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RESEARCH ARTICLE



How young adult videogames materialize senses of self through ludonarrative affects: understanding identity and embodiment through sociomaterial analysis

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ABSTRACT

This article contributes a novel mode of sociomaterial analysis that develops critical methodologies to analyze how videogames participate in the production of affect during gameplay. The authors report on a multi-year international study addressing representations of youth in Young Adult Videogames (YA Games), or games played through the perspective of an adolescent. Over 450 hours of gameplay, researchers used ludo-narratological concepts to create a novel methodological approach to critical game analysis through which player-researchers attune themselves to the affects of ludonarrative harmony and dissonance as units of analysis, asking: How do moments of ludonarrative harmony and dissonance in YA Games produce senses of being an adolescent? Analyzing how ludonarratives participate in the production of affect in YA Games foregrounded social constructions of youth, including experiences with mental health. Implications for attending to affect in videogame criticism are discussed, as well as pedagogies for focusing on adolescents' affective attunement to ludonarratives.



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Over the last two decades, researchers have analyzed the role of videogames in adolescents' everyday learning, both within and beyond schools (e.g., Aarsand and Bowden 2019; Abrams 2009; Bogost 2016; Nash and Brady 2021; Steinkuehler, Squire, and Barab 2012). Videogames have been situated as complex texts for literary and historical analysis (e.g., Beavis, Dezuanni, and O'Mara 2017; Burn 2021; Éthier and Lefançois 2020; Rowsell, Pedersen, and Trueman 2014), as well as instrumental to playful learning beyond schools (Scolari and Contreras-Espinosa 2019), including in designed learning programs for adolescents in libraries, community centers, and hospitals (e.g., Hollett and Ehret 2015; Ito et al. 2013). By analyzing adolescent learning through videogames across these settings, researchers have shown how participation in gameplay and the digital media cultures surrounding videogames are often important pathways for adolescents' identity development, language learning, sense of belonging and well-being across their learning lives (e.g., Abrams and Lammers 2017; Gilje and Silseth 2019). Over the same time, commercial videogames have developed dramatically in their technological and narratological complexity, including moves from console and computer-based games to extended and virtual reality games. Scholars across disciplines interested in gameplay experiences with these increasingly complex texts have debated not only the potential critical terms of analysis, but also whether critical, academic terms are even well-suited for describing affective experiences of play (Bogost 2015; 2016).

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We contribute to these conversations, adding to interdisciplinary approaches to game studies by articulating a sociomaterial perspective on videogames as designed texts that affect players' bodies and senses of self differently than other textual formats, such as prose stories or digital videos. We have developed interdisciplinary methodologies that attend to the materiality of digital texts in the production of affect and emotion, which impact how game studies scholars and educators may approach game critique while remaining open to the playfulness and affect essential to gaming experiences. Here we share a novel mode of contemporary, multi-format videogame analysis that holds direct implications for designing learning opportunities with videogames for youth within and beyond schools. We focus specifically on what our research team defines as Young Adult Videogames (YA Games), or games played through the perspective of an adolescent. This focus on YA Games is especially important as teens across the globe are increasingly turning to online gaming communities and virtual worlds to maintain social connection and foster community in post-pandemic social life.

Most research on learning through commercial videogames has explored either the sociocognitive benefits of gameplay (e.g., Abrams 2017; Beavis, Dezuanni, and O'Mara 2017; Gee 2007a), or the learning and identity development happening in digital spaces and cultures surrounding gameplay, such as chatrooms and fan sites (Aarsand 2012; Steinkuehler and Tsaasan 2020). As commercial videogames grow more complex, games themselves are providing more space for identity development, particularly through direct gameplay. Players co-construct a sense of self through simulated interactions in vivid virtual worlds that are designed to *play the players*, as players navigate not only the game's narrative but also the game's ludology, or game mechanics. The means to analyze how players co-construct a sense of self in the space between playing a videogame and being played by a videogame is especially important for adolescents playing YA Games. It has led us to consider: To what extent are adolescent protagonists expressed in videogames – through playing and being played – in nuanced, intersectional, flat, or even problematic versions of self? What methodologies are apt for understanding player-game co-construction of self, and how might such a methodology translate to more critical gameplay experiences in designed learning environments such as schools and youth centers?

As a team of seven literacy researchers and practicing secondary educators working with adolescents in varied contexts – from public and private school systems and universities to after-school programs across Canada and Australia – we felt it crucial to develop a method of sociomaterial analysis through which to address senses of 'being an adolescent' that YA Games can affect uniquely in players. Drawing from established frameworks for analyzing representations and normalizations of adolescence/ts in more traditional textual mediums such as print-based literature and streaming series (e.g., Petrone, Sarigianides, and Lewis 2014), we conceptualize a novel methodology particularly apt for educators' and youths' critical, sociomaterial analysis of YA Games. Although research critiquing how traditional YA texts frame adolescence/ts is well-established (Alsup 2010; Garcia 2013; Koss and Teale 2009; Sarigianides 2012), YA Games, as an emerging genre, have not yet been discussed or analyzed in game studies or education research. Our analysis of YA Games addresses this lack of critique.

