

GAME DESIGN THERAPOETICS: AUTHORIZING THE COMPUTER GAME AUTOPATHOGRAPHY

Authoring the Computer Game Autopathography

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Abstract

In this paper, I discuss my arts-informed qualitative study and doctoral thesis on the self-healing resources of autopathographical game authorship. I mobilized the autopathography—the autobiographical illness and disability narrative—from literary theory, and organized an ethics-approved game jam in order to study the authorship processes of 13 professional game designers/developers. Their experiences with bipolar disorder, anxiety, ADHD, color blindness, PTSD, shyness, grief, and insomnia would inform their design. My findings show that autopathographical game design during a game jam (AGD-AGJ) may be healing through its four therapeutic dimensions: autopoiesis (re-making the self through introspection), fabulopoiesis (re-imagining the self through the game narrative), logopoiesis (re-perceiving the self through implementation), and sociopoiesis (shared storytelling during a game jam). I offer insights into how gamemakers are pushing the boundaries of artistic experimentation in games while forging a novel creative method of self-care—autopathographical game authorship as an expressive form of design therapy.

Introduction

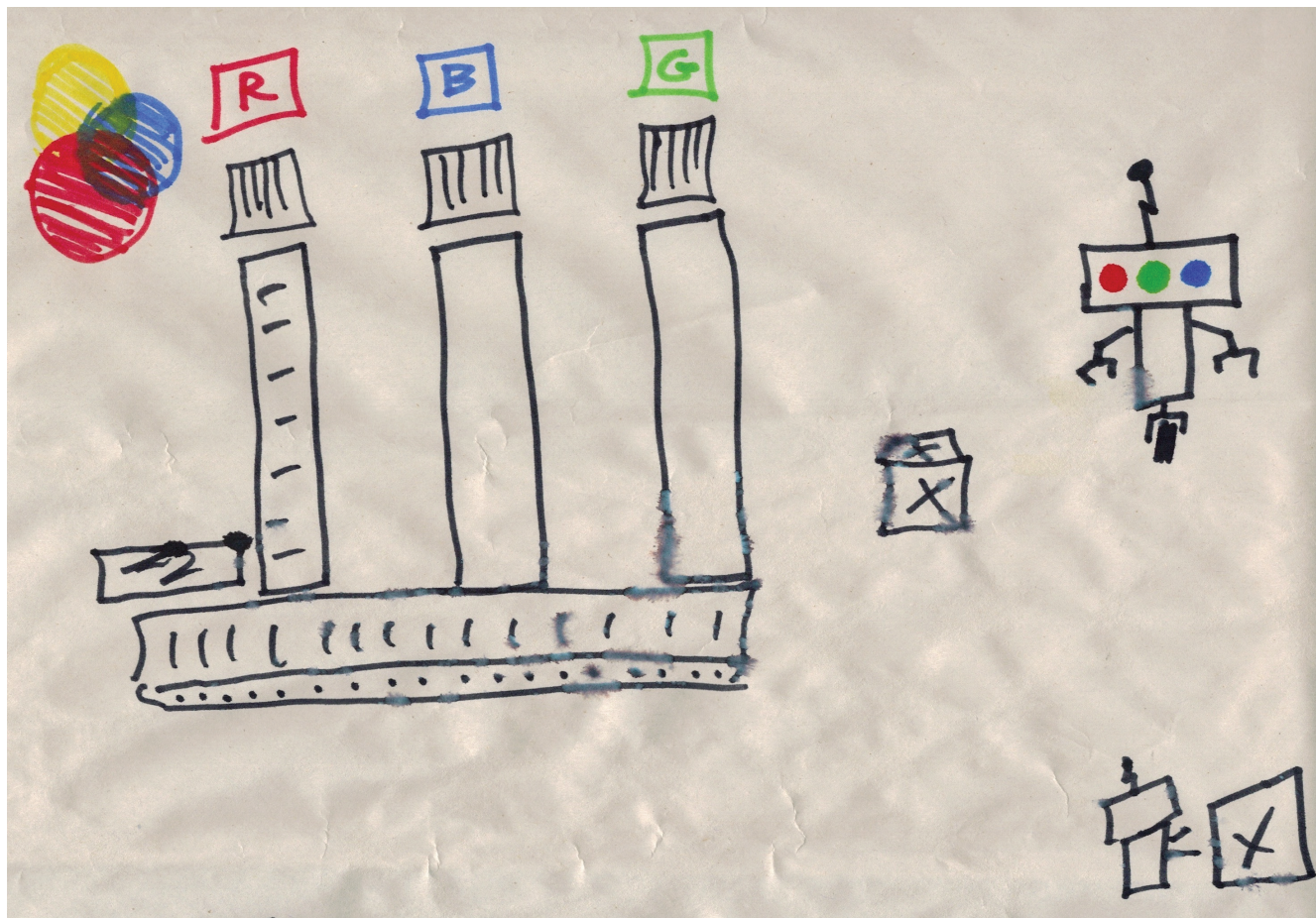
In this paper, I discuss my arts-informed qualitative study and doctoral thesis on the self-healing resources of autopathographical game authorship. I mobilized the “autopathography”—the autobiographical illness or disability narrative (Couser, 1997) from literary theory in order to study the experiences of 13 recruited game designers rendering their autopathographical narratives into computer games during a game jam, which I called the Autopathographical Game Jam. I argue that autopathographical game design (AGD) during an autopathographical game jam (AGJ) offers distinct therapeutic resources for game designers living with mental illness, emotional trauma, and disability.

