start*, Volume 5, Issue 2, pp. 29-50, here p. 39.

45 Eyles, Mark, Pinchbeck, Dan: *Playful Ambience*, p.11.

46 Galloway, Alexander R.: *Gaming. Essays on Algorithmic Culture*, p. 10.

47 Ibid., p. 11.

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absolutely independent of the player and does not rely on their input."[48] When interaction is absent, paying attention, i.e., awareness, becomes the player's sole action, fully directed at the ever-present atmosphere of a game.

David O'Reilly's MOUNTAIN almost exclusively resides in this mode of play.[49] At the start of the game, the player is asked to draw objects on the screen. This is the only interaction required of the player. Beyond this brief task, there are no means of interacting with the game apart from moving the camera or changing settings in the pause menu, leaving the mountain to be watched as it slowly undergoes changes over time.

In RED DEAD REDEMPTION 2, various game processes persist even without player input: NPCs still follow their daily routine and interact with each other and weather changes dynamically, transforming the look and sound of the environment.[50] When player input has been absent for some time, the game camera shifts away from the player character, showing visual impressions of the surrounding environment.[51]

Galloway distinguishes this dynamic rest state from the pause function through *micromovements*. Such "micromovements often come in the form of pseudorandom repetitions of rote gamic action, or ordered collections of repetitions that cycle with different periodicities to add complexity to the ambience act."[52]

I label this concept *generative atmosphere*, as it exhibits similarities with another concept closely connected to ambient music. *Generative music*, another term coined by Eno, describes both a process, *generative*, and its result, *music*. In the generative process, multiple musical layers of different lengths are overlayed and played back simultaneously. Because each layer is looped in their respective cycle, musical elements across all layers eventually overlap at different times, creating an ever-changing musical output. Eno describes this process for his album DISCREET MUSIC, "[…] in which two simple melodic cycles of different durations

48 Zimmermann, Felix/Huberts, Christian: *From Walking Simulator to Ambience Action Game*, p. 39.

49 MOUNTAIN (David OReilly, 2014: Double Fine Productions).

50 RED DEAD REDEMPTION 2 (Rockstar Studios, 2018: Rockstar Games).

51 This again stresses the point that RED DEAD REDEMPTION 2 allows for different levels of engagement. A ludic experience, an explorative experience, and a generative atmospheric experience are all possible.

52 Ibid., p. 10.

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separately repeat and are allowed to overlay each other arbitrarily."[53, 54] He utilized increasingly complex variations of this process on several of his ambient records, including MUSIC FOR AIRPORTS. Eno later switched from combining pre-recorded material to using software that would generate an ever-changing musical output in a similar manner.[55] The shift from using pre-recorded material to employing algorithmic processes illustrates a convergence of ambient music into the context of the generative atmospheric experience in computer games.

To demonstrate the similarities between generative music and the generative atmospheric experience, consider the following: the different musical tracks of a generative ambient piece correspond to processes of the game environment, i.e., events that take place regardless of player intervention. Galloway refers to such events as *diegetic machine acts*.[56] These include day/night cycles, the individual daily routines of humanoid non-player characters, or the behavior of animal NPCs. These processes may not necessarily repeat at the same interval but nevertheless overlap with each other and contribute to the game environment. Their actual expression, like the behavior of an individual NPC, can be seen as the equivalent of a musical expression, such as a melody or a rhythm. Just like various musical expressions overlap at seemingly random intervals, machine acts serve as a generative system, creating the impression of a complex, emergent atmospheric setting.

When the game enters an ambient state, the atmosphere of the game becomes the element at the center of the player's attention. However, Zimmermann and Huberts note that "[t]he ambience act is ever-present."[57] This implies that the ambience act remains active throughout all modes of experience, even if it may fade in the background, as operator actions become more frequent and intense.

Böhme notes that, "[t]oday there is no area of life, no product, no installation or collection that is not the explicit object of design."[58] Digital games offer an unprecedented degree of control over the individual elements that may produce atmospheres: shapes, spaces, the texture of surfaces, lighting, physical properties, sound, and the algorithms that define the behavior of animate and inanimate

53 DISCREET MUSIC (Eno, Brian. Obscure, 1975. Vinyl LP).

54 Eno, Brian: *A Year With Swollen Appendices*, London: Faber and Faber 1996, here p. 330.

55 Ibid., pp. 330-332.

56 Galloway, Alexander R.: *Gaming. Essays on Algorithmic Culture*, p. 11.

57 Zimmermann, Felix/Huberts, Christian: *From Walking Simulator to Ambience Action Game*., p. 35.

58 Böhme, Gernot: *The Aesthetics of Atmospheres*, p. 27.

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entities. Therefore, games and their atmospheres require the attention from scholars across various disciplines, to engage with these elements both individually, as well as in their entirety.

CONCLUSION

Eno's concept of ambient music has been influential in the development of the idea that the perception of and interaction with some games can vary considerably. The notion of ambient games has been interpreted differently by Gordon as well as Eyles and Eglin. While the former focuses on ambient games' emotive qualities and variability of interactions within their diegetic context, the latter focus on the different intensities of interactions and the level of attention paid to the game. However, both approaches contain the theme of variability that can be traced back to Eno's idea that ambient music "must be as ignorable as it is interesting."[59]

The variability of player interaction is characterized by a shifting of the ratio between machine and operator acts. This shifting informs the ambient modes of experience proposed in this article: The *ludic mode* focuses on an intense engagement of the player with the core gameplay loop; the *explorative mode* focuses on the spatial exploration of a virtual environment; and the *generative atmospheric mode* focuses on the player's experience of the game's ever-changing atmosphere. The atmosphere of a game is inherently generative, as it usually emerges from the overlapping of various elements with their individual rhythms. The atmosphere may be intricate (and compelling) enough to be experienced in its own right, but beyond that it is always present, tinting the experience across the other modes.

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Sounding the Atmosphere

BJÖRN REDECKER

INTRODUCTION

Sound plays a crucial role in creating virtual worlds. It is a vital part of digital games, filling them with life and undoubtedly enhancing the experience for players. Ever since Al Alcorn "poked around the sync generator to find an appropriate frequency or a tone" for PONG (1972) and created the bip that broke the silence that had left digital games incomplete, their virtual worlds have become livelier and more accurate.[1, 2] Above all, sound made digital games the *audio*-visual form of media as we know it today.

The very same can be said about "music, as the ordered succession of sound" that serves as "a vehicle for the transportation of atmospheric values."[3] Quite early on, ludomusical research identified game music's contribution to a given

1 Alcorn, Alan in Kent, Steven: *The Ultimate History of Video Games. From Pong to Pokémon and beyond… the story behind the craze that touched our lives and changed the world*, New York, NY: Three Rivers Press 2001, p. 41.

2 PONG (Atari 1972, O: Atari).

3 Herzfeld, Gregor: "Atmospheres at Play: Aesthetical Considerations of Game Music", In: P. Moorman (ed.): *Music and game. Perspectives on a popular alliance*, Wiesbaden: Springer VS 2013, pp. 147-157, here p. 147, cf. also Haffter, Christoph: "Das Andere der Musik. Weißes Rauschen, Ur-Geräusch", In: C. Hongler et al. (eds.): *Geräusch – das Andere der Musik. Untersuchungen an den Grenzen des Musikalischen*, Bielefeld: transcript 2015, pp. 7-17, here p. 9.

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atmosphere as one of its central functions, [4] as Kristine Jørgensen points out: "[T]he atmospheric functions of game audio may still be regarded as one of the most central […]. Most mainstream games utilize music to emphasise certain areas, locations and situations."[5] This is not only the case with most mainstream titles, but has turned into a key design strategy for almost all digital games, small and big, triple-A and indie.

Then again, the term 'atmosphere' is hard to grasp. It is frequently used but rarely broken down to what it really means or implies. Gernot Böhme argues that the detection of atmosphere as an aesthetic concept was a huge step as "philosophy for the first time came to conceive of and to talk about a vague and rather subjective phenomenon."[6] The intersubjectivity of atmospheres makes it possible to even talk about this phenomenon in the first place. Atmospheres "are something out there, quasi-objective," as Böhme puts it.[7] By quasi-objective, he points towards Hermann Schmitz's concept of "subjective facts."[8] Such facts can be felt and identified by a larger number of individuals. Atmospheres can be defined as such subjective facts: They are not things in the sense of physical entities and are therefore only perceived subjectively. Still, it is possible to communicate about them, given the precondition that "a certain mode of perception" has been instilled "through cultural socialization."[9]

Similar to atmospheres, sound and music can be conceived as vague and subjective, especially when we talk about how they affect us. After all, "writing about music is like dancing about architecture,"[10] which further complicates the issue.

4 Ludomusical research, also referred to as ludomusicology studies sound and music in digital games. Cf. Kamp, Michel et al. (eds.): Ludomusicology. Approaches to Video Game Music, Bristol, CT/Sheffield: Equinox 2016, cf. also www.ludomusicology.org

5 Jørgensen, Kristine: "On the Functional Aspects of Computer Game Audio", In: *Proceedings of the Audio Mostly Conference, Piteå: Interactive Institute 2006*, pp. 48-52, here p. 50.

6 Böhme, Gernot: *The Aesthetics of Atmospheres*, Oxford/New York, NY: Routledge 2017, p. 6.

7 Ibid., p. 3.

8 Ibid., p. 2.

9 Ibid., p. 30.

10 This quote is often ascribed to Frank Zappa, although there is contention as to who said it and in which context-amongst the creditors are also musicians David Byrne, Elvis Costello and Thelonious Monk, producer Brian Eno, comedians Martin Mull and Steve Martin as well as performance-artist Laurie Anderson. It points towards the difficulty

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This might be a first hint towards why sound, music, and atmosphere are so closely interwoven. With these complexities in mind, this paper provides a theoretical framework for the interrelationship between sound, music, and atmosphere. In doing so, it will discuss game music's origins, its close relationship to sound effects, and why it might be important to think of these phenomena as interlinked. It will then address the ontological similarities that sound and music share with atmospheres, with tractates written on the immediate nature of music over the centuries providing a theoretic foundation. Finally, it will close with an example from INSIDE that illustrates in which ways game music, game sounds, and atmosphere are interconnected within the virtual spaces of digital games.[11]

HARDWARE AS AN INSTRUMENT | GAME SOUNDS

Digital games were originally born silent.[12] Even the first examples of game titles that were able to visualize their virtual worlds, like NOUGHTS AND CROSSES or SPACEWAR!, had to do so without sound.[13, 14] However,

"[t]here had been some graphic demonstration programs before, namely ›Bouncing Ball‹ that ran on MIT's Whirlwind Mainframe or ›HAX‹, which displayed changing patterns according to settings of console switches and was designed for Whirlwind's successor, the TX-0. Both even had primitive sound support, i.e. timed beeps generated by the console speaker."[15]

It is debatable if these graphic demonstration programs can be understood as digital games. It is undeniable though, that SPACEWAR! was designed as a game, not a simple demonstration. It replaced early computer culture's prevailing work ethic

of communicating satisfactorily about music as an immediate, powerful emotional experience and express one's feelings about it in writing.

