

Article

The ‘Eudaimonic Experience’: A Scoping Review of the Concept in Digital Games Research

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Abstract

Digital games have evolved into a medium that moves beyond basic toys for distraction and pleasure towards platforms capable of and effective at instigating more serious, emotional, and intrapersonal experiences. Along with this evolution, games research has also started to consider more deeply affective and cognitive reactions that resemble the broad notion of eudaimonia, with work already being done in communication studies and media psychology as well as in human–computer interaction. These studies offer a large variety of concepts to describe such eudaimonic reactions—including eudaimonia, meaningfulness, appreciation, and self-transcendence—which are frequently used as synonyms as they represent aspects not captured by the traditional hedonic focus on enjoyment. However, these concepts are potentially confusing to work with as they might represent phenomenological distinct experiences. In this scoping review, we survey 82 publications to identify different concepts used in digital gaming research to represent eudaimonia and map out how these concepts relate to each other. The results of this scoping review revealed four broad conceptual patterns: (1) appreciation as an overarching (yet imprecise) eudaimonic outcome of playing digital games; (2) covariation among meaningful, emotionally moving/challenging, and self-reflective experiences; (3) the unique potential of digital games to afford eudaimonic social connectedness; and (4) other eudaimonia-related concepts (e.g., nostalgia, well-being, elevation). This review provides a conceptual map of the current research landscape on eudaimonic game entertainment experiences and outlines recommendations for future scholarship, including how a focus on digital games contributes to a more comprehensive understanding of eudaimonic media experiences broadly.

Keywords

appreciation; digital games; emotional challenge; emotionally moved; eudaimonia; meaningfulness; media entertainment; self-reflection; social connectedness

Issue

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1. Introduction

The focus on games for amusement drove much of the nascent gaming industry (Ivory, 2015) and indeed, few

would debate the hedonic pleasure of digital games (e.g., Grodal, 2000; Sherry, 2004). However, like many other forms of media (Stober, 2004), digital games have evolved from their earliest days as curious technological

demonstrations into a broadly appealing and creative form of expression (Bowman, 2019). As digital gamers grow older—in 2020, the average age range of gamers in the United States lies between 35 and 44 years (Entertainment Software Association, 2020)—the content of their games has matured to “peer into the dark reaches of the very real human heart to deliver stories that are thrilling, chilling and utterly absorbing” (Benedetti, 2010, para. 6). Schell (2013) suggested that contemporary digital games focus on above-the-neck verbs more aligned with contemplation and poignancy as much as they involve below-the-neck verbs more aligned with action and exploration. For example, digital games can instill in players a sense of guilt (Grizzard, Tamborini, Lewis, Wang, & Prabhu, 2014) leading to unprompted moral deliberations (Holl, Bernard, & Melzer, 2020). Others talk about the power of digital games to inspire a sense of awe and fascination in players (Possler, Klimmt, & Raney, 2018) or even an authentic and personally meaningful sense of place with locations (Bowman, Banks, & Rittenour, 2020). Hemenover and Bowman (2018) suggest that digital games inspire a rich tapestry of emotions in their players.

In line with the evolution of the medium, scholars from different research fields increasingly view digital games not solely as ‘fun machines’ that offer their players rich hedonic experiences such as enjoyment, but are beginning to shed light on more complex, fundamental reactions to games (Klimmt & Possler, 2019). Echoing recent developments in entertainment research (Vorderer & Reinecke, 2015), human–computer interaction (HCI; Bopp, Mekler, & Opwis, 2016), and positive psychology (Ryan & Deci, 2001), these profound dimensions of the digital game experience have often been labelled ‘eudaimonic’ (e.g., Daneels, Vandebosch, & Walrave, 2020; Oliver et al., 2016; Possler, Kümpel, & Unkel, 2020). However, these and other studies across multiple fields of research on eudaimonic game experiences employ a great range of concepts, which are often used synonymously and/or are not clearly defined. For example, Oliver et al. (2016) and other studies based on that data (Bowman et al., 2016; Rogers, Woolley, Sherrick, Bowman, & Oliver, 2017) did not directly measure eudaimonia, but instead prompted players to recall recent meaningful gaming experiences and used a single-item measure of appreciation, without defining either term. Such conceptual flexibility was important to establishing baseline empirical results that digital games could be “more than stories with buttons” (Elson, Breuer, Ivory, & Quandt, 2014, p. 521), but consequently it is less clear what *more* players are actually experiencing.

In this study, we conduct a scoping review to provide an overview and common conceptual language of how a range of concepts broadly known to be non-hedonic (Kashdan, Biswas-Diener, & King, 2008) both (1) resemble and differ from each other and (2) belong or fall outside of the superordinate concept of eudaimonia (Huta & Waterman, 2014). This research is couched within a

growing area of research focused on eudaimonia and digital games. That said, we do recognize that eudaimonia can be understood as an entertainment outcome applicable to media broadly (see Oliver & Bartsch, 2010; Oliver & Raney, 2011). As such, the current manuscript both (a) recognizes unique elements of digital games—such as interactivity, challenge and competition, and social interactions surrounding and shaping gameplay (Klimmt & Possler, 2019; Rogers et al., 2017)—that contribute uniquely to eudaimonia, while also (b) expanding our understanding of the full range of eudaimonic media experiences more broadly.