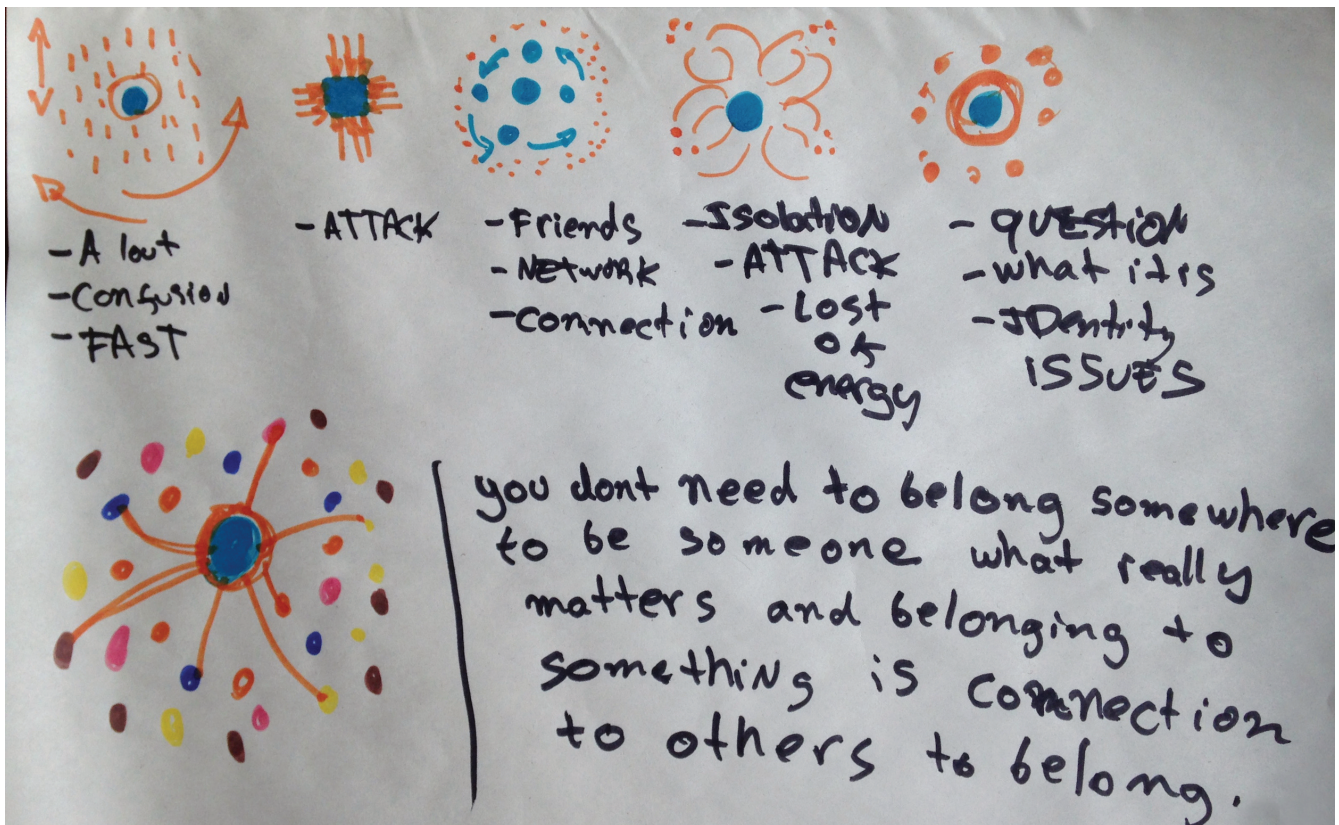
This study was informed by the emergence of autobiographical games exploring personal narratives of health and illness, such as Anna Anthropy’s *Dys4ia* (2012), an autobiographical account of undergoing hormone replacement therapy as a transgender woman; Zoë Quinn’s *Depression Quest* (2013), a text-based interactive narrative about living with depression; and Ryan and Amy Green and Josh Larson’s *That Dragon, Cancer* (2016), exploring the Greens’ grief over their young child’s death from cancer. The relatively new phenomenon of personal games about mental health has challenged the fundamental perception of games as playful entertainment. For example, the cultural perception of games as fun, escapist, and frivolous activities appears to be incongruous with the

serious existential subjects of illness, trauma, and disability. As a matter of fact, the developers of *Depression Quest* warn that “this game is not meant to be a fun or lighthearted experience” (Depression Quest: Games for Change, 2019). In this sense, the autopathographical game genre challenges assumptions about the ontology of games while also providing cathartic experiences for the game designer.