11 INSIDE (505 Games 2016, O: Playdead).

12 Fritsch, Melanie: "History of Video Game Music", In: P. Moormann (ed.), *Music and Game. Perspectives on a Popular Alliance*, Wiesbaden: Springer VS 2013, pp. 11-40, here p. 12.

13 NOUGHTS AND CROSSES (University of Cambridge 1952, O: Alexander Sandy Douglas).

14 SPACEWAR! (MIT 1962, O: Steve Russell et al.).

15 Weske, Jörg: "Digital Sound and Music in Computer Games", research assignment as part of the DFG project Neue Medien im Alltag, TU Chemnitz 2000, np., http://3daudio.info/gamesound/history.html.

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with an ethic of play.[16] Jörg Weske reports that, following the primitive sound support of graphic demonstrations on early mainframe machines such as the Whirlwind I or TX-0, it was originally planned to have sound support for SPACEWAR!. Due to the limits of the PDP-1's processing capabilities, the idea had to be abandoned. The very first examples of game sounds were those of PONG and they were indeed comprised of "the sounds that were already in the machine."[17] When creating the game, Nolan Bushnell and Ted Dabney asked Al Alcorn to come up with an aural accompaniment of the gameplay. This illustrates how PONG's developers sensed that they would need audio to create an authentic atmosphere, in this case the one of a tennis court. Technical limitations prevented Alcorn from fulfilling the request of a more complex aural layer with booing, hissing, and cheering. However, the story of the game's development process illustrates that the vision of an atmosphere already existed, and that audio was thought to be a natural, self-evident part of its realization.

PONG's sounds ended up coming from the sync generator of the game's hardware. They were produced 'in the machine.' This means that the very computer hardware was becoming an instrument itself, a process based on the possibility of indirect sound synthesis in opposition to direct sound synthesis. Sound is, in a physical sense, mechanical radiant energy (vibration) being transmitted by longitudinal pressure waves in a material medium (sound can expand in different materials including metal, water, or air, which is most common to us). If we stick to air as the most common material medium humans experience sound through, it can be described as a vibration of air molecules. In direct sound synthesis, the vibration of air molecules is caused directly by the oscillation of strings, for example. With indirect sound synthesis, rather than manipulating the material medium directly (causing air molecules to vibrate), the vibrations of an oscillating circuit can be "electronically amplified and transduced into sound waves via a speaker,"[18] therefore indirectly manipulating the material medium. It is through indirect sound synthesis that early computer hardware produced sounds and music for games.

16 Cf. Stone, Allucquére Rosanne: *The War of Desire and Technology at the Close of the Mechanical Age*, Cambridge, MA: MIT Press 1995, p. 13.

17 A. Alcorn in S. Kent: *The Ultimate History of Video Games*, p. 42.

18 Thies, Wolfgang: "Der Computer – ein neues Musikinstrument?", In: G. Batel et al. (eds.), *Computermusik. Theoretische Grundlagen. Kompositionsgeschichtliche Zusammenhänge. Musiklernprogramme*, Laaber: Laaber-Verlag 1987, pp. 131-157, here p. 134f., own transl.

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Whereas PONG's sound emanated from a sync generator on a circuit board, later game music was first produced by the same microchips that were responsible for handling gameplay and visuals, and then by dedicated sound chips (programmable sound generators, PSGs) with some of them gaining popularity among game composers and fans alike.[19] The indirect sound synthesis of all these hardware components and later dedicated sound chips caused the audio of digital games to develop a distinguished aural fingerprint, at least initially. Because of the technical implications of the various synthesis procedures,[20] game music from the early 1970s up to the late 1980s had a very distinctive aesthetic.[21] Some of the hardware components and sound chips even carved out a popular music genre of their own, chiptune music,[22] which is reminiscent of this aesthetic, while also being used outside the immediate context of gaming (i.e., when being performed at concerts or festivals not necessarily linked to digital games). Even though various compositional techniques and strategies were used (from small and simple loops to mickey mousing to original soundtracks to cover versions of both popular music and classical pieces), they were all defined by the distinctive sound aesthetic of the hardware producing them and therefore added to the atmospheres of games within that era in a distinct fashion.

This changed with advancements in technology. Especially with the possibilities that wavetable synthesis and digital signal processing (DSP) provided, sound and music did not need to be rendered in real time any longer. Now, pre-recorded material could be streamed from audio libraries. Subsequently, game music moved away from the distinctive chiptune aesthetics that it held before and

19 One of the most prominent was the SID-chip MOS 6581 used in Commodores C64, cf. Rettinghaus, Klaus: "Sidology. Zur Geschichte und Technik des C64-Soundchips", In: C. Hust et al. (eds.), *Digitale Spiele. Interdisziplinäre Perspektiven zu Diskursfeldern, Inszenierung und Musik*, Bielefeld: transcript 2018, pp. 269-280.

20 For more detailed remarks cf. Collins, Karen: *Game Sound. An Introduction to the History, Theory, and Practice of Video Game Music and Sound Design*, Cambridge, MA, London: The MIT Press 2008.

21 With the introduction of DSP (digital signal processing) and wavetable synthesis, using digital samples of instruments, game music began to sound more realistic and organic than previous synthesis models and heralded a significant alteration in its sound. Cf. K. Collins: Game Sound, pp. 45-46.

22 Although it needs to be said that there is contention as to how the term 'chiptune music' should be defined. For an introduction, see Fritsch, Melanie et al.: "Part I - Chiptunes", In: M. Frisch and T. Summers (eds.), *The Cambridge Companion to Video Game Music*, Cambridge: Cambridge University Press 2021, pp. 5-58.

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diversified into a cacophonic cornucopia of sounds, styles, and musical genres. However, the catalogue of compositional techniques and implementation strategies of early game audio established an aesthetic identity that lasts to this day. Today's digital games perpetuate the heritage of early game music that transformed computer hardware into instruments; the blips and beeps of early sync generators, of PSGs, and later ever more sophisticated, dedicated sound chips. This is where game audio learned to walk.

Music and sound have a close, complex, and contested relationship. Due to their sonic heritage, this is especially true for sound and music in digital games. How one defines music is a point of contention not only within academic but also societal discourse. Therefore, it is problematic to draw a sharp line between, for example, dynamic sounds giving feedback to player actions in the form of simple sound effects and game music.

Sometimes these lines might be very clear and sharp, but what makes games interesting subjects of analysis in this field, is that within them sound, as a concrete phenomenon, and music, as an abstract art form, work closely together.[23] This is especially true when it comes to creating the atmosphere of a virtual space. When fulfilling this function, game sound and game music seem to interweave ever more intensely, which is why they need to be thought of together. I do not claim, however, that game sounds and game music are synonymous or ontologically the same. Clearly, there is a difference between a gunshot and a sparkling piano pattern. Game music is functional music that does not follow the formula of *l'art pour l'art*.[24] Serving a function or a purpose indeed anchors it more towards

23 There are other examples of developments and phenomena in which the concrete and the abstract formed an alliance before digital games became a popular media form; examples may include early electronic music in the middle of the 20th century or Pierre Schaeffer's musique concrète. Cf. Chion, Michel: "Die musique concrète ist nicht konkretistisch", In: Hongler et al. (eds.), *Geräusch – das Andere der Musik* (2015), pp. 21-32, and cf. W. Thies: "Der Computer – ein neues Musikinstrument?", In: Batel et al. (eds.), Computermusik (1987), pp. 131-157.

24 Functional music is best described as, nomen est omen, music that strictly follows a function or purpose outside the musical material, which dictates its form and nature. Cf. Rötter, Günther (ed.): *Handbuch Funktionale Musik, Wiesbaden*: Springer VS 2017. The biggest controversy in music aesthetics of the 19th century in the wake of the formation of musicology as a subject of the humanities revolved around the question whether music exists for its own sake, as summarized in the l'art pour l'art formula, or if music always pertains to some reference point outside of the pure musical material and therefore exists for something else's sake.

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something concrete, and therefore away from the concept of the abstract. Game music as functional music needs to be understood as a musical form that concerns the entirety of a digital game's aural layer. Therefore, I will follow a unifying approach to game music and game sound.

THE IMMEDIATE NATURE OF SOUND AND MUSIC

Game sound and game music are key design elements in the creation of atmospheres and are neither an afterthought, nor a passing fad,[25] as "music is not a redundant echo of other aspects of the game, but […] a central part of the audiovisual experience."[26]

This is due to the immediate nature of sound and music, whose direct connection to our feelings and emotions has been a frequent talking point in historic musicology and music theory over the centuries, with writers such as Damon of Oa (5th Century B.C.), Anicius Manlius Severinus Boetius (ca. 480-524), René Descartes (1596-1650) and Eduard Hanslick (1825-1904), among many others, weaving the subject into their work.[27] How exactly this immediate connection works has never been clearly defined and remains a major point of contention within the musicological community. As mentioned before, writing about music is like dancing about architecture.

Baroque author Jean-Jacques Rousseau tries to explain the immediacy of music and its aesthetic difference in contrast to the other most prominent art form of his time, painting. He explains:

"It is one of the great virtues of the musician to be able to paint things that could not otherwise be heard, while it is impossible for the painter to depict those that could not be seen […]. Sleep, the stillness of the night, solitude and even silence find their representation in music."[28]

25 Cf. Karen Collins: *Game Sound*, p. 37.

26 Summers, Tim: *Understanding Video Game Music*, Cambridge, Cambridge University Press 2018, p. 6.

27 For an introductional overview, see Keil, Werner (ed.): *Basistexte Musikästhetik und Musiktheorie, Paderborn*: Fink 2007.

28 Rousseau, Jean-Jacques: "Essai sur l'origine de langues", In: Ibid. (orig. 1781, French), pp. 120-135, here p. 129, own transl.

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Concepts such as sleep, stillness, and solitude are as hard to grasp as the concept of atmosphere—one could even argue that sleep, stillness, and solitude are indeed atmospheres. Although elusive and hard to put into words, these phenomena are experienced quite clearly. This can be said about all kinds of atmospheres. Their elusiveness lies in the fact that they are experienced as immediate phenomena. This immediate experience is made possible by music and sound which are—as has been argued—immediate phenomena themselves. It is precisely this immediacy that music and sound share with the elusive concept of atmosphere.

Immediacy is likewise the most important function of game music and game sound when it comes to contributing and evoking certain atmospheres in games: through their immediate nature, game music and game sound function differently from all other aesthetic components. Visuals, graphics, or narratives often need context, reflection, and prefabricated knowledge to function. Game audio influences the psyche (Damon) of players, appeals to their hearts (Boetius), and paints things that could not otherwise be seen (Rousseau) in an immediate, direct manner. As Rousseau writes about musicians and music in general, game music and game sound have the capacity to:

> "stir up the sea, quicken the flames of a fiery conflagration, make the streams flow, the rain fall and the stream swell; he [the musician] will also paint the abomination of a terrible desert, darken the walls of a subterranean dungeon, calm the storm, make the air calm and serene, and with his orchestra spread new freshness over the grove."[29]

Throughout the baroque period, theorizing on the immediacy of music became a major interest for music theorists like Michael Praetorius and Athanasius Kircher, who wrote tractates on the subject in the first half of the 17th century. One of the most popular and concrete models that would try to categorize the different ways in which music exercises an immediate effect on us was that of René Descartes, who designed a rational theory of affects[30] that influenced not only his contemporaries but also later authors such as Friedrich Wilhelm Marpurg, the aforementioned Jean-Jacques Rousseau, and Johann Mattheson. Mattheson was in turn one

29 Ibid.

30 Cf. Descartes, René: "Musicae Compendium", In: W.Keil (ed.): *Basistexte Musikästhetik und Musiktheorie*, Paderborn: Fink 2007 (orig. 1650, Latin), pp. 85-99.