2. The Philosophical and Psychological Roots of Eudaimonia

The differentiation between hedonia and eudaimonia can be traced back to ancient Greek philosophers and their reasoning about what it means to live a good life (see Delle Fave, Massimini, & Bassi, 2011; Tiberius & Mason, 2009). ‘Hedonism’ is commonly understood as the philosophical idea that the ultimate goal of life is to maximize pleasure and minimize pain (Huta & Waterman, 2014; Vittersø, 2009). Thus, ‘hedonia’ refers to the “subjective experience of pleasure” (Waterman, 2008, p. 235), with hedonia originating from the ancient Greek word *hêdonê* or pleasure (Vittersø, 2009). In contrast, ‘eudaimonism’ is often equated with the idea that a good life is achieved by maximizing not all pleasurable, but rather only worthwhile aspects of life (Ryan & Deci, 2001; Tiberius & Mason, 2009). Most prominently, Aristotle (ca. 350 B.C.E./1994) argued that we live a good life when we exercise virtues (i.e., excellences of character that help us use the best within us) and thus, fully realize our human nature (Delle Fave et al., 2011; Huta, 2017; Tiberius & Mason, 2009; Waterman, 2008). He calls this experience eudaimonia, derived from the ancient Greek words *eu* (“good”) and *daimon* (“spirit”; Tiberius & Mason, 2009, p. 352).

Psychologists adopted the distinction between hedonia and eudaimonia—or rather its current interpretation in modern philosophy (see Waterman, 2008)—to differentiate two distinct but overlapping theoretical perspectives on well-being (for overviews, see Delle Fave et al., 2011; Henderson & Knight, 2012; Huta, 2017; Huta & Waterman, 2014; Ryan & Deci, 2001; for a recent debate on the utility of such a distinction, see Kashdan et al., 2008; Waterman, 2008). Hedonic approaches theorize that well-being consists primarily of pleasure, which is often operationalized in terms of intense positive experiences and no or very few negative ones. In contrast, eudaimonic concepts view well-being as more than just pleasure and is presumed to be a multidimensional construct. However, no conceptual agreement has been reached so far about what these dimensions are. For example, Huta and Waterman (2014) and Huta (2017) identified considerable variations in definitions of eudaimonia within the field of positive

psychology. Among the most common elements are personal growth/self-realization, meaning/purpose/value to a broader context, authenticity/autonomy/expressing one's true identity, and excellence/virtues/using the best in oneself. Moreover, these authors differentiate hedonia and eudaimonia at four distinct levels: orientations/motivations (i.e., what a person seeks), behaviors (i.e., what a person does), cognitive or affective experiences (i.e., how well a person feels), and functioning (i.e., how well a person does).

3. Eudaimonia in Media Entertainment and Digital Games Research

The differentiation between hedonic and eudaimonic orientations/motivations and experiences has recently been adopted by entertainment research (Raney, Oliver, & Bartsch, 2019)—particularly in dual-mode conceptualizations of media entertainment (Lewis, Tamborini, & Weber, 2014; Vorderer & Reinecke, 2015). According to these models, people turn to media content for both hedonic (e.g., Zillmann, 1988) and eudaimonic reasons (e.g., Oliver & Raney, 2011). Moreover, using media can result in hedonic as well as eudaimonic entertainment experiences. Hedonic responses have consistently been characterized in terms of pleasure (e.g., Bosshart & Macconi, 1998) or enjoyment (e.g., Vorderer, Klimmt, & Ritterfeld, 2004). In contrast, no definitional consensus has been reached on eudaimonic entertainment experiences. Current conceptualizations include 'appreciation' (i.e., the perception of meaning, the feeling of being moved, and the motivation to elaborate on these thoughts and feelings; see Oliver & Bartsch, 2010) and the experience of 'activating central values,' 'personal growth,' 'relatedness,' 'autonomy,' and 'a purpose in life' (Wirth, Hofer, & Schramm, 2012). More recently, 'self-transcendent media experiences' (i.e., characterized by "interconnectedness, human virtue and altruistic motivations, and spirituality"; see Oliver et al., 2018, p. 384) have been highlighted as a specific type of eudaimonic media experience. Landmann (2021) further suggests that eudaimonia as an emotional response can be associated with internal feeling states or external elicitors (such as music and other forms of media).

Extending this discussion towards digital games research, recent empirical work has found digital games to elicit many of these eudaimonic reactions. One of the foundational studies within media psychology (Oliver et al., 2016) found that nearly three-fourths (71.9%) of participants in their online survey were able to recall recent gaming experiences that were personally meaningful—a term that was left purposely ambiguous so that participants could define the concept for themselves. Relatedly, studies within the field of HCI have examined several digital game experiences described as emotionally moving (Bopp et al., 2016; Bopp, Müller, Aeschbach, Opwis, & Mekler, 2019), emotionally challenging (Bopp, Opwis, & Mekler, 2018), and reflective

(Mekler, Iacovides, & Bopp, 2018; Whitby, Deterding, & Iacovides, 2019)—phenomena conceptually similar to (but not explicitly understood as) eudaimonia.

Moving on from these findings, the aim of the current scoping review is to provide an overview of how different concepts that represent eudaimonia are used or defined in digital games research within various fields (e.g., media psychology, HCI) as well as how these concepts are related to each other. A scoping review approach is especially relevant for the current study, which can be understood as an inductive approach aimed at (a) identifying key concepts in extant literature and then (b) mapping those concepts in a way that demonstrates the breadth and depth of an area of scholarship (Levac, Colquhoun, & O'Brien, 2010; Munn et al., 2018).