We begin by offering a conceptual framework that explores how the sociomaterial builds on the sociocultural to shape our understanding of identity and embodiment. Drawing on the concept of ludonarrative dissonance and harmony, we consider the interplay between a videogame's mechanics and technical features and its overall narrative – specifically, a player's perceived mismatch between ludology and narrative. Next, we outline our novel methodological approach to analysing contemporary YA Games. Our sociomaterial playthrough approach was informed by both a critical understanding of games as complex YA texts and games as ludonarratively driven. Findings offer a sociomaterial analysis of two YA Games, exploring how they embody ludonarrative harmony and/or dissonance and how this serves to materialize perceived social constructions of youth through ludonarrative affects. These findings focus specifically on aspects of mental health, loss and trauma – themes emerging throughout the ludonarratives of nearly all fifteen YA Games the research team

analyzed over 450 hours of total gameplay. Researchers have noted a prevalence of similar themes in print-based YA texts (Wickham 2018), and as YA media continue to mediate classroom and professional discourse around these topics (e.g., Boyd, Rose, and Darragh 2021), a methodology for analyzing how ludonarratives are designed to make players experience themes that are essential to adolescents' senses of self is all the more crucial.

Conceptual framework

Games as narrative texts

Players have long been hooked by the complex storyworlds that videogames provide. While the belief that videogames 'represent some of the most important storytelling in the twenty-first century' (Ostenson 2013, 71) is one widely held (Bostan 2022), the conceptualization of games as narrative texts has remained a contentious topic for scholars (Apperley 2006; Berger 2017; Juul 2001). Debate largely stems from the notion that narrative – traditionally considered to be prescriptive and passive in nature – is not compatible with the innate interactivity featured through gameplay (Beavis, Dezuanni, and O'Mara 2017; Louchart et al. 2007; Reeve 2009). In the following, we first describe how game studies scholars have conceptualized videogame narratives, and we then advance these conceptualizations through sociocultural theories of identity and sociomaterial theories of affect and embodiment.

Multiple game studies scholars have worked to account for the ways in which videogames are built as narrative medium and yet also carry unique potential for composing and communicating stories. Ip (2011), for example, details diverse techniques (e.g., event sequences, elaborate cutscenes, archetypal characters, and considerations of audience) that work to lay narrative foundations in videogames. Further, Bateman (2021) explores six broad categories of narrative structure marked by increasingly complex relationships between game authors and players: linear traditional, branching narratives, parallel paths, threaded, dynamic narrative, and implied narrative. While linear traditional narratives push players down story paths predetermined by the game's creators, branching narratives place players in positions of agency through consequential textual choices that influence interactions and outcomes available within the game's storyworld. In a fashion unique to the literary medium, storytelling in videogames takes on a collaborative nature wherein components such as plot and characterizations emerge through dynamic, interactive, and participatory means.

In this way, discussions of games as narrative texts require broadened understandings of spectatorship in textual navigation. As players take on an integral role in advancing plotlines, resolving conflict, and undergoing profound character development in and through videogames, their responsibility shifts from watcher/reader to writer/maker (Beavis 2014; Ostenson 2013). This process requires players to not only navigate a game's *narratological* components – consisting of storyworld qualities like plot, characterizations, dialogue, and music – but its unique playable or *ludological* components – consisting of playable qualities like rules, mechanics, and player abilities – as well (Caracciolo 2015). To literacy and game studies researchers Apperley and Beavis (2013), the complex processes of story co-creation between player and game demands a 'critical games literacy', in which games are read as both *text* and *action*. While the *games-as-text* layer is associated with 'digital iterations of 'reading' (or playing) and 'writing' (or producing) in combination and in multimodal forms' (2), the *games-as-action* layer speaks to the 'action-based processes of digital gameplay' and the 'dynamic interplay between game and player' (2).

Co-constructing stories of self through ludonarratives: from the sociocultural to the sociomaterial

The growing conceptualizations of games as ludonarratives that require medium-specific critical literacies raises questions about the role of identity in gameplay: How is adolescence represented

in YA Games? How are players performing a sense of being a teen through gameplay? How are particular versions of adolescence co-constructed through both representations on screen and players' agency in controlling and navigating storyworlds *as* those representations? To date, most research on identity development and gaming frames identity as a sociocultural construct through a predominant focus on the narratological elements of videogames. From this sociocultural perspective, identities are constructed and expressed in specific social contexts and through cultural mediators (Holland et al. 2001), such as language, clothing, and gesture (Gee 2007b). In digital cultures, mediators such as community-specific discourses mark participants as experts or novices. These culturally specific mediators also intersect with broader cultural constructions of identities, including gender, race, and sexuality. In learning science research, studies of youth identity development through gaming have examined language and multimodal discourse as cultural mediators during in-game chats, and during participation in game-related online communities, including fan communities (Gee 2014).