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of the first authors to explore and theorize the importance of sound color (*Klangfarbe*), or timbre, as a major constituent of music.[31]

Upon bringing timbre into the theoretical and aesthetic discourse in the early 18th century, Mattheson immediately pointed out its affective potential, its important influence on human emotion, thus marking it as a key component of affective topoi:

"The fifth piece of the natural doctrine of sound is the most distinguished or most important of all […] and examines the effects of well-ordered sounds, which they show on the emotions and sufferings of the soul."[32]

Mattheson's claims about the emotional impact of sound and music are crucial for exploring atmospheres, which—like sound and music—hold immense affective potential. One of the answers as to how exactly this is possible lies in Mattheson's discovery of timbre as a central component of musical material, having been largely ignored by music scholars for centuries. The study of game music and game sound takes these considerations into account, while also drawing from observations and theoretical works on film and theatre music that likewise underline the importance of timbre as a musical parameter.

ATMOSPHERE THEORY, GAME SOUNDS, AND THE AESTHETIC FUNCTIONS OF SUBTLETY AND IMMEDIACY

In the abovementioned research on game sound and music, functions of game music are often categorized depending on their respective tasks. As mentioned in the introduction, Kristine Jørgensen theorized on atmospheric functions of game music in the formative years of this research, writing that they are

"[w]orking in a more subtle manner […]. The music does not only work as pure information, it also emphasises mood […]. Players notice that the immersion decreases, and that the fictional world seems to disappear and that the game is reduced to rules and game mechanics when sound is removed."[33]

31 Cf. Mattheson, Johann: „Der Vollkommene Capellmeister", In: W. Keil (ed.): *Basistexte Musikästhetik und Musiktheorie*, Paderborn: Fink 2007 (orig. 1739, German), pp. 100-119.

32 J. Mattheson: „Der Vollkommene Capellmeister", p. 109, own transl.

33 Jørgensen, Kristine: "Functional Aspects", p. 50.

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Subtlety is the keyword here. Following Jørgensen, I argue that atmospheric functions differ from their ludic and narrative relatives in the very way they work. Game music that contributes to the atmosphere of a given scenario in a game is less effect laden, less intrusive, and typically not to be found in the foreground of the aural layer, whilst game music with ludic functions accompanying a gameplay mechanic, for example, needs to be very concrete and sometimes quite bold. This does not preclude that music with ludic functions doesn't contribute to atmospheres too. My argument, however, is game music that contributes to atmosphere is often, albeit not always, of a more ambient nature.[34] Game music that builds atmosphere hinges on its ability to fulfil a function and therefore relies more heavily on texture than on harmonic or melodic movements, making it eligible for compositional techniques such as horizontal sequencing. As Tim Harbour explains:

"This means two separate pieces of music with similar structures but differing textures and dynamics need to be written that can be swapped in and out at any time. This kind of procedure works well for more ambient sections of a game."[35]

Among the functions outlined above, the task of game music is to establish or emphasize an atmosphere for the present setting and the overarching narrative, as well as the ludic processes taking place at any given moment. Game music with atmospheric functions fulfills this role by being immediate. In this sense, subtlety and immediacy are closely intertwined. The game music's subtlety does not render it powerless but rather resilient. Compared to its more conspicuous functions, may they be ludic or narrative, game music is much more consistent, as it subtly seeps into the player's subconscious. Although immediate in nature, such game music needs time to fully realize its potential as an enabler of atmosphere. These differences in types of game music, pronounced versus subtle, pragmatic versus aesthetic, apparent versus hidden, can be connected to Gernot Böhme's work. He argues that the aesthetic values of materials and objects exceed their practical use. Felix Zimmermann and Christian Huberts pick up this idea, explaining that when working towards a theory of atmosphere it is important to become aware of a potential divide

34 For a more detailed discussion on ambient music, see the contribution of Vadim Nickel in the present volume.

35 Harbour, Tim: *Music in Indie Video Games: A Composer's Perspective on Musical Approaches and Practices*. Master Thesis, Johannesburg 2016, p. 60.

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"between how an object physically exists and how it acts, how it affects the world around it. Objects can produce specific atmospheres-of warmth, of ease, of naturalness-without being verified as being of congruent material origin."[36]

This theoretical divide can be summed up as an understanding of primary and secondary functions. Zimmermann and Huberts follow and build upon this idea, previously introduced by Umberto Eco, and connect it to Böhme's dichotomy of the object's materiality versus the object's aesthetic.[37]

This network of ideas can, in turn, be expanded to include primary and secondary functions of music and sound in digital games. Whereas the bang of a gunshot possesses the obvious, ostensible primary function of sonically illustrating what is seen on screen (the firing of a gun), it may also possess a hidden, secondary aesthetic function, creating an atmosphere of either shock, rage, and terror, or of menace and fear. This secondary function, however, becomes visible once the timbre of the gunshot as a sound phenomenon is considered: If it is fired near the player, it might be loud and, in its primary function, urge players to react in some way. If a gunshot or several of them are heard in the distance—their timbre modulated by distance or ricochet—it might be distorted and estranged. In its secondary function, it may create an atmosphere of menace that is determined rather by tension than horror. The modulated and reverberated sound of a gunshot in the distance introduces the uncertainty of not knowing who shot and how far away the potential danger is. This uncertainty is especially palpable in games that feature flight, rather than fight, mechanics, i.e., survival-horror titles that put players in the position of having to either hide or flee from enemies. In such games, players rely heavily on the sounds of virtual environments and their timbre when evaluating the danger situation.

In conclusion, the application of primary and secondary functions of objects to game music and sound helps articulate how music and sound build tuned spaces and contribute to atmospheres in digital games: in a primary, obvious, and ostensible manner, as well as in a secondary, hidden, subtle, yet immediate manner.[38] The primary functions of game music are often linked to more traditional

36 Zimmermann, Felix/Huberts, Christian: "From Walking Simulator to Ambience Action Game: A Philosophical Approach to a Misunderstood Genre", in *Press Start 5* (2, 2019), pp. 29-50, here p. 32.

37 Cf. Ibid.

38 Gernot Böhme conceives tuned spaces as spaces with a certain mood and suggests that atmospheres can be briefly described as such, cf. G. Böhme, *The Aesthetics of Atmospheres*, p. 2.

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components of music such as rhythm, tempo, pitch, and volume, whereas the secondary functions of game music are linked to less obvious components such as timbre. In sum, not only is it important *what* kind of music and sounds ring out, but also *how* they sound, how they are conceived, what aesthetic values they transport, and how they affect us. This brings me back to Gregor Herzfeld's remarks from my introduction, who perfectly sums up the argument:

"Every sound has its atmosphere. Besides shapes, colours and odours, it is sound that contributes fundamentally to the atmospheric impression of a given object or situation [and one might add; a gaming situation]. Therefore music, as the ordered succession of sound, is, in addition to its structural qualities, a vehicle for the transportation of atmospheric values."[39]

To illustrate this, I will analyze a sequence from INSIDE that demonstrates an innovative and unique interconnection of game music and sound, and the atmospheres they produce.

SOUNDING THE ATMOSPHERE INSIDE

INSIDE is a 2D-puzzle platformer about a child, presumably a boy, who is hunted by a fascist regime that rules over a monochrome dystopia. The title is a spiritual successor to the developers' previous surprise hit LIMBO (2010), including similar game mechanics such as puzzling, jumping, and running across platforms. INSIDE's overall game atmosphere is characterized by both the dread of being caught and the wonder of exploring a seemingly long-lost, industrial world. Parts of the game take place underwater in flooded areas of abandoned facilities. Some of these areas can be explored by diving, others with a small submarine. The aural layer of the entire game is relatively 'quiet,' with sound effects such as the echoing of footsteps, the clanking and creaking of dilapidated metal railings, and the bubbling of the submarine's oxygen output as the only sounds that punctuate the otherwise stifling silence. Rarely does the game resort to using nondiegetic sound.[40] When it does, however, the use of nondiegetic sound has an outsized impact on the game's atmosphere. This happens, for example, when players navigate the submarine from a small environment to a very large space.

39 Herzfeld, Gregor: "Atmospheres at Play", p. 147.

40 I refer to this terminology in the way that Michel Chion has presented it in his influential work on audio vision, see Chion, Michel: Audio-Vision: Sound on Screen, New York, NY: Columbia University Press 2019.

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Figure 1: The submarine in a small environment

Source: Own screenshot from INSIDE

Figure 2: The submarine in a vast environment

Source: Own screenshot from Inside

The fixed 2D-sideview enables the developers to change the camera angle in a manner they deem necessary for the aesthetic experience of players. This camera movement is significant because it enables the game's audio to fully realize its potential. In this case, a synth pad is added as soon as the submarine enters into

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the expansive space.[41] The rather vague harmonic and melodic structure of ambient game music is not unusual, especially not in the context of indie games. Game music composer Tim Harbour, for example, describes the music for another successful indie game, JOURNEY[42], as

> "on the whole extremely ambient and harmonically static, allowing for melodies and pitched sound effects to be introduced and removed without causing dissonance […] while there is sometimes a small amount of chordal movement, strong harmonic progressions are avoided during gameplay".[43]

Much of INSIDE's sparse use of game music follows a similar approach. The synth pad in this sequence adds a much more powerful dimension to the change of the camera-size-ratio. As the submarine breaks through some pieces of wood blocking the way, it enters the next area. The camera pans out, with the avatar and submarine growing very small, consequently showing players how vast the environment is.

Though restrained in nature, the nondiegetic sound becomes an integral part of the overall aesthetic experience of this sequence. In Rousseau's words, the synth pad makes a stream flow and darkens the subterranean environment—in this case, a flooded industrial dystopia.[44] Subtly and immediately, the synth pad stages the transition from one space to another. It tunes the space the submarine traverses, creating an atmosphere of awe and making players realize how small their avatar is compared to the expanse of the flooded industrial complex.

The synth pad achieves this effect through its unique timbre and sound. First, it is worth noting how INSIDE's composer Martin Stig Andersen decided to use a synthesizer for the nondiegetic music of the game. Andersen's choice is uncommon in the age of wavetable synthesis and DSP-technology. It reflects game music's synthetic heritage outlined above, underlying the argument that the timbre of (early) game music is of paramount importance. Second, it is also worth noting

41 The synth pad's harmonic structure is hard to determine but it appears to hover around a two-tone concept with an F# one octave down and its fifth C# serving as keynotes. As the section progresses, a V-IV-figure forms out with the F#-keynote never quite disappearing, always looming in the background of the almost melodic movement of C# to B.