4. Review Method

We examined the existing literature on digital games and eudaimonia by performing a forward chaining search (i.e., searching through the records that cited a pre-defined anchor paper [see below] and records in further steps; see Webster & Watson, 2002). All coding files are open access and can be found at OSF (<https://osf.io/q7kdv>). Instead of using specific search terms, the rationale behind the 'anchor paper' approach is that (1) eudaimonia currently lacks clearly definable parameters in games research, and (2) many conceptually relevant works do not explicitly employ the term 'eudaimonia' (e.g., Bopp et al., 2016). Searching for specific terms would therefore be either too narrow (i.e., missing out on relevant concepts or studies) or too broad (i.e., including concepts that are correlates, antecedents, or outcomes of eudaimonia). Using an anchor paper and a forward chaining search leaves room for discovering unknown but relevant concepts.

The literature search started out by choosing an anchor paper for the forward chaining search. We chose Oliver et al. (2016) as our anchor paper because it is among the first to have applied the notion of eudaimonic entertainment (Oliver & Bartsch, 2010) to digital games, and the paper has been widely cited within media psychology, communication, HCI, and other fields (~140 times as of our August 2020 search, according to Google Scholar).

Figure 1 depicts our search and selection procedure, following best practices of scoping reviews with respect to rigor and search transparency (Lockwood, dos Santos, & Pap, 2019). We conducted an initial forward chaining search by using the 'cited by' feature in Google Scholar for the Oliver et al. (2016) paper, as this platform also considers conference papers (e.g., the main publication venues for HCI) missing from other databases. After collecting these records, the lead author performed an initial screening by browsing the title and abstract, including records based on four criteria: (1) records dealing with digital games or interactive game narratives (e.g., gamification and virtual reality in general are excluded),

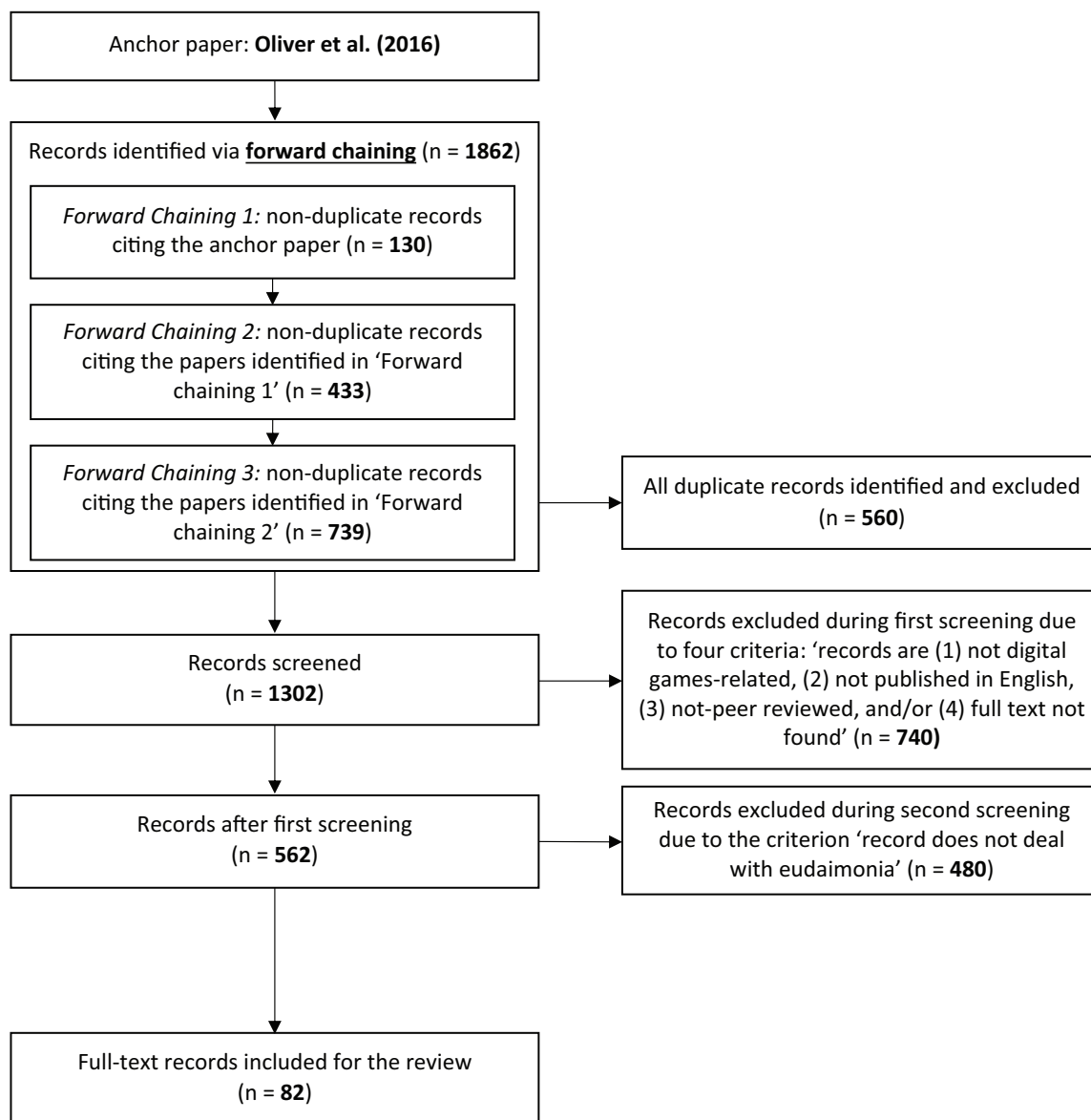


Figure 1. Flow diagram of the record search and inclusion/exclusion process.