Research Methodology and Methods

In Fall 2014, I organized a two-day game jam that I called the Autopathographical Game Jam (AGJ) in order to conduct an ethics-approved qualitative study of the authorship processes of 13 recruited professional game designers and developers—10 male and 3 female participants between the ages of 20 to 33—developing individual autopathographical games about their experiences with bipolar disorder, anxiety, attention deficit hyperactivity disorder (ADHD), color blindness, post-traumatic stress disorder (PTSD), emotional trauma, severe shyness, grief, and insomnia. Working from the methodological schools of grounded theory, case studies, discourse analysis, and research creation, the last of which facilitated the creative development of playable games, I documented the game jam through video recordings and conducted in-depth, semi-structured individual interviews with participants during the game jam (phase 1 of research) and several weeks to months after the game jam (phase 2 of research). Additionally, I collected participants’ processual artifacts such as concept sketches and doodles in order to access subjective dimensions that were not verbalized in interview testimony (see images 1 and 2).





Images 1 & 2. Sketches of autopathographical games Broken Lens and Connections

Data Organization

I organized the data through a 5-step process in order to develop an original analytical framework (see image 3).

- I developed a coding protocol, manually coding the transcribed interview testimony and processual artifacts, and organizing patterns inferred from the data into approximately 10 general codes.
- I converted these 10 general codes into 7 major findings.
- I distilled the 7 major findings into three overarching themes defining my study: autopathographical game authorship as a form of self-care, self-understanding, and therapy.
- I conducted discourse analysis of interviews and artifacts, propelling my structuralist reading of game designer experiences. In doing so, I positioned original participant testimony and artifacts as a springboard for a transdisciplinary theorization informed by game and digital media studies, narratology, linguistics, semiotics, cognitive science, and philosophy.
- I developed the analytical framework of the Tetrad of Therapoiesis in order to underscore what appeared to be a structural logic to the autopathographical game design during an autopathographical game jam (AGD-AGJ) process.