42 JOURNEY (Sony Computer Entertainment and Annapurna Interactive 2012, O: thatgamecompany and Santa Monica Studio).

43 T. Harbour: "Music in Indie video games", pp. 61-62.

44 Cf. Rousseau, Jean-Jacques: "Essai sur l'origine de langues", p. 129.

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how the unique timbre of the synthesizer sound in INSIDE was achieved. Here, the 'traditional' synthesizer approach deviates from its heritage of subtractive, additive, or frequency modulation synthesis-techniques, as Andersen admits that he

"didn't really want to hear synth music in the game. I tried to do it, but it felt too much like a statement […]. I don't think that's appropriate for a game like *Inside*, a small game that's all about creating its own unique world. But when I played them through a skull, the sounds acquired another quality."[45]

By using an actual human skull as an acoustic resonator, Andersen managed to create a fully unique, albeit morbid, timbre that is synthesized and organic at the same time. This unique synthesized-organic timbre relates to the immediacy of music. (Game) music and sound circumvent all diversions and detours when they affect us. The reason Andersen chose to use a skull was to demonstrate how different all sonic expression resonates inside one's own head—literally not metaphorically. According to Andersen, "[t]hings sound much softer in there, more full, in a way […]. So I had the basic idea of trying to recreate sounds as they would sound if they were happening inside your head."[46]

CONCLUSION

The difficulty in writing about subjective phenomena, such as atmospheres, multiplies when trying to think about the relationship of several vague and subjective phenomena such as sound and music and their relationship to atmospheres. Only approximations can therefore be presented and discussed, always humbly self-aware of the fuzziness and problematic nature of these theorizations. With that said, when thinking about the relationship of atmosphere, game sound, and game music, it is crucial to understand three things: First, we need to conceive the aural layer of digital games as a whole, considering the potential and the possibility of sound effects, concrete sound phenomena, and even noise to become ingrained in the musical material. We must do so not only because of the historical development of game sound and music but also because of the developments of music

45 Andersen, Martin Stig: "Audio Design Deep Dive: Using a human skull to create the sounds of Inside", In: *Gamasutra*, October 6, 2016, https://www.gamasutra.com/view/news/282595/Audio_Design_Deep_Dive_Using_a_human_skull_to_create_the_sounds_of_Inside.php.

46 Ibid.

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aesthetics and theory that have dominated the academic as well as societal discourse in the 20th century. Second, we also need to be aware of the everchanging aesthetic discourse surrounding the immediate nature of sound and music. And third, the importance of timbre as an additional parameter of music must be considered as equally important to pitch, volume, or tempo. This pertains especially to the hidden potential of ambient music that often creates atmospheres by using unique timbres, giving the aural experience of digital games a holistic nature: just as the unique timbre of INSIDE's synth pad is an integral part of the game's aesthetic experience, helping to create an atmosphere of vastness and awe when traversing from a small to a vast surrounding inside a peculiar little submarine.

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Systemically Implied Atmospheres

Towards a Mechanistic Understanding of Atmosphere in Pen and Paper Roleplaying Games

JONATHAN JUNG JOHANSEN

INTRODUCTION

This paper argues that parts of a roleplaying system tune both the player's *mood* toward, and the *atmosphere* of, the real and imaginary environments created in play.[1,2] This paper's intervention is that mood and atmosphere are modulated hinges of the sensorial qualities of objects in space and the perceived relation to space. This article explores this tuning from a cybermedia perspective where the mechanical system, materiality, and player perspective may be isolated from one another. *The analysis itself will discuss* how the materiality of the JENGA tower, the DREAD system of rules in the cybermedia process, and the horror roleplaying game perspective as implied by the DREAD manual combine to affect atmosphere and mood.[3, 4, 5]

Considering the variables of an actual roleplay situation, uncovering how atmospheres and moods are modulated in actual play is too ambitious for the scope

1 Mood is to be understood as any single player's emotional state.

2 Atmosphere is to be understood as the properties of environments and conventions that govern their reception.

3 A Jenga tower is a pile of fifty-four wooden blocks stacked three on each level in alternating directions.

4 JENGA (Scott, Leslie, 1983, Hasbro).

5 DREAD (Ravachol, E. and Barmore, N, 2005, The Impossible Dream).

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of this article. Instead, this article concentrates on play as described within the rulebook of the single roleplaying game system DREAD. By deriving assumptions about play from what the system states and implies, the operations of the tuning process can be deduced. Therefore, this paper adopts a mechanistic perspective that only considers play implied by the norms and explicit rules of the system, with minimal authorial interpretation of rules.

In DREAD, players sit around a table where a JENGA tower is placed centrally. One player is the host, who provides the basic framework of the story, while the rest of the players each control a character created beforehand by answering a questionnaire the host has created based on the scenario. Whenever the host determines that a character is at risk, they may request that a player pull one or two blocks from the tower. Removing blocks without the tower toppling means that the player avoids the risk. If the player opts not to pull or abandons a pull, the host may deem that their character is unsuccessful, harmed, or the situation in the imagined space escalates, but the character remains in play. If any player besides the host topples the tower for any reason outside a requested pull, their character is removed from the game or cannot meaningfully affect the game anymore. The tower is rebuilt if toppled, with the pulled bricks removed. Every block pulled out makes the tower more precarious.

ROLEPLAYING GAMES AS CYBERMEDIA

According to Jonne Arjoranta's inclusive model of roleplaying games, all pen and paper roleplaying games have the following characteristics: an *imagined space* shared between players called a *gameworld*.[6] In it, the participants have *shared powers.* The ability to affect the *gameworld* must be shared, or else it would be storytelling. Finally, there are different *modes of interaction* with the Gameworld depending on the system. There are rules governing what each player is allowed to interact with, how they may interact with it, and if physical tools are used to arbitrate. To identify when a roleplaying system tunes atmosphere and mood, I will focus on when the affective potential hinges specifically on interactions explicitly described by the system.

Roleplaying games are complex *gestalts* realized through play. Roleplaying systems contain rules that must be interpreted and integrated into the imagined

6 Arjoranta, Jonne.: "Defining Role-Playing Games as Language-Games. International Journal of Role-Playing", in *International Journal of Role-Playing* 1 (2011), pp. 3-17, here p. 14.

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world by the players. This echoes Espen Aarseth's and Gordon Calleja's observation that any *game as object* is fundamentally incomplete until used as a *game as process* in actual play.[7] The Game as Object is a cybermedia object consisting of sign, materiality, and mechanical system—each affecting one another.[8] The Game as a process incorporates the player, necessitating that they engage the cybermedia object with a game perspective.[9] *Process* in the case of a roleplaying game means that the mechanical system can be invoked in idiosyncratic ways during each play session, creating new meanings and reconfiguring play. Myriad factors can influence these invocations. For example, the player's emotional state during play, the space and particular tools available, relationships between players, and rules modified, added, or unused in a group. In roleplaying games, the mechanical system makes the difference between *game as object* and as *process* very apparent, because the system does not contain the imaginary content that is the subject of play. Rather, the imaginary content is created by talking to one another. José P. Zagal and Sebastian Deterding stress that roleplaying games are socially constituted, as opposed to board games with defined roles for boards and tokens between game sessions. According to the authors, "people talk and act a given game and game world into being – When people stop enacting it, the game ceases to exist."[10] Contextualizing this act within Aarseth's and Calleja's cybermedia model, this enaction is part of the non-trivial effort and perspective required for the player(s) to constitute the Game as Process.

Frequently, a randomization tool like dice is used to impact the imaginary world or used to determine the result of a ruling in the gameworld.[11] Though varying between players, the numerical values and rule system both lend meaning to and impact the imaginings of roleplaying: Gordon Calleja notes that randomization tools may impact the player's imagining of an action's severity by *Synthesis.* An example is a die determining the success or failure of an action. A player could

7 Aarseth, Espen/Calleja, Gordon.: "The Word Game: The Ontology Of An Indefinable Object" in *Proceedings of the 10th International Conference on the Foundations of Digital Games* (2015).

8 Ibid., p. 6.

9 Ibid., p. 6.

10 Zagal, José/Deterding, Sebastian: "Definitions of "Role-Playing Games", In: agal, José/Deterding, Sebastian (eds.), *Role-Playing Game Studies*, New York: Routledge 2018, pp. 19-48.

11 Games entirely without randomization do exist that instead rely on player interpretation or arbitration of factors inside the imagined world, such as amber diceless roleplaying (Wujcik, E, 1991: Phage Press.).

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use a higher numerical result as inspiration for a more grandiose imagining or retelling of their success. Therefore, Calleja states that "[mental episodes can be] generated from stringing together a series of causally related segments of Synthesis of interaction with and interpretation of game rules, representation, and mental imagery."[12] This concept of Synthesis is important, as it describes how parts of a system without imaginary content may affect imagination. By analyzing when the system requests specific actions of players or where the rules specifically request the use of physical materials, be they props or randomization tools, it raises the possibility of moods or atmosphere being affected. This influence on moods and atmosphere operates without necessarily describing the specific effect in actual play by constraining assumptions of imaginary content to what is explicitly demanded by the game as object.

The above-mentioned facets make it difficult to analyze an actual play situation by isolating how a system itself affects atmospheres. On the other hand, the fact that no mechanics can take effect without player enaction complicates analyzing atmosphere solely through the system. Operating under the ruleset, players themselves must act the mechanics into existence. In a digital game, mechanics exist as coded interactions computed by the device automatically. But as players instantiate the rules in pen and paper roleplaying games, the rules are subject to interpretation and modification during play.[13] Some of these rules contain verifiable schemas for action, while others solely affect a player's perspective on the imagined world. Espen Aarseth and Pawel Grabarczyk dub the verifiable category of rules *interpreted mechanics* and[14] the unverifiable category of rules *postulated norms.*[15] In the case of DREAD, we can verify by the rules system whether the tower topples and if the players follow the rules by removing the toppling player's character. The effects of interpreted mechanics are part of the mechanical system in the cybermedia model, while the effects of Postulated Norms are assumed to inform the implied players perspective. An example of such a Postulated Norm in

12 Calleja, Gordon.: "Experiential Narrative In Video Games", In: *DiGRA '09 – Proceedings of the 2009 DiGRA International Conference: Breaking New Ground: Innovation in Games, Play, Practice and Theory*.

13 Dormans, Joris: "On the Role of the Die. A brief ludologic study of pen-and-paper roleplaying games and their rules", In: *the international journal of Computer Game Research* 6 (2006).

14 Aarseth, Espen/Grabarvzyk, Pawel: "An Ontological Meta-Model for Game Research", In: *DiGRA '18 – Proceedings of the 2018 DiGRA International Conference: The Game is the Message*, pp. 1-14.

15 Ibid. p. 14.

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DREAD is the advice 'dwell on the familiar,' where the host is given the advice to draw on experience and memory to quickly create depth, which can be interpreted as liveness and atmosphere. It is impossible to verify whether the environments talked into being are true copies of the host's memory, and whether a felt quality of depth is attributable to the host generating the environment from past experiences. Whether the environment will be perceived by other players as 'familiar' is also dependent on each player's values. To minimize the cognitive dissonance created in the player's imagination during actual play, implied roleplay disregards the arbitrations that a player must make, such as the narrative means by which the host removes a character from being playable in the imagined space if a player makes the tower topple. Instead, it only considers the player as a configuration of the game. This position can be extrapolated from Aarseth's concept of the implied player, a player that follows the expectations created by a game system and as such is "a function of the game, a slot in a game machine that can be filled by any rational, critical, informed person."[16] Following this rationale, the player is a construct produced by the gameworld's limitations on actions.