(2) publications in English, (3) peer-reviewed publications (including peer-reviewed conference papers, book chapters, and extended abstracts, but excluding dissertations, preprints, and books; e.g., Mortensen & Jørgensen, 2020), and (4) the availability of full texts. We conducted a second forward chaining search on the included records from the first search and performed the same screening procedure. We repeated this process one more time, resulting in three forward chaining searches in total between 6th and 30th August 2020 (noting that forward chaining searches are more time dependent than backward searches; see Hornbæk & Hertzum, 2017). This resulted in 562 remaining records after the first screening using the aforementioned criteria.

Afterwards, a second screening procedure was held to determine which remaining records relate to eudaimonia. To minimize researcher biases in the inclusion and exclusion of records, we involved all four authors

in this screening process. Our 562 records were divided between two coder pairs, who then independently coded each record in terms of whether the record focused on eudaimonia in digital games. As the focus of our analysis was to both (a) synthesize a shared definition of the concepts as well as (b) analyze possible divergence in the concept of eudaimonia, we intentionally did not formalize a strict definition of eudaimonia prior to coding (note that our anchor paper, Oliver et al., 2016, did not strictly operationalize the concept either). Instead, all four authors shared a loose set of coding guidelines (see OSF) based on previous work on eudaimonia (Huta & Waterman, 2014; Oliver & Bartsch, 2010; Oliver et al., 2018; Wirth et al., 2012) as well as coded with their own working notion of eudaimonia in mind. Table 1 (see Supplementary File and OSF) contains the results of this coding, including distribution of codes and interrater reliability statistics. For completeness, we

report Krippendorff's alpha statistics with 10,000 bootstrapped samples (see Hayes & Krippendorff, 2007), noting that for Pair 2 we see a 'paradox of reliability' in that a low overall frequency of inclusion codes (~9%) represents coding invariance and thus, reliability estimates beyond percent agreement are no longer informative (see Krippendorff, 2016). Disagreements ($n = 45$ records, or 8%) were settled through asynchronous group discussion. Our overall pattern suggested robust shared agreement as to what records did and did not concern eudaimonia, and thus we proceeded with our analysis on $n = 82$ records dealing with eudaimonia and digital games (see Figure 1).

To identify broad patterns of eudaimonia-related concepts in digital games research, we first summarized the remaining 82 records broadly following the categories of eudaimonia outlined by Huta and Waterman (2014). These include (a) the name of the concept(s) that are determined as eudaimonic or related to eudaimonia in the record itself, (b) a short description of the concept(s), (c) a justification of why we consider the concept(s) to be eudaimonic, (d) the category or type the concept(s) belong(s) to (i.e., orientation or motives, behaviors, experiences, and functioning or outcomes), (e) the level of measurement of the concept(s) (i.e., trait or state), and (f) potential sub-dimensions of the concept(s). Secondly, we clustered the identified eudaimonia-related concepts with regards to their similarity in terms of the categories (a) to (f) and noted the records referring to those concepts. An overview of these clusters can be found in Table 2 (see Supplementary File and OSF). Finally, we read through our corpus, identified how the records conceptualize the respective eudaimonia-related concepts, and then discussed how these concepts might relate to each other. These patterns were collated by the first author before discussion among the authorship team, with the end goal of uncovering (a) common patterns between different papers and (b) divergence between those patterns. The resulting patterns are presented in Sections 5 and 6, where we refer to reviewed records with reference numbers (e.g., Paper 1 [hereafter P1]; see Supplementary File and OSF for the full list of reviewed records indexed with reference numbers).

5. Results

Most reviewed publications focused on the formation and constitution of eudaimonic experiences in the context of playing digital games. Consequently, studies were more likely to discuss state-based concepts than trait-based orientations or motivations (somewhat deviating from past theorizing, such as Oliver & Raney, 2011). Four broad patterns emerged from our analysis: (1) appreciation as an overarching (yet imprecise) eudaimonic outcome of playing digital games; (2) covariation among meaningful, emotionally moving/challenging, and self-reflective experiences; (3) the unique potential of digital

games to afford eudaimonic social connectedness; and (4) other eudaimonia-related concepts such as nostalgia and well-being. Each is discussed below.

5.1. *Appreciation as an Overarching (Yet Imprecise) Eudaimonic Outcome of Playing Digital Games*

Almost a third of the reviewed publications ($n = 26$ studies) refer to appreciation to describe eudaimonic game experiences, often engaging Oliver and Bartsch's (2010) definition of appreciation as "an audience response: an experiential state that is characterized by the perception of deeper meaning, the feeling of being moved, and the motivation to elaborate on thoughts and feelings inspired by the experience" (p. 76). This is possibly due to several studies using the appreciation questionnaire introduced by Oliver and Bartsch (2010) to quantify the eudaimonic game experience. That said, many works treat appreciation as a primarily overarching concept, with markedly different understandings between papers. For instance, some refer to 'eudaimonic appreciation' (P12, P18, P28, P73) as an outcome of gameplay. Others use the terms appreciation, eudaimonia, and eudaimonic entertainment experiences interchangeably when describing gaming outcomes (P59, P80), with a few suggesting that appreciation is an outcome of having had an (undefined) eudaimonic game experience (P13, P22, P41, P61). Moreover, the reviewed works differ in how they specify game elements eliciting appreciation, which also impacted how those papers conceptualized appreciation itself. Some denote appreciation as an audience response to serious and meaningful content, but also argue that it extends to morally challenging content as games can present players with questions on morality or ethical dilemmas they can think more deeply about (e.g., P73). Appreciation has also been understood in terms of a response to games' artistic qualities (P80) or as players' pleasing aesthetic evaluation of a game's setting, music, and character design (P3, P74). Despite these conceptual differences, most studies in our sample (e.g., P5, P12, P32, P61, P80) understand appreciation as a complementary type of game experience distinct from the hedonic experience of fun or enjoyment. In short, while our review shows that appreciation is often understood as a key component of eudaimonia in digital games research, the review also reveals a lack of precision and consensus regarding its definition.

