Age Differences in Nonhedonic Entertainment Experiences

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This article examines age differences in nonhedonic (eudaimonic) entertainment experiences. Results of an experimental study comparing younger adults aged 18 to 28 years (n = 84) with older adults aged 62 to 87 years (n = 65) who watched either a sad or a happy version of a meaningful film show that generally, older viewers reported higher levels of eudaimonic entertainment than younger participants. Furthermore, among older participants, eudaimonic entertainment experiences during the film were associated with positive affect and mixed emotions. This study further develops our understanding of nonhedonic entertainment experiences. Implications for other research areas are discussed.

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Older adults typically value emotional goals, emotional meaningful relationships, and meaningful goals in life more than younger adults (Carstensen, Fung, & Charles, 2003; Carstensen, Isaacowitz, & Charles, 1999; Charles & Carstensen, 2010). Emotional, cognitive, and motivational development over the life span also manifest in both media selection and effects (Mares, Oliver, & Cantor, 2008; Mares & Sun, 2010; Mares & Woodard, 2006). Accordingly, recent research has begun to examine the development of entertainment motivations over the life span (Bartsch, 2012; Mares & Sun, 2010; Mares et al., 2008). Older adults, for instance, are more interested in contemplative and emotionally meaningful entertainment than younger adults. However, it is not only media preferences that change during a lifetime, but also the way older people experience mediated episodes. Yet, only very few studies have examined age differences in experiences during movie reception (but see Bartsch, 2012; Charles, 2005). Bartsch (2012) emphasizes the importance of understanding entertainment gratifications of older people, as this group is likely to spend a growing amount of time with entertainment media (Mares & Woodard, 2006). In addition, research has tended to overlook nonhedonic (so-called eudaimonic) types of entertainment experiences that are linked to perceptions of meaningfulness,

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to contemplation about existential questions, to valuable and important aspects of life or the human condition (cf. Oliver & Bartsch, 2010; Oliver & Hartmann, 2010; Wirth, Hofer, & Schramm, 2012). Such experiences and the media offerings likely to elicit such feelings are a source of emotional and personal meaning that is especially valuable for older adults because they can help cope with the imminent end of life and thereby increase well-being. In two studies, Wirth et al. (2012) conceptually introduced and empirically tested the notion of eudaimonic entertainment experiences. The authors point out a need for additional studies that examine the role of moderator variables in eudaimonic entertainment such as age. Following Oliver and Hartmann (2010), they ask whether the strength of eudaimonic experiences changes across the life span. Similarly, Bartsch (2012) calls for a more “in-depth consideration of entertainment gratifications” (p. 605) of both younger and older adults in order to better understand the functions of entertainment media. Therefore, this study aims to extend recent research by examining the effects of age on these more complex, nonhedonic entertainment experiences, namely eudaimonic entertainment experiences. The study draws both on theories of adult emotional and social development (Arnett, 2007; Carstensen et al., 1999; Labouvie-Vief, 2003) and on theories of eudaimonic well-being (Ryan & Deci, 2001; Ryff & Singer, 2008; Waterman, 2008).

Eudaimonia and eudaimonic entertainment experiences

The term *eudaimonia* has its root in Aristotelian philosophy and deals with human potentials and virtues and a life according to one’s values and one’s true potentials (Aristotle, Rowe, & Broadie, 2002; for a thorough review of the concept see Ryff & Singer, 2008). Positive psychology applied these concepts in order to grasp optimal human psychological functioning (cf. Kashdan, Biswas-Diener, & King, 2008). In order to capture key features of human well-being, Ryff (1989; see also Ryff & Keyes, 1995) presents a multidimensional model of eudaimonic (or psychological) well-being. Each dimension taps different aspects of positive psychological functioning. Relatedness, for instance, involves the strengths and delights derived from close contact with others (Ryff & Singer, 2008).