Sociocultural theories therefore provide insight into how games co-construct stories of self, yet they do not fully account for the embodied experience of gameplay. As games and literacies researchers, our conceptual framework draws on both *sociocultural* and *sociomaterial* perspectives to consider how a sociocultural focus on the construction of identity within and through games can be married with the sociomaterial and embodied experiences of gameplay.

Sociocultural perspectives focus analysis on discursive representations of experience, yet the embodied experiences of gaming, and the feeling of gameplay activity, cannot be represented through language alone (Ehret and Hollett 2014; Ehret 2018; Ingold 2020). Recent advances in sociomaterial and affect theories have led us to consider a conceptual approach through which to analyze the embodied experience of gameplay, such as ludological components, which, as noted above, researchers have argued is essential for developing approaches to critical games literacy.

Sociomaterial and affect theories focus on modes of experience beyond language, such as bodily sensation (Boldt 2021), rhythm (Leander and Hollett 2017), and atmosphere (Anderson 2014). From this perspective, affect is the sensation of moving and being moved before that sensation is given a name in language, such as happiness or nervousness. Affect theorists are particularly interested in how specific contexts can enable or constrain bodies' capacities for movement through the reception and production of such sensations. For example, literacy researchers Nichols and Coleman (2021) described how the implementation of a digital productivity tracker inequitably affected middle school students' capacities to act by producing ranges of feelings from anxiety and frustration for some to contentment and self-agency for others. By combining sociocultural and sociomaterial perspectives, our work attends to how playing YA Games involves adolescent representation through both narrative and game mechanics, impacting an embodied sense of performing youth identity through the players' capacities to act throughout game play.

The materiality of videogame narratives and the affective production of senses of self: toward a sociomaterial methodology for critical playthroughs

Videogame play produces a wide-range of sensations, some of which are unpredictable and others that are designed for by game developers (Isbister 2016). To understand how videogames produce affects that may enable or constrain the production of a sense of self desirable to the player, we draw on the concept of ludonarrative dissonance common in gaming culture, criticism and industry (Caracciolo 2015); This describes the interplay between a videogame's mechanics and technical features, and its overall narrative – specifically, a player's perceived or felt mismatch between ludology and narrative. For example, game critics often use ludonarrative dissonance to describe experiential incongruities in contemporary narrative-driven, first-person shooter videogames, wherein players experience relentless violence through gameplay but are asked to question the morality of such

violence through the game's narrative. Ludically, players feel 'forced' to enact and even enjoy violence, while narratively players are asked to question and oppose it.

Although we do not argue that videogames do, or can, produce specific identities in players, let alone violent identities, we believe that a sociomaterial approach to videogame analysis is necessary to inform a critical games literacy that focuses on how the players and games co-construct stories and senses of self. The embodied experience of videogame play includes experiences of ludonarrative dissonance, and, we will argue, harmony, that are essential to how videogames work as new media texts. In the case of playing YA Games, players can co-construct particular experiences of being a teen through play – as hybrid player/played-protagonist – and, therefore, co-develop their own stories of adolescence. Our sociomaterial methodology for critical playthroughs, described in the following section, focuses on this process through an analysis of how YA Games can entrain players to both enact and challenge social constructions and naturalizations of youth (Lesko 2012).

Sociomaterial methodology for critical playthrough analysis

Our conceptual framework informed the development of critical modes of analysis of materialized and embodied senses and perceptions of youth affected through playing YA Games. We asked the following research questions: (1) How do moments of ludonarrative harmony and dissonance in YA Games produce particular senses of being an adolescent for player-researchers? (2) How do these senses of being an adolescent connect to larger social issues important to adolescent identity development? With these questions guiding our critical playthrough analysis, the project's seven educator-researchers worked collaboratively to select texts for study and develop data collection tools and analytic procedures.

Player-researchers and selected games for analysis

Based in Canada and Australia, we met virtually over a six-month period to critically explore and analyze contemporary, multi-format YA Games published between 2006 and 2020. This process took shape in the collaborative creation of a YA Games catalogue organized according to protagonist age (ranges of 10–19 and 20–24); game genre (e.g., narrative-based, action-adventure); and supported devices (e.g., consoles, tablets). Six of the study's seven educator-researchers then assumed the roles of player-researchers as they selected games for critical playthroughs (Table 1). Our backgrounds as secondary English teachers and literacy researchers, experiences working with youth in varied capacities and contexts, and familiarity with YA texts of diverse formats aptly prepared us for such critical play.