5.2. *Covariation among Meaningful, Emotionally Moving/Challenging, and Self-Reflective Experiences*

As noted above, appreciation has been commonly operationalized in terms of (a) meaningful, (b) emotionally moving/challenging, and (c) reflective experiences. However, we observed that several works understand these notions as interrelated, yet conceptually distinct. Each is discussed below.

5.2.1. Meaningful Game Experiences

Notions of meaning and meaningfulness were mentioned in almost half of our sample of reviewed papers ($n = 36$ studies). Like appreciation, meaningful experiences were described simply as experiences that go beyond hedonic experiences (e.g., P25, P28, P32, P35) and some manuscripts used meaningfulness interchangeably with eudaimonia and appreciation (P3, P10, P13, P32, P42, P53, P58, P81). Some studies suggested that these meaningful/eudaimonic/appreciation game experiences co-occur with emotionally moving and reflective game moments. For instance, P25 found that adolescent players defined meaningful game experiences as also being emotionally moving and reflective, while P12 defined meaningful game experiences as experiences of poignancy (i.e., a sharp or strong feeling of sadness, sympathy, or sorrow) and reflection. However, these studies de facto confounded potentially separate concepts and experiences.

When described as a separate dimension of eudaimonic game experience, meaningful game experiences were conceptualized in two broad categories: one by which players attach idiosyncratic meaning to in-game experiences more broadly and one by which players make more direct connections between specific in-game experiences and unique out-of-game struggles. For the first category, P62 showed that meaningful experiences result from the fulfillment of eudaimonic needs such as insight into the human condition or understanding of life's truth more broadly—indeed, such an approach has been used by scholars such as P45 as a definition of meaningful games. Such meaningful experiences are filtered through a player's own world, body, and language (P24), and these experiences clarify real-life situations by providing a deeper psychological understanding of everyday situations (P1), emphasizing the connection between the game world and the real world. Alongside this, P77 described meaning as one of the psychosocial consequences of playing digital games, defining meaning as something that resonates with what is important, relevant, or valuable to players in their world broadly. Similarly, P38 and P39 describe meaningful choices in interactive narratives as being emotional, morally ambivalent, and highly personally significant. These studies found that meaningful choices positively affected appreciation of interactive narratives or games. Our anchor paper (Oliver et al., 2016) followed a similar approach in asking participants to recall a self-defined meaningful digital game experience and from this, observing increased evaluations of game narrative quality, feelings of social relatedness and personal insight, and subsequent appreciation of the overall experience.

For the second category, some studies mentioned gaming experiences as meaningful when they provide players with a sense of purpose during uniquely struggling times. For example, individuals who temporarily turn to digital games during difficult life situations men-

tioned that playing provided inter alia a lifeline in times of existential doubt, giving them meaning and more achievable goals both in—and outside of the game (P36). Another study found that playing games is perceived as being a meaningful and purposeful activity for so-called problem gamers, offering a sense of meaning as (a) gaming is integrated into their lifestyles, (b) they belong to a shared community of gamers, and (c) gaming fulfills a purpose in their lives (such as relaxation or challenge; P65). These examples help us understand that game experiences can be defined as meaningful when they provide insight into and connections with players' own lives or when situations in the game can be applied to real-life situations (P17, P25, P48).

5.2.2. Emotionally Moving and Emotionally Challenging Game Experiences

Another dimension of eudaimonic game experiences mentioned in $n = 9$ studies referred to emotionally moving or challenging game experiences. Both were broadly understood as situations in which a player reacts with strong emotions to a focal in-game event. Thus, while meaningfulness was mostly conceptualized in the reviewed papers as an experience in which players make primarily 'cognitive' connections between the game and 'out-of-game' elements from their own lives (see Section 5.2.1), being emotionally moved or challenged was understood first and foremost as 'affective' responses to 'in-game' elements. The feeling of being moved was mostly defined in the reviewed works as a gaming experience often characterized by intense negative or mixed affective responses, that is, players experience positive and negative emotions at the same time (e.g., P5, P6). Various elicitors of such emotional experiences have been identified (P5, P6, P25): the narration (e.g., story twists), in-game characters (e.g., personal transitions, loss), aesthetic elements of the game (e.g., soundtrack), and having to make difficult in-game decisions (this one is more associated with emotional challenges, see below). Being emotionally moved or experiencing mixed-affective responses was regarded as an important characteristic of eudaimonia in games by various authors (P6, P22, P25). Moreover, P5 found that emotionally moving game episodes score high on appreciation, and both P5 and P6 suggest a close relationship of the concept to self-reflection and the experience of meaningfulness.