5-Step Theory-Building Process

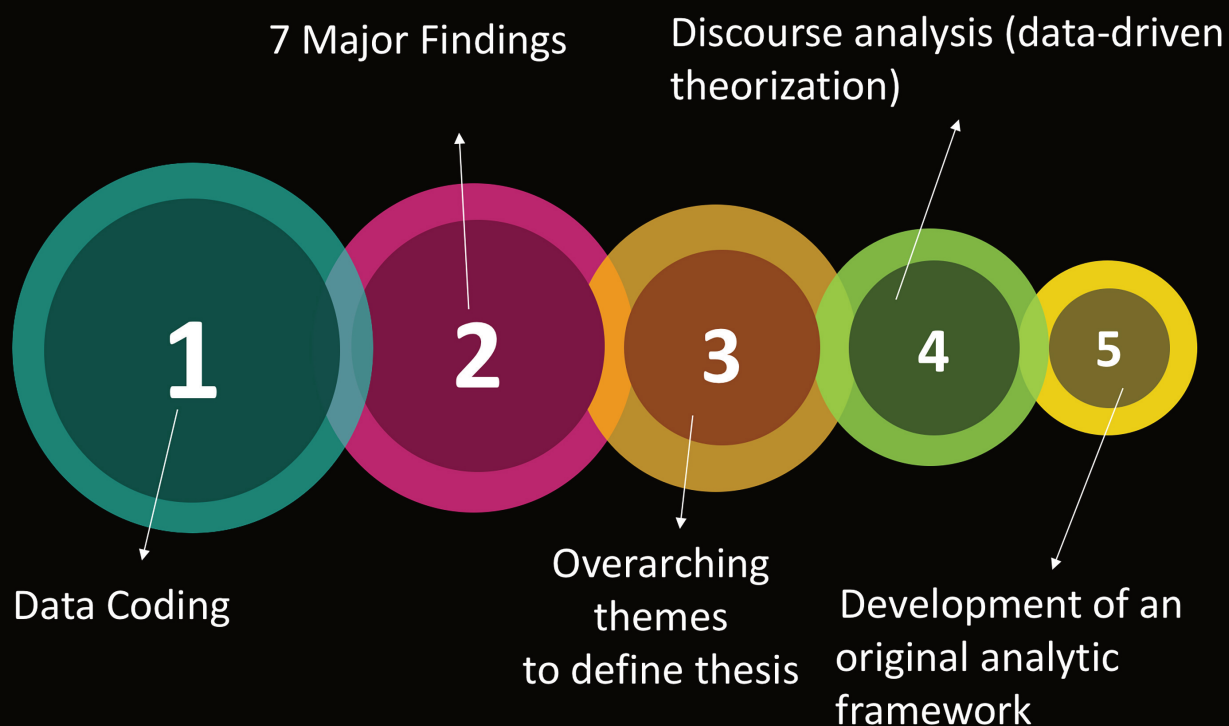


Image 3. Infographic of Data Organization and 5-Step Theory Building Process

Summary of Study Findings

1. Participants mobilized autopathographical game design during the autopathographical game jam (AGD-AGJ) towards “DIY therapy”, “group therapy”, “self-hypnosis”, “mindfulness”, and “coping with emotions” as per the direct quotes of participants.
2. Participants found the experience of integrating the autopathography and computer game as unorthodox, “out of the box”, and “strange” as per participant testimony.
3. Many autopathographical games took on an abstract and symbolic form.
4. Participants backgrounded (concealing details) and foregrounded (amplifying details) the autopathographical narrative depending on context: autopathographical game design (AGD) vs. the autopathographical game jam (AGJ). That is, participants openly shared and verbally disclosed, in group conversations and interviews during the AGJ, a range of deeply personal details relevant to their autopathographical narratives. They did not, however, disclose personal details in their autopathographical games out of a desire to protect themselves from the potential of stigmatizing reactions from other participants—a form of self-care.
5. Most participants did not explore a present distressing state. Through autopathographical game design, they appeared to be revisiting past emotional states from a safe distance,

although “reliving an experience” (according to participant Alex) was always a possibility.

6. Some participants harnessed autopathographical game design as a tool of self-understanding in order to gain a deeper awareness of their first-person experiences with illness, trauma, and disability.
7. The autopathographical games were not disseminated outside of the autopathographical game jam space.

My primary research finding demonstrates that participants appeared to have experienced AGD-AGJ to be a therapeutic process of self-care—a result that I did not anticipate due to my presumption that the technically intensive processes of game design and development inhibit any therapeutic effects. Participants, however, described the AGD-AGJ process, which includes certain defining properties of autopathographical game design, as healing and self-insightful.

For example, Fred, who made a puzzle game called *Brain Buster*, wanted to understand how he had used computer game design at a previous game jam to “cure himself”. He had used “game development as a form of coping with emotions” and harnessed rule-design as a form of “DIY therapy” and “self-therapy”. The design of his puzzle game became an inquiry into his own healing process. In other words, Fred appeared to be mobilizing computer game design for the second time in a row to explore his own processes of self-healing and self-understanding through game design. Lukas, a shy and introverted game developer, authored a game called *Co-Op Defense* in order to practice “self-hypnosis”; he had hoped to teach himself interpersonal skills through the game and the autopathographical game jam platform, while also practicing self-acceptance of his intense shyness.

Autopathographical game design also became a problem-solving tool for participants attempting to better understand their own mental health experiences and/or communicate them to others through gameplay. An example of this deployment of autopathographical game design is Martin’s game *Broken Lens*, a game about a color-blind robot as the principal game player character, tasked with separating color-coded boxes on an assembly line. This game allegorized his first-person experience with color-blindness through the rules and mechanics of the game:

The mechanics of the game, the rules can demonstrate the troubles and the pressure of someone (who is color-blind), how normal tasks become harder for you.

The Creative Foundations of the Tetrad of Therapoiesis

I would like to briefly address the creative foundations of the Tetrad of Therapoiesis before I delve into its details, namely the creative impulse that propelled participants to engage in autopathographical game design (AGD). Participants expanded the vocabulary of computer game design through a set of creative grammars that belong to two *semiospheres* (Lotman, 2005) or semiotic structures of meaning-making: the autopathography and the computer game. Participants found the integration of these two semiospheres through autopathographical game design unusual, resulting in the transgressive aesthetics of autopathographical game design. Here I draw on a number of theorists including Chomsky’s (1968) theory of “the creative aspect of language use (CALU)”, which enabled a reading of how participants created “weird games” (Alex) by “messing and experimenting” (Fred), and “doing different things” (Marco); but also, how participants positively harnessed the transgressive aesthetics (Shklovsky, 1925; Vygotsky, 1971; Juul, 2013; Linderoth & Mortensen, 2015; Sicart, 2015)

of autopathographical game design in order to unconventionally build empathy in the player. In fact, four of the games authored during this study thwart player enjoyment by either manipulating the player or engendering psychologically uncomfortable gameplay. Sam's game *Anxiety Corporation* incorporated an "anxiety meter" to lure the player into a panic attack. Nathan's game *ADHD Hero* and Martin's game *Broken Lens* "de-motivate" the player in order to produce feelings of rage and frustration conveying their respective childhood experiences with ADHD and color-blindness. John's game *Untitled* about living with untreatable bipolar disorder advocated for assisted suicide by crafting unwinnable gameplay. John explains:

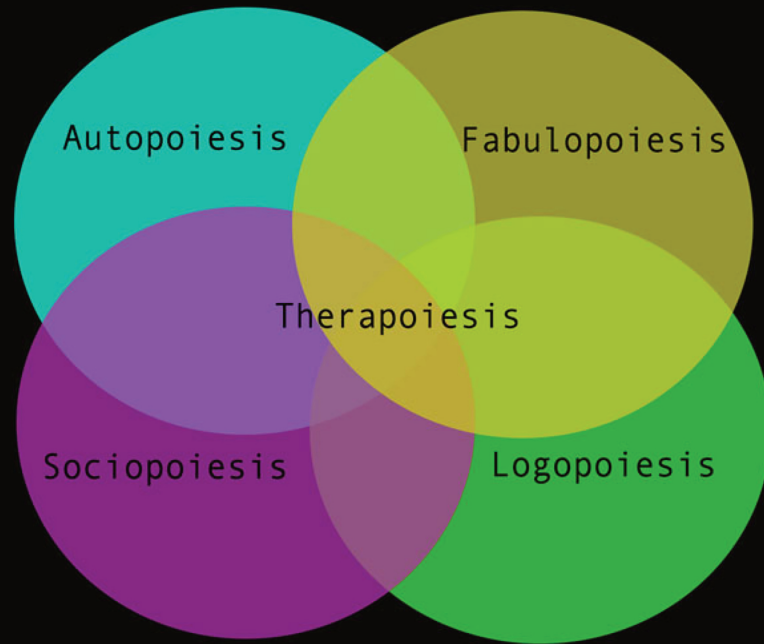
There is no pause button, there is no way to exit the game. The only way to exit is to kill yourself and die.

These examples of transgressive game design invoke Linderoth & Mortensen's (2015) "dark play" and "cruel play", Juul's (2013) paradox of failure that presents grueling and difficult gameplay with higher player rewards, and Sicart's (2015) "abusive game design", a game design tactic which undermines pleasurable gameplay experiences by finding ways to manipulate and deceive the player. Autopathographical game design is thus transgressive by defying the primary semiotic structure of the computer game, which is the near-universal assumption that games are fun and escapist, and that the serious and existential topic of illness, pain, and trauma cannot be played.

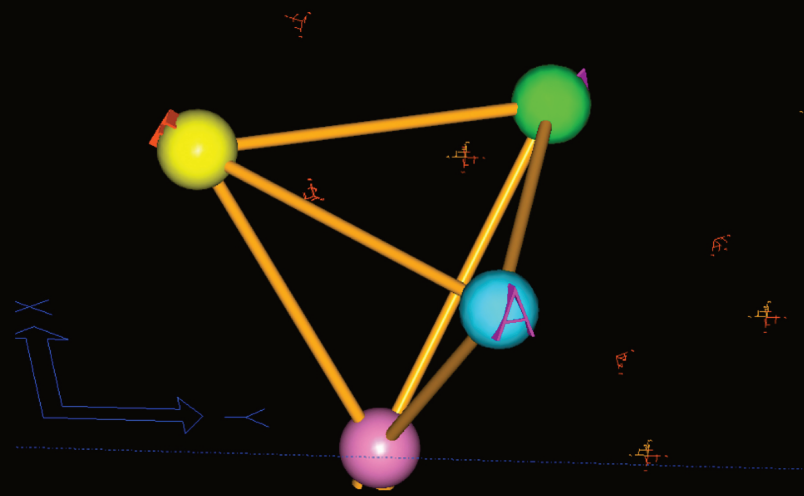
Analytical Framework: The Tetrad of Therapoiesis

Autopathographical game design during an autopathographical game jam (AGD-AGJ) process connects to Aristotle's (1961) framework of knowledge formation: *praxis* (to do), *poiesis* (to make), and *theoria* (to understand). In other words, during the AGD-AGJ process, participants practiced their autopathographical game design skills (*praxis*), created games (*poiesis*), and gained knowledge about themselves (*theoria*). Participants experienced the AGD-AGJ process as therapeutic through the synthesis of four dimensions, which I call: *sociopoiesis*, *autopoiesis*, *fabulopoiesis*, and *logopoiesis* constituting my analytical framework of *The Tetrad of Therapoiesis* (see image 4). The tetrad takes shape, however, through a second phenomenon—participants' ability to immerse themselves in and distance themselves from their autopathographical narratives during the AGD-AGJ process. That is, these four dimensions enabled participants to cognitively shift among three epistemological perspectives during the AGD-AGJ process, which they experienced as restorative: the first-person (subjective), second-person (relational), and third-person (observer) perspectives (see image 6). This shift may have allowed participants to view themselves differently, akin to being able to shift perception between the front-end and back-end side of a Necker Cube. This ability to shift perspective appeared to be therapeutic for participants and engendered self-understanding and self-insight. It might also be helpful to imagine the Tetrad of Therapoiesis as a tetrahedron, which I 3D printed in order to illustrate the synthetic power of the four dimensions, which *together* amplify the therapeutic effects on the game autopathographer (see image 5).