Analysis of roleplay alters this perspective. There is no hard limit to what actions can be acknowledged in a roleplaying situation. A more fruitful analytic framework is *Implied Roleplay:* a construct arising from moments activating only a component part of the written roleplaying system and considering *only the necessary minimal way* for the rule to run to its completion. Only in these moments when interpreted mechanics can be invoked, and this invocation can be seen as verifiably misunderstood or true, can we with a degree of certainty discuss the effects of synthesized parts of the system upon mood or atmosphere. It is only these moments I discuss in the analysis of the mechanical system in DREAD. Lastly, Implied Roleplay makes certain assumptions about the perspective of the implied roleplayers. These implied players all partake in a vivid imagining of the shared world, assuming that instances of that world inside each player's imagination are comparatively similar. Ergo, no adjudications or discussion about the interpretation or validity of a particular interpreted mechanic should take place except when arbitration or discussion is suggested by the wording of that interpreted mechanic. I also assume that these player constructs all have perfect knowledge of what interpreted mechanics can be invoked.

16 Aarseth, Espen: "I Fought The Law. Transgressive Play And The Implied Player", In: *Proceedings of the 2007 DiGRA International Conference: Situated Play*, pp. 130-133.

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ATMOSPHERES AND MOOD IN ROLEPLAYING GAMES

For the philosopher Gernot Böhme, *Phantastike Techne* describes the affective potential of designed objects and environments, and actions taken within these spaces in relation to an audience member. As such, it provides a touchpoint between the tower (designed object), player interactions (containing both audience member and actant), and the designed space (imaginary space and physical space) that are included in a session of DREAD. Böhme goes on to explain phantastike techne as the way in which objects radiate outwards and influence observers by their enclosing sensory impressions like light, heat, and sound instead of their geometric properties. The culturally and interpersonally defined reception of these stimuli make phantastike techne manifest as an emotion in the observer. In other words, these are a stage designer's techniques to fabricate an environment and tune it to a set of affective potentials that surround and impress themselves upon the experiencer. This emanation is what Böhme calls *Ekstases*.[17] These concepts originally allow Böhme to disseminate the atmospheric properties of any material element of designed environments**,** viewing the creation of atmospheres through the production aesthetics of stage design. Applying them to the rules and mechanics of a roleplaying system initially poses a challenge: phantastike techne relates to objects in space, not insensible elements such as numerical rules or norms governing how objects in an imagined situation react in roleplaying games. The randomization tools used in roleplaying game rules are material and during their use move and make sound. They may thus emanate Ekstases depending on how they are used to stage the environment. Furthermore, due to Synthesis and depending on the tools (dice, cards, candles, the JENGA tower) used in the system, the material tools represent meanings particular to the imagined situation.[18] Through the rules tied to them, these tools create certain expectations and outcomes with their physicality and therefore have ekstatic potential. The mechanical system itself does not create moods and atmospheres but rather physical actions of a system.

This modulation is made possible by way of the object's emanations and by how it moves in space in relation to the experiencer's "Felt Body" (Ger.: "Leib"). Following Hermann Schmitz, "Encorporation" (Ger.: "Einleibung") is the process of connecting one's own felt body with another body or object in space through

17 Böhme, Gernot: "The Art Of The Stage Set As A Paradigm For An Aesthetics Of Atmospheres", In: *Ambiances* [Online] Rediscovering (2013).

18 TEN CANDLES (Stephen Dewey, 2015; Cavalry Game).

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sensory qualities.[19] This encorporation is afforded via suggested movement (Ger.: "Bewegungssuggestionen").[20] The object and space become a felt part of a perceiver's own felt body, that is, something which is perceivable as if being part of a person's body.[21] For example, if a specific die is repeatedly thrown and only used for determining the danger of a situation, then that die, and its audiovisual ekstases, will come to be associated with danger, which becomes doubly effective when it lies within the view of the player(s). Effectively, when a player takes this die into their hand, ready to cast it and concede to its power of life and death over the player's character, they would feel the danger emanating from this die weighing heavy in their hand.

Ekstases can then theoretically emanate from two planes in a roleplaying game: The first plane is the player's physical presence enclosed by the physical space in which they play. The second plane is a solely imagined space, the player's imagined focal point and how this exists in the imagined space. Both planes interact, of course, made apparent above with the die example. However, the tension between imaginary and physical phenomena remains. The tension lies in transferring concepts of atmosphere creation like ekstases or encorporation tied to the perception of physical phenomena to a context like a roleplaying game with imaginary phenomena. The mental focal points for the player (the player character) and the environment that radiates toward the player character are imaginary constructs, there is no physical object which can radiate towards or immerse the player's senses through heat, sound, or lighting. Yet, in a roleplaying session, the atmosphere conjured by the ekstases of the imagined objects created through interaction and mental habitation may impact the player's mood: A player's mood may reach paranoia because of the eerie atmosphere of the environment that their character inhabits, as with Böhme's example of being moved to tears entering a space with a somber atmosphere.[22] Following Böhme, every production aesthetic has its own particular means for conjuring atmosphere via its medium and the atmosphere conjured in an imagined environment in a roleplaying game emanates in the form of speech.[23] Böhme writes:

19 Schmitz, Hermann: "Atmospheric Spaces", In: *Ambiances* [Online] Rediscovering (2019).

20 Ibid. p.4.

21 Ibid. p. 4.

22 Ibid. p. 22.

23 Böhme, Gernot. *The Aesthetics of Atmospheres. Ambiances, Atmospheres and Sensory Experiences of Spaces*. (2017) Routledge Taylor & Francis Group.

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"[…] atmospheres, however, can also be produced through words or through paintings. The particular quality of a story, whether read or heard, lies in the fact that it not only communicates to us that a certain atmosphere prevailed somewhere else but that it conjures up this atmosphere itself. Similarly, paintings which depict a melancholy scene are not just signs for this scene but produce this scene itself."[24]

While the precise staging of this environment via speech during play is unverifiable in Implied Roleplay, it is possible to discern whether a roleplaying game text contains advice on how to best verbally stage and thus conjure these gameworld environments. Again following Böhme, atmosphere is a quality that exists between physical environment and perceiver: through their own sensuous presence, the perceiver's reality accesses part of the environment's sphere of presence.[25]

Implied Roleplay sheds light on how the mechanics and materials bring specific properties into sensuous proximity of the player: a pen and paper roleplaying game does so in implied play when a norm or interpreted mechanic is loaded with words that construct imaginary environments which then produce the atmosphere. More specifically, an atmosphere is implied to be conjured when mood-bearing words are tied to dice or other objects, thus providing additional means for encorporation. Processes or workshops may be necessitated before play, whose purpose is to shape a player's conception of the imagined space before it is constructed during play (or vice versa) to stage the imagined space to fit a specific player's conceptualization of a mood. This process of atmosphere conjuration via 'staging the imagination' is different than the production of atmospheres in conjunction with material such as paintings or the staging of a theater play, wherein it is impossible to make sure the atmosphere's sphere of presence fits to the reality of all perceivers that can access it.

THE MATERIAL OF THE TOWER: NO COMPUTATION ELICITS HORROR

If the players are to engage with DREAD as a roleplaying game, they must view the material and mechanical parts of the gaming situation as such. Before discussion of either material or Interpreted Mechanics, a description of the implied roleplayers' perspective with which to view either is necessary. Markku Eskelinen

24 Böhme, Gernot. *The aesthetics of atmospheres. Ambiances, atmospheres and sensory experiences of spaces.* (2017) Routledge Taylor & Francis Group.

25 Ibid. p.20.

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suggests that gaming situations can be divided into *equipment* such as tokens, and a *manipulation* of these tokens which is the configurative praxis of gaming.[26] At its most ludic, the player's frame for manipulating the equipment is governed by rules and goals, and degrees with which the players can affect the game environment. I will focus on where the player's perspective affects the resolution of an interpreted mechanic by way of informing the manipulations the player makes. But what is the perspective that the DREAD manual implies? The objective of the DREAD system is stated on the introductory page:

"Dread is a horror game. There is no reason that the content of any game of Dread needs to be any more horrifying than you wish it to be, and therefore Dread can be played suitable for nearly any age. However the contents of this book delves into mature topics at points, in order to facilitate groups who enjoy those sorts of horror, so please exercise discretion when passing this book around."[27]

With this paragraph, the game explicitly sets as a goal to facilitate individual forms of horror ranging from the prosaic to the visceral. While it is impossible in Implied Roleplay to verify whether that goal is reached during play, it is possible to see when and how the DREAD system urges the host to enforce the framing by specific manipulation of the interpreted mechanics: Multiple chapters of the book are used to inform the player on how to create a specific mood, such as a Suspenseful mood[28]. these chapters only contain postulated norms not allowing for mechanical analysis, they inform the host on how to invoke interpreted mechanics at certain points in the game with special emotional potential. They also describe how the questionnaire or the tower can be used to prime the players emotionally for a specific type of horror before play, starts[29] depending on the situations in which the host will thereafter request pulls from the tower. These chapters serve as advice for how to 'stage the imagination,' guiding the host on how to conjure specific atmospheres by using responses in the questionnaire, or affecting the player's preconception of the imaginary world. For example, chapters that describe how the *supernatural* theme relates to the tower, and how the pulling mechanic may best be utilized to enhance the theme, gives the host a repertoire to embrace the ecstatic

26 Eskelinen, Markku: "The Gaming Situation", In: *The International Journal of Computer Game Research, Volume* 1 (2016).

27 DREAD (Ravachol, E. and Barmore, 2005: The Impossible Dream) p. 0.

28 Ibid p. 87.

29 Ibid p. 90, 117.

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potential in the tower and the gameworld effects of its toppling vis-à-vis the mechanics for an *eerie* or *strange* atmosphere.[30]

Considering the JENGA tower's materiality without the DREAD system, or any imagined space, reveals a possibility for an atmosphere of tension and anxious player moods: as long as the tower is physically unmoving yet unstable, it suggests the possibility of toppling. encorporation offers anxiety as a mood for players and the atmosphere of the room becomes tense by the ekstases of the JENGA tower's (in)stability when it does move. As the tower may be affected by any vibration, such as the errant movements of other players, any moving body is made available for encorporation into the player's own felt body.