In defining the emerging genre of YA Games, we began with existing understandings applied to more traditional textual formats, such as print-based novels and streaming series. In a definition adopted by the American Young Adult Library Services Association (Cart 2008), author and researcher Cart describes YA Literature as an innovative, multi-formatted genre – from book-length fiction and non-fiction works, to poetry and graphic novels – that addresses the 'problems, issues, and life circumstances of young readers ages 12–18' (2). We drew upon this definition while developing our YA Games catalogue, but felt it important to expand the age range of featured adolescent protagonists from 12–18 to 10–24, which aligns with the World Health Organization's definition of 'young people'.

Our selected games included relevant themes to youth audiences, such as identity, family conflicts, friendship, and love. While the potential pool of game titles was vast, the research team selected fifteen initial YA Games and navigated six of those games closely over 450 hours of total combined gameplay. These six titles have been described in Table 1, two of which have been further fleshed out through our sociomaterial analysis in the Findings section of this paper.

Table 1. Examples of YA Games Selected for Sociomaterial Analysis.

YA Games
<p>Alyx: Half Life (2020) Virtual-reality, action-puzzle game Players experience a highly tactile VR immersion into teen protagonist Alyx Vance's life. In her navigation of a dystopian world policed by alien conquerors, Alyx demonstrates courage, strength, and independence as she fights evil, travels through time, and completes various missions to ensure survival.</p>
<p>What Remains of Edith Finch (2017) Narrative-based, adventure game Players follow 17-year-old protagonist Edith Finch as she returns to her family home and investigates a longstanding curse causing the loss of 12 family members. As Edith moves around her home and glimpses life through the eyes of the deceased, she contemplates difficult issues (e.g., trauma, mental health, drug abuse) and reflects upon her own tumultuous journey through adolescence.</p>
<p>Oxenfree (2016) Narrative-based, adventure game Players follow a group of teenagers in their quest to escape an island controlled by a vengeful supernatural presence. This dangerous endeavor pushes the adolescent protagonists to reflect upon and come to terms with the obstacles they've faced in life, such as addressing familial issues, coping with loss and rejection, and overcoming anxieties about the future.</p>
<p>Life Is Strange (2015) Narrative-based, adventure game Players follow 18-year-old photography student Max Caulfield as she discovers her ability to rewind time. While attempting to control her newfound power, maintain complex friendships, and navigate struggles with mental health, Max must simultaneously save the town from a violent predator and an impending natural disaster.</p>
<p>Beyond: Two Souls (2013) Narrative-based, drama-adventure game Players follow Jodie Holmes as she navigates adolescent life while physically linked to an invisible entity with telekinetic powers. Jodie must learn to control her powers and overcome increasingly difficult obstacles – like being enrolled as an 18-year-old CIA operative – as she journeys to find meaningful connections and establishes her own path in life.</p>
<p>Bully (2006) Narrative-based, action-adventure game Players follow 15-year-old juvenile delinquent Jimmy Hopkins throughout his first year attending a boarding school for 'troubled' youth. As Jimmy attempts to rise through the ranks of his school's social hierarchy and establish his sense of belonging, he must simultaneously navigate and combat issues of bullying, substance abuse, and socioeconomic-based violence.</p>

Affective moments for analysis in critical playthroughs

Drawing on our conceptual framework in tandem with critical approaches to analyzing representations of adolescence/ts in complex YA texts (e.g., Petrone, Sarigianides, and Lewis 2014), we developed an interdisciplinary methodology to game critique attending to the materiality of digital texts in the production and embodiment of identity through ludonarrative affects. First, player-researchers felt for moments of ludonarrative harmony and/or dissonance, cataloging each and recording a connected videoclip of gameplay. Player-researchers then analyzed each of these moments individually, using a 'critical playthrough report' (Table 2). Player-researchers uploaded these reports and related video of gameplay to a shared online folder for collaborative open coding and critical discussion.

Over the course of the study period, the team met regularly to discuss moments of gameplay with individual player-researchers presenting representative video-clips from their analysis. While player-researchers shared experiences of being moved through instances of gameplay, their

Table 2. Example prompts from critical playthrough report.