The notion of emotional challenge (originally coined by Cole, Cairns, & Gillies, 2015) was presented by Denisova, Guckelsberger, and Zende (2017) as a distinct type of gaming experience "which confronts players with emotionally salient material or the use of strong characters, and a captivating story" (p. 2513). They also mentioned that emotional challenges cannot be overcome through players' skill or dexterity, but by resolving tension built up in the narrative, by identifying with game characters, and by emotionally exploring, understanding, and resolving ambiguity (see also Cole et al.,

2015). As such, emotional challenge as defined in the extant digital games research that we reviewed resembles Bartsch and Hartmann's (2017) notion of affective and cognitive challenge in non-interactive media. Multiple studies in our review demonstrated that emotional challenges manifested among players by immersing them into the narrative and confronting them with difficult themes (e.g., death, illness, and domestic problems; social issues such as racism and torture; narratives mirroring instances of players' own lives), difficult decisions or moral dilemmas (e.g., with ambiguous consequences or undesirable options), and dealing with intense emotions (P8, P27, P30). Moreover, P8 found that emotional challenges were appreciated significantly more by players, compared to non-emotional challenges, implicitly characterizing this type of experience as eudaimonic. Similarly, P22 explicitly connected emotional challenge to eudaimonic experiences from playing digital games, and P55 and P56 found that emotionally challenging game scenarios in virtual reality scored significantly higher on appreciation.

5.2.3. Self-Reflective Game Experiences

A third type of eudaimonic experience often discussed in $n = 30$ reviewed papers can be classified as self-reflective experiences. Unlike meaningful experiences (in which players affixed personal meaning toward in-game elements) and emotionally moving or challenging experiences (in which players labored with complex emotional situations), self-reflective game experiences are those in which players contemplate and try to understand themselves. Broadly speaking, research on self-reflective game experiences does suggest that more profound, long-lasting, and out-of-game transformative reflections are less common than might be expected (P51, P79), as players tended towards reflections more proximal to gameplay. That said, two patterns of self-reflective game experiences did emerge in our analysis: (1) perspective-taking for empathy, and (2) personal growth and development.

Numerous studies focused on how players responded to being placed 'in the shoes' of a variety of experiences that aim to encourage empathy. For example, adolescent players in P25 discussed reflecting on their role as a young cancer patient in *That Dragon, Cancer*. P54 discussed the potential for games to trigger both perspective-taking and empathic concern (i.e., subconscious affective responses to another's emotional state), showing that both processes encourage players towards increased feelings of altruism and other-oriented emotions—feelings commonly linked with eudaimonia (Oliver et al., 2018). Other-oriented empathy was also a central focus of digital games dealing with victims of the Fukushima nuclear disaster in 2011 (P42) and war refugees (P70). P26 found that historic warfare games that incorporated the perspectives of many actors (including perpetrators, victims, and bystanders) promoted reflective and thought-provoking experiences

among players. Broadly speaking, P30 explained that 'intentionally uncomfortable game experiences' (i.e., experiences that cause a degree of suffering to the user while also providing hedonic and eudaimonic benefits) encourage reflection on broader social issues that might be otherwise inaccessible to most players (and their personal experiences). Although not specifically attached to uncomfortable issues or content, scholarship from P19 and P53 introduced 'poetic gameplay' as a form of intentional disruptive gameplay in which players' established expectations regarding the 'form' of a digital game (e.g., gameplay mechanics, controls) are intentionally broken as a mechanism for altering players' relationships with the digital game, which can encourage more reflection on the overall game experience.

Self-reflective game experiences also encouraged personal growth among players. For example, P36 found that playing games in personally troubling times can stimulate personal change and growth by helping players develop confidence and motivation while playing and then encouraging players to transfer these new-found strengths to other areas of their daily life. Notably, personal growth was also found even in players who had self-reflective experiences absent of a focal trouble or struggle. For example, online gaming experiences can improve players' self-confidence leading to personal growth (P1) and games promoting moral decision-making skills may lead to moral growth by increasing players' moral reasoning and competence (P33, P68).

5.3. *The Unique Potential of Digital Games to Afford Eudaimonic Social Connectedness*

Another set of studies ($n = 17$) highlighted social connectedness as a eudaimonic experience which digital games may be uniquely suited to evoke. While the covariation of the three aforementioned concepts in Section 5.2 has been historically subsumed under appreciation (Oliver & Bartsch, 2010), studies discussed here identified social connectedness as being conceptually related to (but not covarying with) appreciation, and which seems unique to digital games. Several different concepts were used as synonyms for social connectedness, including socializing (P17), connection with others (P16, P49), social connection (P36), togetherness (P44), relatedness (P49, P75), closeness (P14), and character attachment (P7, P12, P14). However, few of these concepts have been explicitly linked to eudaimonia, which may suggest that social game experiences are not eudaimonic per se. That said, papers that did relate socially connecting game experiences to eudaimonia (e.g., P25) focused on the connection between players and either other human players or other in-game characters.

5.3.1. Connecting with Other Humans

Unsurprisingly given the rich social history of digital games (Bowman, Weber, Tamborini, & Sherry, 2013), a

prominent form of social connectedness discussed in the reviewed papers focusses on other players. In their online survey study, P45 found that having stronger eudaimonic game experiences was predicted by a higher satisfaction of relatedness needs (i.e., the need to connect with others and experience caring for them), among other variables. P25 reported that adolescent players mentioned socially connecting experiences as eudaimonic. These claims are in line with patterns reported in our anchor paper, with the need for relatedness emerging as a significant predictor of eudaimonic appreciation in Oliver et al. (2016).