Furthermore, the tower as a randomization tool has qualities that must be considered in relation to Synthesis. In a traditional dice-based roleplaying game such as DUNGEONS & DRAGONS, an implied roleplayer will know that if they need to roll five or above on a six-sided die, they will have a 33% chance of success, and the emotional tension of a roll of the die will largely be determined by that particular roll's success-to-failure ratio and the effects of success or failure. As Joris Dormans points out, in such mathematically complex roleplaying games, players experienced with the system of rules may come to "see the numbers and the chances instead of the drama."[31] Jaroslav Švelch explores this tension in his examination of the dual nature of how monsters in games tend to be enemies that can be defeated by mechanical means and knowledge of game mechanics. Within literature, monsters represent confrontations with awe and terror, whereas in computational games, a monster's ability to threaten the player may be fully grasped through its bestiary entry and come to stand as a signifier for mere damage and/or defense numbers.[32] This harms the monster's potential of evoking feelings of awe and sublime in the player.[33] Even though these numbers are advised not to be accessible to players in the context of DUNGEONS & DRAGONS,[34] implied roleplayers would know that the monster as a threat *could* be fully understood if its entry in the written bestiary would be known. Therefore, Švelch summarizes that "[DUNGEONS & DRAGONS] is a game of fantasy, but also control—it is not just

30 Ibid., p.96.

31 Dormans, Joris: *On the Role of the Die*.

32 Vella, Daniel: "No Mastery Without Mystery. Dark Souls and the Ludic Sublime", In: *The International Journal of Computer Game Research* 15 (2015).

33 DUNGEONS & DRAGONS (Gygax, G, and Arneson, 1974, TSR inc).

34 Gygax, Garry: ADVANCED DUNGEONS & DRAGONS: MONSTER MANUAL, Lake Geneva: Tactical Studies Rules 1979.

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about dungeons & dragons, but also dice & spreadsheets. It combines the thrill of exploration of the unknown with the security of an ultimate knowability."[35]

Švelch compares this tendency of encyclopedic enclosure in games, where beings and the world can be fully grasped by their level of threat based on *mathematical operations* and numbers, to Peter Galison's military models of reality on cybernetic battlefields,[36] which translate combatants into subjects of tactical calculations.[37] Švelch concludes that DUNGEONS & DRAGONS is decidedly a computational game even though it is played with no digital aid, because it follows the 'digital' impulse to encyclopedically contain its fantastical contents.[38] DREAD resists this impulse of turning its threats into component parts of a computational warfare model whose purpose is to be fought and destroyed. There are no numbers, statistics, or calculations that can contain and reduce DREAD's possible monsters or other horrific phenomena to mere numbers. Still, the very much tangible and material qualities of the tower exert an influence on players that can draw their attention to its ludic properties, as is acknowledged in the chapter about *suspense:*

"Every time a character attempts something with a questionable outcome, no matter how mundane, every player's complete attention will be on the tower. This is something of a double-edged sword. While the players will be focusing on the game, they might not be focusing on the story. Their minds will naturally turn to thoughts about the tower: which block seems the loosest, where would it be most strategic to pull, does it lean too far in that direction, and so forth. There is nothing inherently wrong with this, but if the story is at a point of high tension, or when you really want to build the suspense further, you will have to keep the story at the forefront of their minds."

The quote speaks to the intention of using the tower to firstly create and maintain tension. However, it also acknowledges that imagination may be suspended during this process. To counter this, the text encourages players to describe the consequences of the pull immediately afterwards as to not release tension—and to keep the player's imagination somewhat tethered to the fiction. The synthesizable

35 Švelch, Jaroslav: "Encoding Monsters. "Ontology of the enemy" and Containment of the Unknown in Role-Playing Games", in *The Philosophy of Computer Games Conference* 2019.

36 Ibid., pp. 3-4.

37 Galison, Peter: "The Ontology of the Enemy. Norbert Weiner and the Cybernetic Vision", in *Critical Inquiry* 21 (1994), pp. 228-266.

38 Švelch, Jaroslav: "Encoding Monsters. "Ontology of the enemy" and Containment of the Unknown in Role-Playing Games", p. 6.

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meaning does not come from the cybernetic qualities the tower has on a battlefield, delineated by rules. Rather, meaning is generated through the interconnection of the situation in the gameworld and the stakes of any given pull as exemplified by the tower's stability. Over the course of play, the precariousness of the tower in DREAD becomes, by way of repetition of the above-mentioned Synthesis, a reminder of all prior actions and comes to symbolize the mounting horror in the imagined space.

The JENGA tower does not offer the mathematical consistency of a randomization tool. The success or failure of a pull depends on how many blocks have already been removed and the player's dexterity, which does not amount to the transparent mathematical distribution of a dice roll. While the JENGA tower's ludic properties within the DREAD system are clear, the chance of successfully pulling a block cannot be determined on the tower's current physical state. This in turn means that threats in the game are not accessible as ludic tokens via logic and math but are rather felt and sensed via the tower through the player's own felt body.

Escalating tension and suspense-vis-à-vis the horror roleplaying game perspective—are built into the progression of a DREAD game. Materially, this is done in three ways. First, by way of the tower's promise of an impending collapse. Second, the tower materially becomes more unstable as play progresses and blocks are pulled out, even without rules applied from the DREAD system. Third, the tower's destabilization is compounded by an interpreted mechanic: Whenever the tower is toppled and reassembled, it will be destabilized by pulling out several blocks before play starts. After it has then been rebuilt, any present player will have witnessed the fictional event tied to its fall. These elements combine to reinforce the tower's signification of horrors to come based on horrors experienced: every pulled-out block represents the event in the imagined space that elicited the pull. Its current state is a direct result of past events in both real and imagined space. The state of the tower becomes increasingly available for Synthesis vis-à-vis the horror roleplaying game perspective: With every pull, with every topple, the ekstatic power of the JENGA tower grows and so does its influence on the atmosphere.

If compared with DUNGEONS & DRAGONS and the randomization tool used within it, the die, Svelch's cybernetic containment makes itself apparent. Over time, the same die type is used to test whether a character succeeds at a given action. The values that represent a player character's physical and mental health can decrease over play, and this may increase tension. Compared with DREAD, however, these systems do provide a baseline outcome and goal for any hostile

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interaction.[39] That is to say, if health is reduced to zero, a player character is defeated. Contrary to DREAD, a player's tension does not impact their ability to roll their dice in DUNGEONS & DRAGONS as the health and sanity values in the system are abstractions of the sublime to the mundane and graspable, each with an individual and contained use. Materially, the die may also be safely contained in the player's hand while the tower confronts the—possibly tense or even shaking—player with increasing precariousness.

Suspense is an emotional tension generated by knowledge of a future happening. Even in DREAD'S implied roleplay, a knowledgeable player cannot know how a situation will reliably resolve in the imagined space, contrary to a system that gives numerical values and means to defeat enemies.[40] The game provides no means to fully contain the risk that the tower represents. What the implied roleplayer does know is that at some point, the tower will topple in physical space. Because this happening is tied to the imagined space via the consequences of a failed pull, suspense is realized.

When the tower is finally toppled for any reason, the character of the player who caused it to fall is removed from play.[41] By way of Synthesis, the capability to topple the tower, even accidentally, ties the player and imagined space together, creating a feedback loop between the player's mood, the atmosphere of the physical space, and the atmosphere of the imagined space. If the tower is sufficiently unstable when the host invokes the interpreted "pull" mechanic, the player can only choose to forfeit their agency temporarily by passing, or face near-certain horror by pulling. This is a communal experience, further underlining that more than one player feels this atmosphere of horror: even if one player succeeds, the next player to pull has an ever smaller chance of success as one more block has been removed.

When the pulling mechanic is invoked, the tower itself becomes the point of anchorage for the player's kinesthetic emotion of mounting horror, while simultaneously arresting imagination by stopping play from progressing. If the tower moves a little in this process, promising to tumble, and if it finally does tumble, the possible consequences can manifest themselves more clearly in the player's imagination; the once inchoate emotion within the player's imagination now takes on both a thematic center in the action and an anchorage point in physical space. This effect echoes Schmitz's observation regarding the manipulation of fearful

39 Deterding, Sebastian: "Gameplay: Map or Frame?", in *CFP: Games as HCI Method Workshop CHI* 2016.

40 DREAD (Ravachol, E. and Barmore, N, 2005, The Impossible Dream).

41 Ibid. p. 16.

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atmospheres: "If in a preliminary form of fear without a point of anchorage, the area of condensing is experienced with corporeal anxiety, the result is horror, which is rounded off into fear when a point of anchorage is added,"[42] making the emotional quality spatial.

CONCLUSION

This case study of DREAD and its use of the JENGA tower hints at the possibility of understanding atmospheres not only as properties of the corporeal body in contact with a physical world but as something which can be analyzed through a cybermedia perspective that takes into account the ways in which a roleplaying game is a social process. The term Implied Roleplay was suggested to describe the game processes bound to happen in any roleplaying game that uses a given roleplaying system. For analyzing how atmospheres are intended to be conjured by playing a particular system, unverifiable, postulated norms can be analyzed to see if they prime players towards perceiving the imagined environment in a specific way, or prime players towards using one another's atmospheric conceptions to construct environments that conjure atmospheres they are receptive to. Interpreted mechanics, the verifiable elements of a system, can be put under further analytical scrutiny: their resolution and the process of resolving the mechanic can be partitioned to see when these can be incorporated into an implied player's felt body through dice or other material tools necessitated by the minimal interactions implied by the system. In these cases, it can be said that an atmosphere is mechanically implied by the system.

With this in mind, with the JENGA tower as the material dimension of the DREAD cybermedia object, the player during play becomes aware of the tower's position in relation to their felt body, and of how their own and other player's movements or any reaction may cause the tower to topple. During play, the tower then comes to serve as a reminder for all actions taken before. The atmosphere emanating from the tower's ekstases is all the more affective because its potential collapse completely eliminates player agency. A player's ability to successfully complete a pull is affected by their physical body, and their mood is again affected by both the atmosphere of both the physical and the imagined space. This creates a cybernetic feedback loop where the tension in physical and imagined space feed into one another. Because of the tower's inability to numerically contain threats

42 Schmitz, Hermann: "Atmospheric Spaces", In: Rediscovering (2019). (9) Ambiances [Online].

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in the imagined world, it can be assumed that any emotions tied to the threat and thus the tower will first be felt as inchoate atmospheres, then felt as more condensed emotions as the mechanics give the atmospheres a concrete point of anchorage, via the tower's ekstases, and sensed as moods. The Synthesis of the tower straddles the imagined and real environments, causing mood(s) and atmosphere(s) conjured in either environment to feel true in both.

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Conclusion: Toward an Atmospherology of Digital Games

FELIX ZIMMERMANN[1]

THE IMPOSSIBILITY OF TALKING ABOUT ATMOSPHERES

In this anthology, we have set out to examine the uncharted regions of atmosphere in digital games. Atmosphere is ever present in non-academic discussions, games are lauded for having it, shunned for lacking it. But what does atmosphere really mean? Browsing the distribution platform Steam and searching for games tagged as "atmospheric," we find role-playing heavyweights like RED DEAD REDEMPTION 2 and THE WITCHER 3: WILD HUNT, which are commended for their intriguing world-building.[2, 3] Other entries might be more surprising, like EURO TRUCK SIMULATOR 2, a simulation game that allows players to deliver cargo and spend hours on motorways around the world.[4]

If we dig deeper into the user reviews on Steam it becomes impossible to ignore that the term atmosphere—whatever it means—is of importance for many players to describe their play experiences. For example, the 2012 title DISHONORED, a stealth game that casts the player in a plague-ridden city, is recommended on Steam by the user "Murphy's Lawyer" for "[g]ame atmosphere

1 This chapter is loosely tied to the author's dissertation "Atmosphärisches Vergangenheitserleben im Digitalen Spiel" (University of Cologne 2022, publication with Büchner forthcoming).