Critical Playthrough Report
<ol style="list-style-type: none"> 1. Describe the game's relation to adolescents/ce through narratives, <i>with particular attention to the co-construction of identity between player and game narrative.</i> 2. Describe the game's relation to adolescents/ce through ludology, <i>with particular attention to the embodiment of adolescent identity through the game's ludological features.</i> 3. Describe moments you felt the game's relation to adolescents/ce through ludonarrative harmonies and dissonances, <i>with particular attention to player ludonarrative agency/lack of agency in the production of particular senses of being an adolescent.</i>

individual interpretations were merged with the collective, as unique histories, cultures, and experiences came to the fore. This process unveiled deepened understandings of the embodied, co-constructed identities emerging within and through YA Games, and helped to guide the study's analysis. The following section illustrates findings from this collaborative, critical analytic work through key gameplay excerpts from two selected YA Games. We focus this section on how ludonarrative harmony and dissonance operate as sociomaterial units of analysis apt for videogame critique. Specifically, and addressing our research questions, we show how these units of analysis enable critique of how YA Games uniquely affect senses of adolescence.

Operationalizing ludonarrative harmony and dissonance as sociomaterial units of analysis in two YA games

We here focus on an expanded analysis of the following two games: *What Remains of Edith Finch* (2017) and *Life Is Strange* (2015). We note thematic similarities across these two YA Games that, attending to ludonarrative harmonies and dissonances as sociomaterial units of analysis, were made felt to us as analysts: navigating mental health and responding to trauma. We focus on these examples to highlight how sociomaterial methodologies make felt the senses of self that YA Games can affect for players. Additionally, these analyses address our study's broader research questions around how YA Games materialize within gameplay and beyond in connection to broader issues impacting the production of players' senses of self and potentially those of adolescent YA Game players.

What Remains of Edith Finch

In *What Remains of Edith Finch* (2017) [*Edith Finch*], players engage with the universally relevant themes of family and death through the authentic perspective of the eponymous 17-year-old protagonist. After a lengthy absence, Edith returns to her family home and seeks to gain insight into the family 'curse'. Each time she visits the room of a deceased family member, the core gameplay mechanic triggers her to be transported back in time to experience that family member's final moments through their unique point of view. Throughout the game, the death vignettes serve as an opportunity to experiment with gameplay and explore diverse narratives, including those related to mental health, drug abuse, and trauma.

Edith Finch balances these dark events with an otherwise whimsical, gentle, mysterious tone. Both the art style (realistic in detail and cartoonish in color) and the music (plucky, playful, curious, and calm) contribute to this tone and advance the narrative. The game also draws on magical realism when some death vignettes concede logic for symbolism, like when the starving ten-year-old Molly, in a bid to escape her bedroom at night, turns suddenly into a cat, then a hawk, then a shark, then finally a menacing snake-like creature with an insatiable hunger for human flesh.

Most of the game's narration of adolescent experience occurs through Edith's exploration of her abandoned childhood home, during which her voiceover narration offers emotions and insights provoked by her journey. The ludonarration consists of two forms: mandatory and optional. The mandatory narration is the primary method of storytelling in *Edith Finch*: the player will embody Edith on a semi-linear path through the Finch family home, and Edith will deliver pieces of the narrative that follow a standard narrative structure that includes orientation, complications, and resolution. The optional pieces of narration are triggered when players interact with the mise-en-scène, which may reveal context or reflection from Edith's perspective.

Edith Finch features clear, deliberate demarcations between segments of the game that are ludonarratively harmonic and those which are dissonant. The parts of the narrative that feature Edith exploring the house and providing voiceover narration are almost entirely harmonic; the framed story for the game sets up an as-yet-unidentified character opening Edith's diary in which she has written each piece of 'voiceover' narration that the player encounters throughout play (written,

that is, with the express purpose of enlightening this unidentified character about her experience returning to the house at seventeen). The unidentified character later turns out to be her child, whom Edith was carrying while re-exploring the house and who she wishes to educate about the supposed ‘family curse’ they will inherit. In this way, every ludic interaction the player experiences as Edith is harmonic with her narrative purpose of coming to understand her family’s history as an adolescent. She explores her childhood home with new eyes – the wisdom conferred by her adolescence – and, in doing so, highlights a key aspect of adolescent experience: the process of recontextualising one’s past with new insights, which allows for new stories to emerge.

Operationalizing ludonarrative harmony: more than a representation of adolescence

The way that players, playing as Edith, experience these stories through the game’s ludonarration evokes a sense of being an adolescent, of living an adolescent’s experience. These feelings are conjured through ludonarrative harmonies or dissonances. Each time Edith enters the room of one of her deceased family members, she finds an item of theirs – a diary, a letter, a series of photographs – that acts as a catalyst for the shift in perspective that has the player live out the deceased characters’ final moments through their respective thoughts and feelings. In this way, the narrative creates clear shifts where the logic of Edith’s narrative gives way to more poetic forms of narrative expression, which allow players to be privy to the deceased’s verbal intonations, perspectives, and sensory experiences.