Some studies in our analysis focused more specifically on individuals seeking social connectedness when dealing with difficult life situations (P16, P36). For example, P36 found that these people turn to games because they can meet individuals with a shared interest in gaming, which provides a sense of belonging through meaningful social connections. The players also mentioned that they could engage with others this way without having to discuss their difficulties, providing an additional form of support. Studies on military combat veterans (P17) and children with cystic fibrosis (P49) provided further evidence that social connectedness in digital games could improve eudaimonic well-being (also see Section 5.4).

5.3.2. Connecting with Game Characters

Moreover, some papers in our review also discussed relationships between the player and the playable character as well as with other non-playable characters (NPCs) as eudaimonic experiences (P11, P12, P72). For example, P12 showed that an increased identification with and responsibility for the playable character (two aspects of the ‘character attachment’ construct) were positively associated with eudaimonic appreciation. Moreover, P11 found that players who engage with their avatars as social companions (referred to as an ‘Avatar as Other’ orientation in Banks, 2015), tend to do so in ways that can be understood as eudaimonic. These players respond to their avatar as if it were an authentic and differentiated social agent. Players deemed these relationships as eudaimonic when they were experienced as a source of personal power or when they served as vehicles for learning about themselves. Thus, these relationships seem to be linked to eudaimonia and reflective game experiences. Socially connecting experiences can also be described as meaningful interactions with NPCs, especially when NPCs receive humanizing characteristics (e.g., moral ambivalence, emotionality, and imperfections; see P21).

5.4. Other Eudaimonia-Related Concepts

Finally, we address concepts uncovered in our analysis that may be characterized as eudaimonic, but are conceptually distinct from those presented above. First, P32

categorized ‘nostalgia’ as an emotional and cognitive state where individuals have fond and bittersweet recollections of both close others and events in their life, suggesting a relation to meaningful, emotionally moving, reflective, and socially connecting eudaimonic experiences (see also P81, P82). Similarly, P25 briefly mentioned nostalgia in their study as one of the emotionally moving game experiences that adolescents defined as eudaimonic. P80 provided further evidence for this relationship by showing how nostalgia, elicited by playing the game Pokémon GO, is (a) a meaningful aspect that fuels players’ desire to play the game and (b) a mediating experience that leads to the eudaimonic response of appreciation after playing the game.

Several studies ($n = 8$) mentioned the notion of ‘eudaimonic well-being.’ Unlike the aforementioned experiential concepts in this review, well-being has often been categorized in terms of ‘functioning’ (see Huta & Waterman, 2014). The reviewed studies used both psychological and eudaimonic well-being as interchangeable concepts to describe “how well a person is doing” (Huta, 2017, p. 14) in terms of self-acceptance, positive relationships, purpose in life, personal growth, and improving confidence (P17, P61, P67). This concept has also been found as an outcome to nostalgic game experiences (P80, P81) and both meaningful and socially connecting experiences (P17). Finally, P66 suggested the term ‘syndaimonics’ (i.e., the synergy between social context and positive mental flourishing) as a similar concept for eudaimonic well-being.

Several other concepts were mentioned in one or very few studies in our review. For example, a study on the abstract and experiential representation of depression and anxiety in digital games used the concept of ‘emotional resonance’ to describe a form of education that builds appreciation and understanding for other’s experiences (e.g., empathy), and can engage players in self-reflection (P58). Hence, the concept seems to be related to reflective game experiences (also see Section 5.2.3). ‘Self-transcendence’ is another concept often presented as a specific form of eudaimonia (Oliver et al., 2018). In a study of cancer survivors, P23 found that digital games could support self-transcendence by encouraging feelings of helpfulness (i.e., preservation and enhancement of the welfare of people around us) and universalism (i.e., understanding, appreciation, tolerance, and protection for the welfare of all people and for nature). ‘Elevation,’ understood as an uplifting and heartwarming emotional state as a response to often unexpected acts of kindness, (moral) virtue, altruism, and so forth (Ellithorpe, Ewoldsen, & Oliver, 2015) and commonly defined as a self-transcendent emotion (Shiota, Thrash, Danvers, & Dombrowski, 2014), is another eudaimonic concept that has received scant attention in gaming work. In this review, only P25 studied elevation, finding increased elevation among adolescent gamers both when they saw an NPC assist their own character and when making moral in-game decisions.

6. Advancing Research on Eudaimonia in Digital Games

The present review indicates that eudaimonia has mostly been considered as an experiential state in digital game research. Appreciation seems to play a central role in this regard. In line with Oliver and Bartsch's (2010) notion of the concept—which was originally developed in the context of movie reception—digital game appreciation was often and closely connected to meaningful, emotionally moving/challenging, and self-reflective experiences in the reviewed research. We note that this finding is somewhat unsurprising, given our use of Oliver et al. (2016) as anchor paper. Moreover, we acknowledge that our approach eschewed relevant works that do not originate in or even predate Oliver et al. (2016), for instance research on positive discomfort in games (Jørgensen, 2016), queer studies scholarship on 'no-fun' emotions (Ruberg, 2015), existential game design (Rusch & Phelps, 2020), and ethnographic accounts of individual and collective identity formation in online games (Nardi, 2010).