2 RED DEAD REDEMPTION 2 (Rockstar Games 2018, O: Rockstar Studios).

3 THE WITCHER 3: WILD HUNT (CD Projekt 2015, O: CD Projekt Red).

4 EURO TRUCK SIMULATOR 2 (SCS Software 2012, O: SCS Software).

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connoiseurs."[5, 6] They claim that "[t]he atmosphere of the game is really its heart and soul."[7] Another user, "Knal," points out that "[t]he very first thing that will grip you as you play is the unique world and amazing atmosphere,"[8] while user "Beaker" claims that "the atmospheric scenery of the decaying city has burned itself into my memory for eternity."[9]

Or take a look at the Steam reviews for ASSASSIN'S CREED SYNDICATE (2015), which is set in London during the Industrial Revolution. The user "GrimReaper" argues that "[t]he soundtracks and atmosphere in the game involuntarily send you to London in the XIX centuries."[10] And even the user "Gollycon" who does not, in fact, recommend the game, has to acknowledge that "[a] lot of the pubs and street corners had a pleasant atmosphere to them."[11]

Granted, this is no more than a fraction of the thousands of comments we can find on Steam, other distribution platforms, or on social channels like Twitter or Reddit. Still, these few comments paint a vivid picture of a term that is used regularly, nonchalantly and—as it seems—without needing any further explanation. This colloquial use of the term and the seeming omnipresence of conversations about atmospheres—think about commentators lamenting the lack of atmosphere in football stadiums emptied by pandemic restrictions—has given atmospheres their reputation of being "mere linguistic phenomena"[12] or "a mere metaphorical way of speaking."[13] But is this actually the case?

As the philosopher and renowned researcher on atmospheres Gernot Böhme has pointed out, a usage of the term atmosphere "in the non-meteorological sense [is] provable at least since the 18th century."[14] And while we may find reasons to

5 https://steamcommunity.com/id/murphyslawyer87/recommended/205100/ from 15.11. 2015.

6 DISHONORED (Bethesda Softworks 2012, O: Arkane Studios).

7 https://steamcommunity.com/id/murphyslawyer87/recommended/205100/ from 15.11. 2015.

8 https://steamcommunity.com/id/knal/recommended/205100/ from 24.06.2015.

9 Ibid.

10 https://steamcommunity.com/id/GrimReaper0406/recommended/368500/ from 13.01. 2020.

11 https://steamcommunity.com/id/free-man/recommended/368500/ from 03.12.2018.

12 Rauh, Andreas: "Versuche zur aisthetischen Atmosphäre", In: Rainer Goetz and Stefan Graupner (eds.), *Atmosphäre(n): Interdisziplinäre Annährungen an einen unscharfen Begriff*, München: kopaed 2007, pp. 123-41, here p. 124, transl. by author.

13 Böhme, Gernot: *Aisthetik. Vorlesungen über Ästhetik als allgemeine Wahrnehmungslehre*, München: Wilhelm Fink 2001, p. 48, transl. by author.

14 Ibid., p. 51, transl. by author.

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discredit the term atmosphere as an "almost dogmatically used revelatory phrase [*Offenbarungswort]*,"[15] we would be remiss to discard its significance as a practice established over centuries to describe emotional relationships between subjects and their environment. We should not mistake the way the term *is* used—inconsistently, abundantly, and unreflectively—with the way it *could* be used. No matter how "vague," and "subjective"[16]—as Björn Redecker acknowledges in this anthology—atmospheres may seem, one thing is for certain: they refer to a "*non-neutral* place"[17] and to a "specific mode of perception."[18] Whoever uses the term does so to describe *something* that is difficult to grasp with the tools language affords us. We could see this diffuse omnipresence of atmospheres as a sign of defeat, of the inadequacy of our terms, or even as a "symptom of exhaustion."[19] However, I argue here that the term atmosphere is not the endpoint of an attempt at grasping this ominous *something* that we feel when tucked in at home in the flickering light of a fireplace[20] or when riding through the thick virtual forest of RED DEAD REDEMPTION 2.[21] On the contrary, it is the starting point for much more if its "hermeneutic potential" is embraced fully.[22] The concept of atmosphere carries such potential because it encourages the exploration of existing material from new angles. It draws attention to the conscious design of space as a means to shape

15 Henckmann, Wolfhart: "Atmosphäre, Stimmung, Gefühl", In: Rainer Goetz and Stefan Graupner (eds.), *Atmosphäre(n): Interdisziplinäre Annährungen an einen unscharfen Begriff*, München: kopaed 2007, pp. 45-84, here p. 55, transl. by author.

16 Björn Redecker in this volume, p. 208.

17 Rauh, Andreas: *Aisthetische Atmosphäre*, p. 124, transl. by author.

18 Ibid.

19 Wellbery, David E.: "Stimmung", In: Karlheinz Barck et al. (eds.), *Ästhetische Grundbegriffe, Vol. 5*, Stuttgart / Weimar: J.B. Metzler 2010, pp. 703-33, here p. 732, transl. by author.

20 This specific situation could, for example, be described with the Danish expression "hygge". It is by no means accidental that attempts have been made to connect hygge to the concept of atmosphere. In this vain, anthropologist Jeppe Trolle Linnet defines hygge as "the sense of an atmosphere that allows dwelling" (see https://www.linkedin.com/pulse/definition-hygge-jeppe-linnet-phd from 11.04.2018).

21 Zimmermann, Felix: "Ethical Boredom in the Wilderness: Treating Red Dead Redemption 2 as an Ambience Action Game", In: Dietmar Meinel (ed.): *Video Games and Spatiality in Amercian Studies: Playing the Field II*, Berlin: de Gruyter 2022, pp. 51-70.

22 Rauh, Andreas: *Aisthetische Atmosphäre*, p. 124, transl. by author.

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the player's emotional state. The question is: Does our understanding of the virtual world change if we take atmospheres into account?

This is to say that we, as researchers of (digital) games, should come to terms with the inescapable vagueness of the common discourse surrounding atmospheres and therefore with the impossibility of (adequately) talking about them. By no means does this acknowledgment predetermine what we can do with atmospheres moving forward. If anything, there is work to be done. The term and its current usage pose a challenge for academic research, especially for game studies. While atmospheres are remarkably present in the production and reception of digital games, the research on these games and their contexts seems hesitant to adopt the topic.[23,24] This is hardly surprising when we consider the statements made above. As it stands, the terminology is fundamentally fraught and therefore atmosphere is not a tool that we can simply apply to better understand digital games. The "hermeneutic potential," consequently, does not lie in the term atmosphere itself. Rather, it challenges us to improve upon it, to develop methodologies to analyze the phenomenon it refers to, and to engage with the countless statements of players and developers alike who try to put into words a special engagement they have with digital games and their worlds.

AVENUES AND COMPLICATIONS

Terms

What we need is an atmospherology of digital games: a scientific theory of how the phenomenon of atmosphere can be described in relation to the specific mediality of digital games. But before a unifying effort can be made to set in stone the pillars of such an atmospherology, steps must be undertaken to adapt the existing

23 The first German-language anthology on this topic was brought forth by Christian Huberts and Sebastian Standke in 2014: Huberts, Christian and Standke, Sebastian (eds.): *Zwischen|Welten: Atmosphären im Computerspiel*, Glückstadt: Verlag Werner Hülsbusch (vwh), 2014.

24 Recently a few English-language publications have dealt with atmospheres and digital games, for example: Fuchs, Mathias: Phantasmal Spaces, London: Bloomsbury Academic 2019; Zimmermann, Felix and Huberts, Christian: "From Walking Simulator to Ambience Action Game: A Philosophical Approach to a Misunderstood Genre", In: *Press Start* 5 (2019), pp. 29-50; Whistance-Smith, Gregory: *Expressive Space: Embodying Meaning in Video Game Environments*, Berlin: de Gruyter 2022.

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research on atmospheres to what has been established already in game studies discourse.[25] This is not an endeavor for one or even a few researchers but for a multitude of scholars who approach atmospheres each with their own specific research focus.[26] The previous chapters have made apparent the productivity of this strategy, making big steps toward an atmospherology of digital games, answering questions, asking new ones, and leaving ample room for future research in this growing field. They are to be understood as pieces of a greater puzzle, as first expeditions into the unknown that strive to uncover answers and illuminate the whole. See for example the ludomusicological perspectives on atmospheres that **Björn Redecker** and **Vadim Nickel** bring forth. They understand that atmospheres, like music and sound, are immediate. As Redecker points out, "we need to conceive the aural layer of digital games as a whole."[27] It is specifically this holistic approach towards game audio that will be essential to an atmospherology of digital games moving forward. Beyond that, scholars must not fall into the trap of an ahistorical exceptionalism of atmospheric production and experience in digital games. As Nickel convincingly shows, the way digital games produce atmospheres by means of game audio is very similar to the traditions of ambient and especially generative music. This led Nickel to identify a specific "generative atmospheric experience."[28] It is of great importance to understand that the phenomenon in focus here is not categorically different from the centuries of (talking about) atmospheric experience. On the contrary, the continuation of this tradition in digital games only proves that "[a]esthetics is a basic human need"[29] that can be satisfied by atmospheric experiences brought forth by an "aesthetic economy" – which entails digital games.[30]

However, it is hardly possible to ignore the terminological complication the term 'ambient music' brings with it. As if the inconsistent use of the term *atmosphere* wasn't enough, an atmospherology of digital games will also have to take

25 For example, it can be asked how atmospheres relate to a prevalent concept like Immersion (see Freitag, Florian et al.: "Immersivity: An Interdisciplinary Approach to Spaces of Immersion", In: *Ambiances – International Journal of Sensory Environment, Architecture and Urban Space* (2020)).

26 Granted, in my dissertation I'm trying to tie some threads together.

27 Björn Redecker in this volume, p. 221.

28 Vadim Nickel in this volume, p. 203.

29 Böhme, Gernot: *Atmosphäre. Essays zur Neuen Ästhetik*, 7th edition, Berlin: Suhrkamp 2013, p. 41, transl. by author.

30 Böhme, Gernot: *The Aesthetics of Atmospheres, Ambiances, Atmospheres and Sensory Experiences of Spaces*, London / New York: Routledge 2017, p. 33.