The duration of one such shift to a death vignette near the game’s end (see [Appendix A](#)), about six minutes of gameplay, is a moment of ludonarrative harmony designed to evoke the feeling of living through an adolescent’s mental crisis – that of Edith’s brother, Lewis. Suffering from drug addiction and depression, Lewis, at the behest of his psychologist (whose voiceover narration runs during the vignette), sobers up and focuses his efforts on his menial job at the local cannery. The monotony of the work, however, in combination with his depressive and dissociative tendencies, leads Lewis to slowly lose himself in a fantasy of his own conjuring. Players feel the all-consuming nature of his depression through a harmonious merging of the game’s narratological and ludological features. As Lewis becomes increasingly distracted while attempting to complete a work task, players, too, become increasingly pulled into the fantastical world he has created to cope with his worsening depression, and they must navigate both dream-world and reality simultaneously. This forced ludonarrative navigation of mental health is poignant as players carry the knowledge that Lewis eventually loses his battle with depression and takes his own life.

[Figure 1](#) depicts a moment from the scene where players must work to complete Lewis’ job of cleaning fish on a conveyer system, while at the same time navigating through the daydream connected to his depression. As the daydream deepens, managing the endless flow of fish to clean becomes more and more difficult. More than a representation of adolescence, players feel the embodiment of a mental health crisis, struggling to keep up with a monotonous physical task while the daydream takes up more and more space on the screen. In this respect, players experience Lewis’ mental health crisis in an embodied way as it consumes their field of vision.

As player-researchers, we felt this moment of harmony as the resonance of the game’s ludology – the progressively more difficult simultaneity of fish cleaning and daydream navigation – and the emotional impact of the narrative – knowing, as Edith does, that this experience of a mental health crisis will lead to her brother taking his own life. This moment of ludonarrative harmony exemplifies instances we analyzed across YA Games through which more-than-representational moments of playing an adolescent affected us as players, evoking a sense of living through the body of a teenage avatar in a mode unique to modern videogames.

As a sociomaterial unit of analysis, ludonarrative harmony in *Edith Finch* opens questions, then, not just about how the text works to express more-than-representational senses of being an adolescent, but also how such texts can lead players to empathize with and understand the diversity of experiences of mental health. Here, through ludonarrative harmony, players empathize with

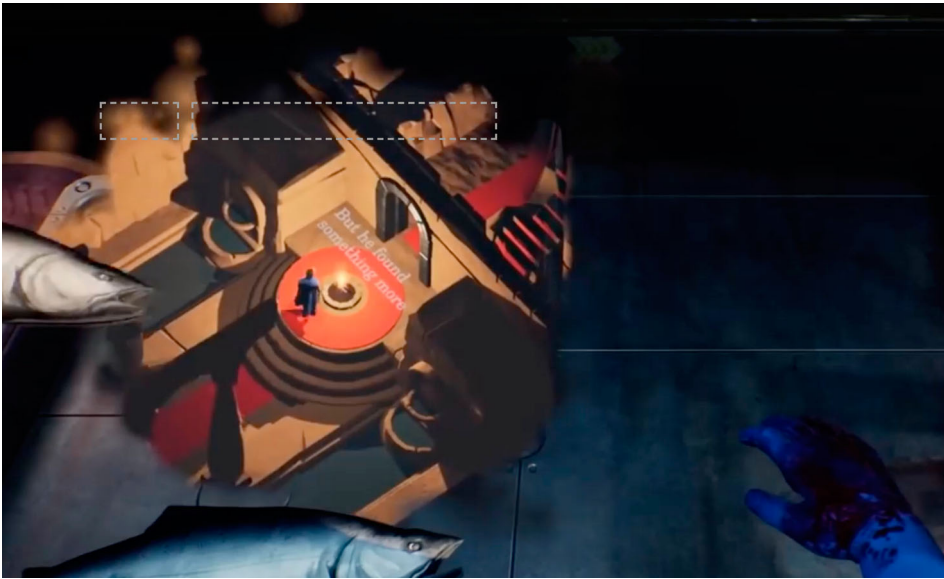


Figure 1. Through a merging of ludonarrative components, players experience one of Lewis' dissociative episodes while he tries to cut fish at the cannery and becomes increasingly consumed by his daydreaming about fantasy worlds.

Lewis' experience as an adolescent dealing with his family trauma in the only way he knows how – by being wholly consumed in an increasingly elaborate fantasy world.

As researchers, moments of ludonarrative harmony such as this formed the basis for our analysis of how YA Games evoke senses of being an adolescence as an emerging genre. But we also see this unit of analysis as having literary textual features prime for analysis in literature classrooms and/or informal learning environments where teens are playing videogames with each other and with teachers and adult mentors. These moments for analysis offer, therefore, potentials not just for thinking about how YA Games work as literary texts, but also for how a literary medium affects, viscerally, an adolescent experience of navigating trauma and loss.