The Tetrad of Therapoiesis



The synthetic power of the Tetrad of Therapoiesis



Images 4 & 5. Venn diagram and 3D-printed tetrahedron of the Tetrad of Therapoiesis

The Multi-Personed Perspective

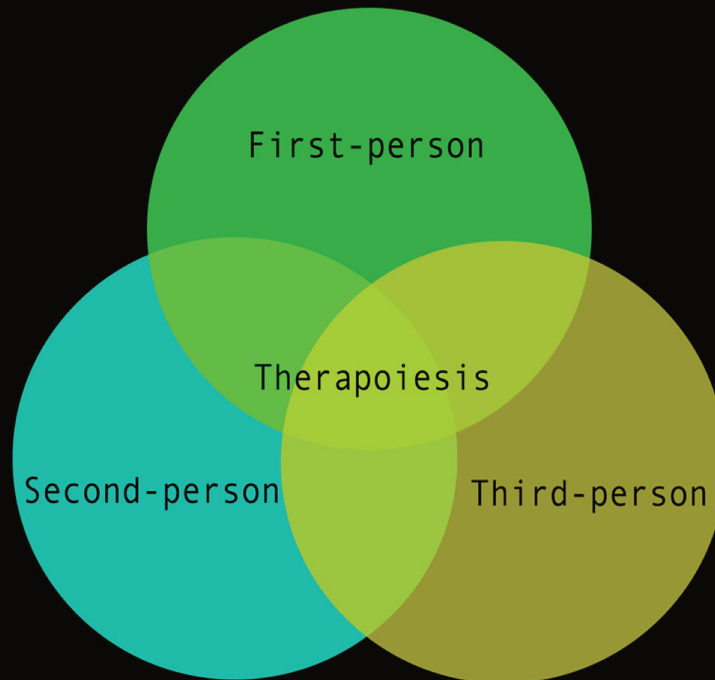


Image 6. The Multi-Personed Perspective of AGD-AGJ

The Four Dimensions of The Tetrad of Therapoiesis

Consider next a detailed description of the four dimensions of the Tetrad of Therapoiesis.

Sociopoiesis: Second-Person Perspective

Sociopoiesis is a collective-making process engaging the second-person, relational perspective; through sociopoiesis, participants safely shared their autopathographical narratives and playtested their games in the social space of the autopathographical game jam (AGJ), which appeared to propel their creativity. Participants experienced the process of verbally expressing their autopathographical narratives during this game jam as healing. Martin affirmed that building a deeper connection with others through sharing personal narratives was a significant dimension of the game jam: [block quote] I think the thing about making a game about personal stuff is sharing. [block quote] In this sense, one anonymous doodler remarked that the AGJ can be viewed as a form of “group therapy” akin to a support group, but with the added benefits of “artistry” and “anonymity” that autopathographical game design afforded (see image 7).