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into account the numerous other terms that are used to described atmospheric experience. One of these terms is 'ambient' or 'ambience' which is featured in the introduction to this section by **Sonia Fizek**. She has called for a holistic approach to ambient media and identifies "Slow Play" as a specific ludic practice in relation to ambience.[31]

Without going into too much detail on the terminological quandaries of atmosphere, ambience, *Stimmung*, mood, tone, attunement-to name but a few-it is evident that there is no consensus on the relationship of these terms. Atmosphere and *Stimmung* are prominent in German-language literature on the topic; mood and tone are terms in more colloquial settings, for example when developers or players describe their experiences with games; and ambience or "ambiances,"[32] as they are called by the French sociologist Jean-Paul Thibaud,[33] are more popular in English-language atmosphere research. As the chapters by Nickel and Fizek demonstrate, 'ambience' puts emphasis on specific aspects of atmospheric experience, especially on audio arrangements (ambient music) and-as Fizek makes clear—on the unconscious and subtle, i.e. that which is not reflected upon by the player. Based on this, Fizek has made the convincing claim that "ambience complicates the usual story of an aesthetic video gaming experience, which is usually regarded as a foreground activity."[34] It is still up for debate, however, whether ambience is indeed "much more capacious a term than atmosphere", as Fizek maintains.[35]

I would argue that an atmospherology of digital games will have to integrate related terms like ambience, however, not in a sense of assimilation but of productive coexistence. Atmosphere, then, could constitute an umbrella term under which other terms like ambience, mood, or tone can be subsumed, with each term providing a specific focus and nuanced view of atmospheric experience. Atmospheric experience can very much be a conscious and reflective foreground experience, but at the same time it is possible to talk about atmospheric experience in terms of the background, of the unconscious and pre-reflective. The terminological plurality of atmosphere allows us to be both transparent and precise about our research endeavor. While complex terminology requires the added effort of

31 Sonia Fizek in this volume, p. 127.

32 The „International Journal of Sensory Environment, Architecture and Urban Space", one of the most important publications on atmosphere research, is also titled „ambiances", see https://journals.openedition.org/ambiances/.

33 See for example Thibaud, Jean-Paul: "Urban Ambiances as Common Ground?", In: *Lebenswelt: Aesthetics and Philosophy of Experience 4* (2014), pp. 282-95.

34 Sonia Fizek in this volume, p. 140.

35 Sonia Fizek in this volume, p. 129.

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striving for clarity and sophistication, the value of such an effort has been demonstrated by the nuanced approaches in this anthology, oscillating between terms like atmosphere and ambience while highlighting their strengths and weaknesses.

Themes

An atmospherology of digital games must be understood as an inherently interdisciplinary endeavor, not only in how phenomenology and game studies are joined but also in how the broader historical and cultural context of atmospheric experience is to be considered.[36] The productivity of such an understanding is especially apparent in the chapters by **Anh-Thu Nguyen**, **Magdalena Leichter**, and **Katja Aller**.

One of the core arguments of Gernot Böhme is that atmospheres are a product of "aesthetic work."[37]Atmospheres, in that sense, can be consciously created to fulfill specific functions and satisfy specific (aesthetic) needs. Nguyen shows how productive it can be to rethink well-known cultural dynamics like tourism, which is of increasing importance to digital games, in terms of atmosphere. She has opened up an avenue for future research on atmospheres as part of "national branding strategies"[38] and "as a marketing tool for Cool Japan."[39] With this, she has entered the territory of what Mathias Fuchs has termed "phantasmal spaces," which he describes as "rich with atmospheric content"[40] and as "rhizomes of memories, conventions, cultural techniques and material history in permanent change".[41] An atmospherology of digital games will also have to consider the production and experience of atmospheres in digital games as complex cultural networks and thereby follow in the footsteps of the work presented here.

Similarly, Leichter acknowledges the longstanding tradition of atmospheric experience and its origins as a meteorological term. She underlines the sentiment

36 For example, to encompass a historical perspective on atmospheres, I propose the concept of "atmospheres of the past" (see Zimmermann, Felix: "Historical Digital Games as Experiences: How Atmospheres of the Past Satisfy Needs of Authenticity", In: Marc Bonner (ed.), *Game | World | Architectonics: Transdisciplinary Approaches on Structures and Mechanics, Levels and Spaces, Aesthetics and Perception*, Heidelberg: Heidelberg University Publishing 2021, pp. 19-34).

37 Böhme, Gernot: *The Aesthetics of Atmospheres*, p. 14.

38 Anh-Thu Nguyen in this volume, p. 151.

39 Anh-Thu Nguyen in this volume, p. 153.

40 M. Fuchs, Phantasmal Spaces, p. 127.

41 Ibid., p. 130.

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that an atmospherology of digital games should not reduce the complexity of the phenomenon by disregarding its history and cultural embeddedness. On the contrary, the complexity of atmospheres must be addressed by an interdisciplinary project. Drawing on a diverse assemblage of researchers, this anthology demonstrates how a joining of game studies and atmosphere research is to be achieved.[42] Leichter's analysis of wind shows the value of engaging with even the most commonplace phenomena. For Leichter, wind must be regarded as a "multisensory phenomenon, making the gameworld a navigable space with meteorological (air-filled) atmospheres as well as an aesthetic realm".[43]

Finally, Aller's contribution can be seen as a plea to take seriously the implications of genre discourse about and beyond digital games when it comes to forming an adequate atmospherology. Her chapter serves as a stark reminder that generalized statements about what constitutes atmospheric experience in digital games are out of the question. A genre like the Walking Simulator—which is in itself heavily debated[44]—utilizes very specific techniques to produce, as Aller has stated, "uncanny atmospheres" and is therefore to be regarded separately from other genres that employ different gameplay mechanics, player perspectives and such.[45] What is more, with her implementation of seminal theories on the uncanny and fearfulness, Aller underscores one of the central arguments of this chapter, namely that an atmospherology of digital games will and must invite interdisciplinary work to unleash the "hermeneutic potential" of atmospheres.

Methods

How do we describe atmospheric experience—a question that has accompanied us since the beginning of this chapter—and how do we objectify that which is so

42 And with this, this book follows into the footsteps of the German-language anthology by Christian Huberts and Sebastian Standke which first broke ground in this regard.

43 Magdalena Leichter in this volume, p. 171.

44 Cf. Carbo-Mascarell, Rosa: "Walking Simulators: The Digitisation of an Aesthetic Practice", In: *Proceedings of 1st International Joint Conference of DiGRA and FDG* (2016); Juul, Jesper: The Aesthetics of the Aesthetics of the Aesthetics of Video Games: Walking Simulators as Response to the Problem of Optimization. Lecture at the *12th International Conference on the Philosophy of Computer Games Conference* (August 2018, Copenhagen); Debus, Michael S.: *Unifying Game Ontology: A Faceted Classification of Game Elements*. Dissertation, Copenhagen 2019; F. Zimmermann & C. Huberts, *From Walking Simulator to Ambience Action Game*.

45 Katja Aller in this volume, p. 175.

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radically subjective? Böhme has engaged with this question and determined atmospheres as "quasi-objective or something existent intersubjectively."[46] By that, he refers to the double nature of atmosphere: On the one hand, atmospheres are subjectively experienced and very much determined by an individual's predisposition. On the other hand, you can argue about and even agree with others on the atmospheres present in specific special arrangement.[47] Atmospheres can be, as I pointed out before, consciously created and the elements used to create these atmospheres can be put under scrutiny.[48] Therefore, their intersubjectivity lies especially in the tried and tested, in some cases even traditionalized elements used in their creation.

Jonathan Jung Johansen reminds us that, although this anthology is mainly concerned with digital games, we cannot ignore the sophisticated techniques of aesthetic work that analog games and game design draw on. As Johansen demonstrates, an atmospherology of digital games could benefit from the research of game mechanics and their influence on atmosphere production and atmospheric experience. Johansen makes a strong argument for researchers of atmospheres in all play contexts to focus on the physical or virtual presence of game objects as "ecstasies," meaning "the way things are radiating into space and thus contributing to the formation of an atmosphere."[49] The unassuming Jenga tower is a striking example of such a game element and is key in the atmospheric play situation Johansen describes. His analysis underlines that we would do well to value game design in its importance for an atmospherology of digital games as a whole. Especially Johansen but also many of the other authors in this volume bring forth deliberations on how a method for approaching atmospheres in digital games can be created that eminently considers the ludic.

CLOSING REMARKS ON ATMOSPHERIC COMPETENCE

The seven contributions of this volume are a testament to the urgent need for an atmospherology of digital games. As we speak, atmospheres are at work in the

46 Böhme, Gernot: *The Aesthetics of Atmospheres*, p. 2.

47 Cf. ibid.

48 I argue in another paper that we could call the process of translating atmospheric situations into constellations of elements a "constellation analysis" (cf. F. Zimmermann, *Historical Digital Games as Experiences*, p. 25).

49 G. Böhme, *The Aesthetics of Atmospheres*, p. 5.

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world around us and in the worlds we enter via play. The full range of their influence, however, still eludes most game research.

Gernot Böhme makes an interesting point when he argues for an "aesthetic education"[50] and the corresponding development of "atmospheric competencies"[51] to allow not only researchers but society as whole to be aware of the power of atmospheres. This power lies in the often-unconscious effects atmospheres have on our emotional state. Böhme, and the Italian philosopher Tonio Griffero deduce that "atmospheric 'competence'" is what helps us to "really learn how not to be grossly manipulated".[52]

These concluding remarks are not meant as an alarmist plea to shun or regulate atmosphere production and atmospheric experience. They are but a reminder that atmospheres are already an integral part of our lives and, specifically, an essential aspect of the gameplay experience. As I said at the beginning of this chapter: games are lauded for having it and shunned for lacking it; and, additionally, developers do their best to satisfy this demand for atmospheric experience and have, over the years, established techniques of aesthetic work currently neglected by academic research. Let us change that, let us learn to understand what players mean, what developers mean, what *we* mean when we talk about atmospheres in games, not to dispel the magic of atmospheric experience but to understand (and perhaps enjoy) it more fully.

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51 Ibid., p. 40, transl. by author.

52 Griffero, Tonino: *Quasi-Things. The Paradigm of Atmospheres*, Albany: SUNY Press 2018, p. 41.

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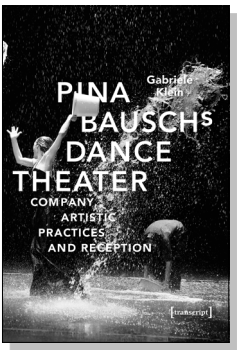

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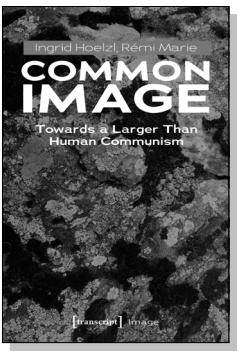

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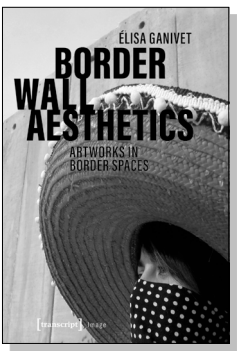

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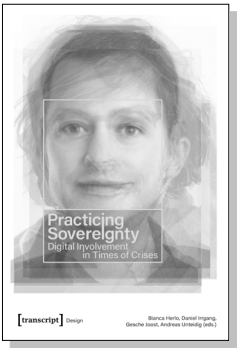

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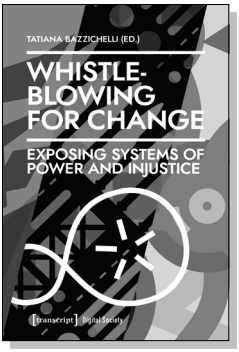

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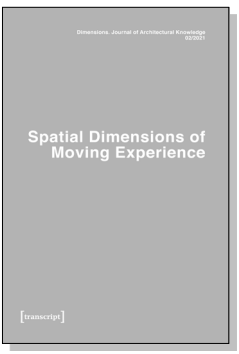

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