Life is Strange

As in *What Remains of Edith Finch*, exploring *Life Is Strange* (2015) through a critical, sociomaterial lens reveals the ways in which varying forms of ludonarration in YA Games lay vital foundations for storytelling and perspective taking through the eyes of an adolescent protagonist. Yet difference between the two YA Games is marked in moments of constrained embodied identity construction felt through *Life Is Strange's* ludonarrative features. While players experience harmonic agency in their selection of plot-steering narrative pathways throughout navigation of the designed text, the predominant character traits of their adolescent avatar, Max Caulfield, are pre-established and unwavering. The following sociomaterial analysis demonstrates how YA Games can push players to perform and make felt particular senses of self, affecting bodies within and beyond game worlds.

After learning about her ability to rewind and replay time, Max – an 18-year-old photography student living in the fictional town of Arcadia Bay – must embark on several quests to help those around her: comforting friends dealing with difficult circumstances; protecting classmates from a violent predator; and saving the town from an impending natural disaster. As she navigates these challenging circumstances along her 'coming of age' journey through teenhood, Max proves to be a sensitive, kind, intelligent, morally good, and 'desirable' adolescent figure (according to contemporary Western social standards). While players have a role in guiding Max's character

development over the course of their gameplay – maintaining control over many of her verbal responses, interactions with other characters, and life-altering decisions through ludologically-driven textual choices (as depicted in [Figure 2](#)) – they must ultimately *co-construct* her identity alongside a pre-established, socially ‘palatable’ version of her avatar already decided upon by the game’s developers. Manifest through ludonarrative affects, this game quality impacts players’ embodied production of desirable senses of self.

Operationalizing ludonarrative dissonance: affecting senses of self beyond game worlds

While navigating the YA Game through a sociomaterial lens, the player-researcher experienced a visceral restriction of identity construction in the opening scene of the game’s third episode. Much like in *What Remains of Edith Finch*, *Life Is Strange* has players navigate issues of mental health and trauma from the perspective of an adolescent protagonist. Throughout the game’s first three episodes, the narrative’s spotlight is occasionally shone on Kate, a secondary character attending photography school with Max. After Kate is drugged and has revealing photos taken of her at a party, she is mercilessly bullied by the majority of her peers both in person and online. Although Max is there to offer support, she is ultimately unable to prevent Kate’s downward spiral into a depressive state that ends in the taking of her own life.

After witnessing Kate’s suicide, Max – and the game’s players, by proxy – must navigate a deep and painful struggle as she learns to cope with the loss of her close friend. In a similar fashion to Lewis’ dissociative episodes in *What Remains of Edith Finch*, players are unable to avoid experiencing the all-consuming embodiment of Max’s depression through a merging of ludology and narrative. This is captured in the opening scene of the game’s third episode through a short cutscene and several minutes of player-navigated gameplay. As the episode opens, Max is first seen asleep at her desk with her dorm room lights on. After being abruptly woken by a text message from a friend requesting her presence, she immediately decides to ‘get moving’. While the cutscene ends with Max’s ludological placement facing the door – encouraging players to exit and ‘get moving’ – there is also the ludological option to stay and explore. With each object interacted with as the room is navigated, players become increasingly aware of the depression, disconnect from reality, and sense of numbness plaguing their adolescent avatar. Max, for instance, thinks the following



Figure 2. Players are given the option to ludologically control Max’s response to finding a demeaning phrase about Kate written on the bathroom mirror (‘Look’ OR ‘Erase’).

throughout the scene: ‘I still can’t stop thinking about Kate ... It’s like I’m awake in a bad dream ...’; ‘I can’t even keep my plant alive, much less Kate ...’; and ‘You know you’re hurting when you don’t give a shit about music’. More than a representation of adolescent experience, players feel the affects of Max’s mental health crisis.

While the game’s narrative tells the story of an adolescent suffering from trauma in need of rest and help, it is contrasted by a continuous ludological push toward *action* as the ideal and productive response to coping with loss. Players realize it is the *only* response to coping with loss, as their efforts to remain in the room are met with an increasingly intense narratological drive to exit. This is also made apparent by some of Max’s thoughts throughout the scene: ‘Come on, Max. No more tears. You have to act, not react’; and ‘Jeebus, I am so fricking tired ... But crime does not delay ... I need to stay on top of this investigation ...’. Rather than allowing players to enact agency in Max’s grieving process, a required performance of ‘productive’, ‘healthy’ ways of coping with loss forcefully engrains expectations that the adolescent avatar should simply overcome trauma and direct her emotions toward ‘useful’ ends. This ludonarrative push to an action-oriented response to mourning not only produces particular senses of being an adolescent during gameplay, but reaches out beyond the game to reinforce the neoliberal values present in the broader society in which the game was created – directly addressing our second research question.