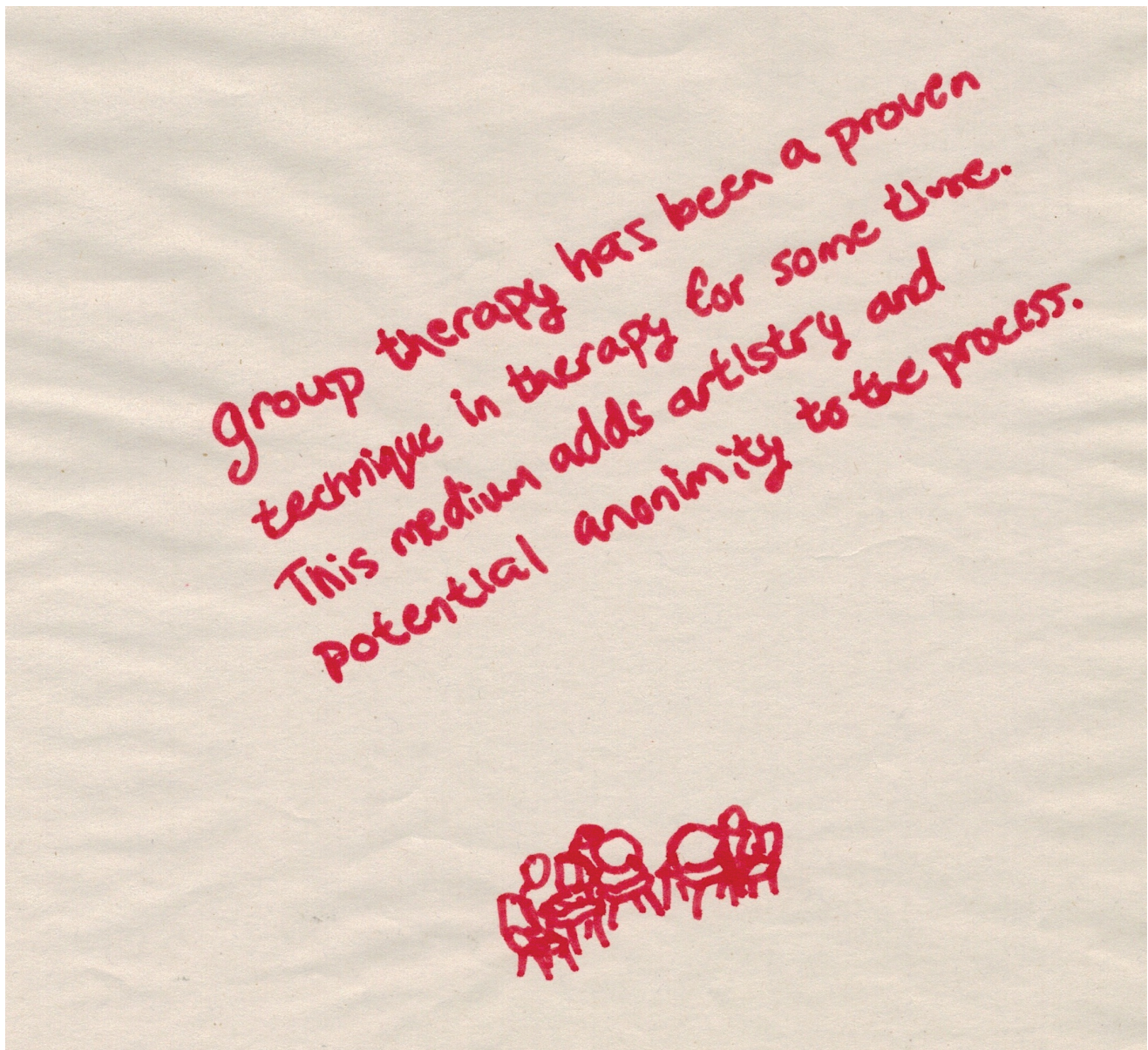


Image 7. Doodle evoking the therapeutic dimensions of the Autopathographical Game Jam

I theorize the sociopoetic dimensions of the autopathographical game jam (AGJ) as a healing community rooted in mutual care and dialogue by drawing on existential philosopher Martin Buber's (1923) dialogic theory of *I and Thou*. I and Thou give voice to the mutual encounters among persons infused with a divine presence accounting for a variety of positive and negative human interactions in community living, such as ease and hardship. As Marco testified, he experienced the AGJ as an improvisational space guided by a "spark of magic". He tied this evocative quality of the game jam to the opportunity to bond with others through autopathographical storytelling coupled with creative experimentation, which many typical game jams, driven by the pressure to create commercially-viable games, do not support. Participants also testified that they confronted feelings of vulnerability and discomfort during the AGJ given the personal nature of autopathographical narratives, a tension whose presence was paradoxically generative for their creative processes.

Autopoiesis: First-Person Perspective

Autopoiesis is an introspective, self-reflective, and self-referential process of self-making that directly engaged the first-person perspective; through autopoiesis, participants gave voice to the ontological dimensions of autopathographical game design (AGD) as a “technology of self” (Foucault, 1988)— a regenerative form of identity construction and self-craftsmanship. Through autopoiesis, participants confronted their own fears and limitations living with illness, trauma, and disability. Brody, who made the murder-mystery game *You’re Invited*, invoked the process of self-reflection in autopathographical game design, which, by ontological necessity:

...involves a level of analysis...where you have to look at yourself.

The self-referential dimensions of autopoiesis required that participants engage with their illness and disability experiences as a referent of their autopathographical games, which enables the designer to re-fashion themselves through a process of alternating between themselves (their subjective experiences) and the emerging image of themselves (the autopathographical game). Marco, who made a game called *Connections* about his experiences of being bullied, evoked the metaleptic qualities of autopoiesis in autopathographical game design whereby the author and narrator of the game co-constitute each other in an ongoing process of internal dialogue:

It’s like I am interviewing myself inside my mind...it was like getting a mirror and then putting a mirror in front of another mirror so you have infinite reflections.

This form of self-reflection, albeit an emotionally difficult process, appeared to be generative for participants by building deeper self-awareness. As Alex testified:

It’s not very easy to make stuff about personal experiences that are intimate because if I have to think about how then I have to address the thing. If I have to address the thing then I have to relive the thing (laugh). And that can be really hard.

Fabulopoiesis: First- and Third-Person Perspective

Fabulopoiesis is an analogical and metaphorical making, a self-reinvention through the game’s *fabula*—the content of the narrative. Narrative medicine scholar Anne Hunsaker Hawkins (1999) reinforces the significance of fabulopoiesis to all forms of autopathographical storytelling by calling the pathography a “modern adventure story” (as cited in Couser, 1997, p. 5). Participants fabulized themselves by reimagining their illness narratives through game characters such as a spirit guide to induce sleep, a detective to understand psychological trauma, and an ADHD diagnostic test camouflaging as a musical instrument that can be played to evade positive diagnosis. For example, Brody described his game about a detective tasked to prevent a crime from occurring at a dinner party as an analogy of his hyper-attentive thought processes:

I am doing a murder mystery game about how intense conversations can be with PTSD.

Fabulopoiesis also enabled participants to reason analogically in order to shift between their first- and third-person perspectives—mapping structural similarities (Gentner, 1989) between one domain, their first-person illness, trauma, and disability experiences and another, the computer game. John’s

game is an example of this structural mapping process, which analogized the emotional highs and lows of his bipolar disorder to the game's rule structure:

If you go too far down (depression), your character kills himself, if you go too far up (mania), you can't control yourself and you die anyways.