Our review also suggests that eudaimonic gaming experiences entail other facets, particularly social connections, nostalgia, elevation or self-transcendence. Of course, many of these experiences (e.g., meaningful, emotionally moving, self-reflective, nostalgic experiences) are not unique to digital games, although it is relevant to note that digital games are capable of triggering eudaimonia, especially given the historical perspective towards the medium as being restricted to hedonia (Bowman, 2019; Ivory, 2015). That said, the current study makes a critical contribution to eudaimonia research by further specifying game-specific elements that contribute to and shape the experience, thus expanding the conceptual space of eudaimonia. That is, many of our themes suggest that the interactivity afforded by digital games uniquely contributes to eudaimonia and shapes the resulting experience—for example, the role of the player as an active agent in media choice-making (P38, P39) and unique elements of entrained social interaction (P16, P25, P36) that are not possible with non-interactive media. Additionally, the notion of emotional challenge (P8, P22, P56) is presently not addressed in accounts of eudaimonic emotion (Landmann, 2021). To this end, understanding how eudaimonic constructs in digital games research are conceptualized therefore contributes to the larger body of research on eudaimonic entertainment research, as "studying video games also proved to be a promising path to extend established theories of media entertainment" (Klimmt & Possler, 2019, p. 343).

However, our findings do raise questions as to how different types of experiences found in this review are related. Are some of these concepts cognitive or emotional response states to digital game use that can be understood as mediators for other experiential eudaimonic media effects (for a distinction between mediating response states and effects, see Valkenburg & Peter, 2013)? For example, is the experience of deep social

connections an outcome of gaming which can fuel the perception of meaning? Is there a minimum number of eudaimonic experiences required for players to consider a game impactful or appreciable in a eudaimonic sense? We believe that these are important empirical questions that digital game research needs to address next in order to gain an advanced understanding of the various, relevant dimensions reviewed above.

Additionally, our review revealed the need for an integrative theoretical model that structures the various strands of research and identified concepts. From our analysis, appreciation (Oliver & Bartsch, 2010) might provide a common starting point, but the construct also seems to subsume interrelated-yet-distinct concepts (i.e., meaningfulness, feeling moved, self-reflection). Moreover, it does not account for all dimensions of eudaimonia discussed to this point. Vorderer et al. (2004) model on the formation of hedonic entertainment experiences may be a helpful template in this regard. Such a model would also benefit from a strong recourse to the philosophical and psychological roots of the distinction between hedonia and eudaimonia (see Section 2) in order to make sure that 'eudaimonic experiences' are not simply an overarching category representing every non-hedonic game response (see Kashdan et al., 2008). At the same time, our review points to the need of adapting these basic conceptualizations of eudaimonia to the gaming context. For example, while growth and excellence play an important role for eudaimonia in general (Huta & Waterman, 2014; Waterman, 2008), our review suggests that not all challenges of players' skill and resulting mastery experiences in digital games are eudaimonically relevant (see Section 5.2.2).

Finally, our review revealed that some eudaimonic concepts identified in the context of other media (mostly movies) received little interest in digital games research so far: (1) 'eudaimonic motivations' and (2) 'self-transcendent experiences.' The former was only mentioned in four studies in our review (P2, P43, P59, P80). For example, P59 adapted a measure on trait-like preferences for hedonic and eudaimonic movie entertainment (Oliver & Raney, 2011) to investigate how these motivations affect players' entertainment response to a given game. The relative neglect of eudaimonic motivations in the reviewed literature is remarkable given the large amount of research on player motivations in general (for an overview, see Klimmt & Possler, 2019). One explanation may lie in the relative infancy of research on eudaimonia in the context of digital games. However, it is also plausible that players do not specifically turn to games in the search for meaning, personal growth or being moved, but are rather primarily motivated by experiencing pleasure. Hence, eudaimonic experiences may be states that players 'happen to find' while being 'on the road to fun' (Possler et al., 2020). Additionally, only two studies in our review dealt with self-transcendent experiences and related emotions such as elevation (P23, P25). This is revealing given that self-transcendent media

experiences in general (Oliver et al., 2018) and elevation in specific (Ellithorpe et al., 2015) have attracted considerable scholarly attention in the context of movies and social online media, as they are considered prime examples of eudaimonic media reactions (Janicke-Bowles, Bartsch, Oliver, & Raney, 2021). Moreover, initial theoretical and empirical work on self-transcendent emotions like awe and elevation has revealed that these experiences can be elicited by games and are strongly related to eudaimonic concepts discussed in this review such as appreciation, meaningfulness, and reflection (Daneels et al., 2020; Possler et al., 2018, 2019). We believe that empirical work on these two concepts could make an important contribution to our understanding of eudaimonia in the context of digital games. Additionally, future work should examine whether eudaimonic concepts already identified in the gaming literature and discussed in this review can be placed on a continuum “with self-related, egoic gratifications on one end, and self-transcendent experiences on the other” (Oliver et al., 2018, p. 384). An in-depth investigation of self-transcendent responses would further help untangle the meaning of altruism and prosociality, as these two concepts are almost absent from the work examined (P69, P70, P71), but have been intensely discussed in the literature on self-transcendent media experiences (e.g., Oliver et al., 2018). Further exploration of self-transcendence in the context of digital games therefore promises insights into how games cannot only evoke eudaimonic experiences, but also impact (prosocial) real-life behavior (for example, by motivating people to help others).

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Conflict of Interests

The authors declare no conflict of interests.

Supplementary Material

Supplementary material for this article is available online in the format provided by the authors. All coding and data files can also be found at OSF (<https://osf.io/q7kdv/>).

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