Our sociomaterial methodology reveals the ways that storytelling in YA Games can evoke a unique sense of living through the body of an adolescent through a player’s capacity to act (or not to act) during gameplay. Further, after becoming wholly invested in co-creating an avatar’s identity, the visceral response of losing agency as a player can carry affective implications both *within* and *beyond* game worlds. These more-than-representational moments of playing an adolescent affected us as player-researchers over the course of the study: as the researcher navigating *Life Is Strange* began to lose control over constructing Max’s identity, feelings of frustration, sadness, and loss were experienced – particularly throughout the scene described above. The player-researcher’s bodily, rhythmic, and atmospheric stirrings all became governed and constrained by an inevitable push out the door down a pre-established character pathway and story of self.

When considering our work with youth across varied contexts from formal classroom spaces to after-school gaming clubs, it became clear that such narrowly constructed materializations of youth could have lasting impacts on players’ embodied experiences and expressions of self. While studies have shown how videogames and their surrounding digital cultures provide important pathways for identity development, belonging, and well-being in youth (e.g., Abrams and Lammers 2017; Gilje and Silseth 2019), there is currently little knowledge on the ways in which ludonarrative features can enable or constrain a body’s capacity to move through senses of self within and beyond game worlds. It, therefore, becomes important to approach YA Games through such sociomaterial units of textual analysis in order to promote critical gameplay experiences, both within designed learning environments and during recreational play.

Discussion

Theorizing the materiality of digital texts is essential to critical methodologies. Through the development of ludonarrative harmony and dissonance as sociomaterial units of analysis, we created a methodology for critical game studies that addresses the growing complexities in videogame technology and narratives. This methodology centers the role of the body in game analysis and the relationship between texts and the production of affect. Focusing on the production of affect through ludonarrative harmony and dissonance foregrounded the analysis of players’ co-construction of self throughout play, particularly in relation to navigating issues of mental health and healing. Beginning from the affects of ludonarration rather than narrative representations alone allowed player-researchers to identify moments where freedoms and limitations to constructed representations of identity (and in the case of selected YA Games, youth identity) most intensely evoked senses of self. More than other areas of new media criticism, games criticism must continue to

develop such sociomaterial perspectives that are sensitive to how gameplay affects users' bodies in a different way than other mediums.

Beyond implications for game design and criticism that attend to the materialization of senses of self both in and out of videogame play, our analysis suggests potentials for embodied pedagogies in adolescent literacy instruction that focus on students' affective attunement to ludonarratives across videogame formats, including console, PC, and virtual reality. We wonder: How might this critical playthrough methodology translate to more critical gameplay experiences for adolescents in designed learning environments such as schools and libraries? As our analysis makes clear, game designers develop games to affect players through narrative and interactive elements that combine to produce emotional experiences. In the case of YA Games, these emotional experiences can evoke particular senses of self in a player, who is navigating the storyworld on screen, through a more or less nuanced or ethical portrayal of adolescence. Attention to the logical components of ludonarration alone allow for a critique of such portrayals, but they cannot always account for the affectively intense moments that arise in moments of ludonarrative harmony and dissonance that present themselves first through affect. Modeling and scaffolding adolescents' critical, embodied play through a focus on affective attunements to ludonarratives can positively shape robust game critique in literacy classrooms: encouraging pause for thought around adolescents' ability to co-develop stories of self and teenhood through individual and collaborative gameplay; addressing the ways in which bodily feelings and sensations impact senses of self within and beyond game-worlds; questioning players' agency (or lack of agency) to enact or challenge socially constructed/naturalized portrayals of youth.

While revealing practical pathways for educators, our sociomaterial analysis of gameplay in relation to trauma, mental health and loss across two YA Games also highlights the need for more research on videogame pedagogies that forefront affect and affective responses to games as texts designed to elicit embodied responses and actions. Game and literacy studies must aim to understand how teachers can model and scaffold gameplay toward students' critically engagement with the themes, ludonarrative elements, and embodied experiences inherent in YA Games. Future studies must continue to ask: How do adolescents learn to be critical of representations of, for example, a teen experiencing loss in a videogame, while at the same time feeling and navigating such loss ludically? How can teachers help students become more aware of their embodied responses to texts designed to move them emotionally, intellectually, and physically? Using ludonarrative harmony and dissonance as entry points to critical pedagogies with adolescents provides one possibility for research in classrooms and other designed learning environments. YA Games will continue to grow as a genre, and videogames will continue to develop in their technical complexity. Educators and researchers, therefore, must continue to develop their tools for sociomaterial analysis and pedagogies that engender more critical, affectively attuned literacies in relation to texts designed to affect senses of self that are not always in a player's control.

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Appendix A

This permanent link provides access to a video analysis of ludonarrative harmony in *Edith Finch*. The analysis is presented by research team member Jack Theodoulou, graduate of Sydney School of Education and Social Work, The University of Sydney, Australia.

<https://bit.ly/3r9pTko>