Many of the participants fabulized their first-person experiences through narrative design and/or the gameplay architecture (systems design), harnessing novel illness and disability metaphors in order to elicit self-insight. In fact, this point relates to the deployment of analogy and metaphor as indispensable tools of creativity in both art and science. In the latter, scholars (i.e., Bruner, 1986; Boyd, 1993; Polya, 1957) have affirmed the important function of analogies and metaphors as heuristic tools of scientific discovery. In the case of autopathographical game design, participants may have used illness and disability metaphors as a heuristic method of self-discovery.

Logopoiesis: Third-Person Perspective

Logopoiesis is a calculated and mathematical making constituting the implementation processes involved in designing a game as a computer software application (information systems design), which engenders a strong form of the third-person perspective. The Greek word *logos* translates to word, reason, plan, computation, and reckoning. Logos is an intrinsic constituent of language; in this sense, the process of ordering lived experiences into narrative form can become healing. Hawkins (1999) elaborates: "pathography articulates the hopes, fears, and anxieties so common to sickness, organizing them into a coherent whole and suggesting by example ways of thinking and acting" (p. 11). Logopoiesis in autopathographical game design (AGD), however, is distinct from any other form of autopathographical storytelling (i.e., prose) — a form of coding therapy that amplifies the effects of the other three poieses. Through logopoiesis, participants harnessed the Cartesian clear and distinct properties of computation, such as digital design, algorithm design, programming, debugging, and refactoring code, in order to disambiguate their personal experiences into software code. For example, Sam gave voice to the deliberate nature of logopoiesis as a logico-analytical distancing device:

By taking a personal experience and expressing it through code, I have to look at it objectively. I have to look at it in numerical, rigid values. [block quote] Similarly, Fred described algorithm design as an effective mindfulness practice enabling measured and deliberate engagement with autopathographical game authorship: [block quote] Once you understand the process of coding and are able to create original algorithms, the process of coding can be quite meditative. While writing the code, I personally reach a state where I focus on nothing but the math I'm creating. I'd say it's comparable to maintaining a Zen garden...At least for me this process has helped me deal with difficult emotions by placing me into an analytic head space which allowed me to work out my emotions with a new perspective.

Vicky stated that the detail-intensive dimensions of digital game authorship "quiets her (overactive) brain". During the autopathographical game jam, she abandoned her intention of authoring a game about her grief of losing her father, because this experience was too painful a reminder. Instead, she chose to make "cute and funny" pixel art as a form of self-care. She stated that she found the activity of "working with the pixels in such a small form that is so exact" to ease her anxiety. We can infer that

in the case of autopathographical game design, the precise and exact nature of digital authorship can be harnessed to provide measured and detached engagement with a potentially arduous emotional experience.

Participants also suggested that the logical and analytical mindset-i.e., “computational thinking” (Papert, 1980; Wing, 2006; Denning, 2017) required by their skilled use of implementation tools enabled them to inhabit the observer position, boosting their self-confidence and imparting self-clarity. Alex, who made a game about his experiences with bipolar disorder called *Brain Pains*, affirmed the confidence-building resources of computational thinking, which are especially germane for programmers contending with the common stigma that mental illness impedes logical reasoning:

it felt great to be capable of doing these logical things in programming.

Conclusion

One study limitation concerns the small sample size of 13 participants informing analysis and theorization. I draw on discourse analysis scholars Potter and Wetherell (1987) who claim that, for qualitative researchers interested in discursive data forms, *ten interviews* are sufficient for conducting in-depth analysis of participant testimony. They affirm that the principal determinant of sample size for the purposes of discourse analysis must be the specific research question used, and that a higher number of interviews does not necessarily ensure a better analysis of discursive data: “for discourse analysts the success of a study is not in the least dependent on sample size” (p. 161). Therefore, this study offers a legitimate yet novel methodological approach to examining the creative making processes of game designers via their experiences of autopathographical game design during a game jam (AGD-AGJ). Additionally, game jams in general offer qualitative researchers the opportunity to study a rich network of multimodal information constituting the creative process of game designers that includes both discursive data forms (i.e., verbal testimony and verbal interaction among participants) and non-discursive data forms (i.e., photographs, video recordings, design sketches and drawings), as demonstrated by the type of data collected in this study.

The autobiography is a timeless method of organizing lived experience (Olney, 1972). In this case, the autobiographical narrative is given a new form through computer game design. This study contributes to at least two fields: a) game narrative aesthetics, by introducing the Tetrad of Therapoiesis, and by theorizing how game autopathographers build self-knowledge through ludic forms of storytelling; and b) the medical humanities and disability studies, by illuminating the hidden and untapped resources that computer game design offers autopathographical storytellers. This study also intervenes into the field of serious games in underscoring the self-transformative and socially transformative potential of autobiographical forms of game authorship and game jamming practices. Most importantly, as an artist-researcher conducting a therapeutic reading of autopathographical game authorship processes, I offer my analytical framework—The Tetrad of Therapoiesis—as a description of how game designers are creatively experimenting with the medium of computer games while forging a novel method of self-care—autopathographical game authorship as an expressive form of design therapy.

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