The notion of eudaimonia has also been applied within entertainment research. Oliver and Raney (2011) present evidence that movie selection is driven not only by pleasure-seeking concerns (or hedonic motivations), but also by a desire for deeper insight into human existence and meaningfulness (or eudaimonic motivations). From a process-based point of view, Oliver and Bartsch (2010) introduce the concept of *appreciation*, which is defined as “the perception of deeper meaning, the feeling of being moved, and the motivation to elaborate on thoughts and feelings inspired by the experience” (Oliver & Bartsch, 2010, p. 76). This nonhedonic gratification is conceptualized in terms of cognitive and mixed affective blends and associated with contemplativeness and reflectiveness. In a similar vein, Oliver and Hartmann (2010) provide a closer look at *meaningful cinematic experiences* that encourage sensitivity
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to the values of human existence, human relationships, and human virtue. Finally, Wirth et al. (2012) introduced the notion of eudaimonic entertainment experiences—a concept highly comparable with appreciation and meaningful cinematic experiences. However, taking the aforementioned multidimensionality of eudaimonic well-being into account (e.g., Ryan & Deci, 2001; Ryff & Singer, 2006), Wirth et al. (2012) applied the notion of eudaimonic well-being to entertainment experiences that are beyond mere pleasure. They found eudaimonic entertainment experience to be a multidimensional construct consisting of five dimensions: (a) relatedness, (b) activation of central values, (c) competence/personal growth, (d) purpose in life/self-acceptance, and (e) autonomy.

During reception of a movie depicting the poignancies of human life, one might feel certain relatedness with the characters of the film. That is, it can be gratifying to feel connected with the depicted character. This state is comparable with what Oliver (2008) called tender affective states that are “associated with human connectedness” (p. 44), although these states do not have a specific target. According to Wirth et al. (2012), relatedness comprises close cognitive and affective affinity to others which, finally, is experienced as gratifying.

The second dimension, activation of central values, is characterized as a positive state that arises when the depicted story or a character’s actions meet the onlooker’s values. This dimension of eudaimonic entertainment is closely related to the emotional state of elevation—a positive emotional reaction to “human excellence” (Algoe & Haidt, 2009, p. 107). This emotional reaction can be based on an evaluation by so-called moral modules (harm/care, fairness, loyalty, authority, and purity, cf. Tamborini, 2011). We will discuss this below in more detail.

Besides activating central values, sad but meaningful films also elicit feelings of competence/personal growth (Tamborini et al., 2011; Wirth et al., 2012). These states occur whenever cognitive or emotional challenges imposed by a media offering are successfully mastered (Grodal, 2007). Besides competence/personal growth that is conceived as a process that is rather an evaluation of the reception process, an additional experience—autonomy—is conceived as a part of eudaimonic entertainment. Autonomy is rather the result of reflections on one’s own life in relation to the respective character’s life (Wirth et al., 2012). That is, one can experience a sense of volition and willingness leading his or her own life compared to the arduous or even life-threatening situation of a character.

Similarly, the dimension purpose in life/self-acceptance also is closer to the onlooker’s life although it is elicited by the respective meaningful film. More precisely, meaningful films can lead to the conviction that one’s own life (compared to the life of a character of a film) or life in general has value; this belief, in turn, is likely to lead to an enhanced acceptance of oneself (for a discussion of the five dimensions, cf. Wirth et al., 2012).

It has to be mentioned that eudaimonic entertainment is conceived as an experience that is elicited by a media offering and the onlooker’s interaction with it. It encompasses both an evaluation of the life of the depicted character and an
evaluation of one’s own life in relation with the character’s life (Wirth et al., 2012). Thus, both properties of the stimulus and also properties of the viewer play a major role in determining the experience.

**Age differences in emotional experiences and entertainment**

Theory and research are inconsistent with respect to age differences in eudaimonic versus hedonistic emotional experiences. Support for age-related increases in eudaimonic emotional experiences comes from the *socioemotional selectivity theory* (SST; Carstensen et al., 1999, 2003; Charles & Carstensen, 2010). Briefly, this theory assumes that older age is inextricably linked to an increased focus on emotional goals and information (Carstensen et al., 2003). With older age, more present-oriented goals (i.e., emotional meaning and antecedent-focused emotion regulation) become more important, as the conclusion of the appraisal process is that time is limited (Carstensen et al., 1999). People approaching the ultimate ending (i.e., death) are searching for existential meaning in life and focus more on complex and meaningful positive experiences (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000). Additionally, SST also suggests that with older age the appreciation of life as a fragile gift as well as the importance of close social relationships and life satisfaction increase (Carstensen et al., 1999). Also, older people pay more attention to positive than to negative information either with hindsight or with regard to the moment (the so-called *positivity effect*; Mather & Carstensen, 2005; Urry & Gross, 2010). In contrast, in younger people, whose future is relatively expansive, more future-oriented goals such as information-seeking are important. As a result, younger adults exhibit more exploratory behaviors that also may entail negative emotions or even risky behavior (Arnett, 2007).

In contrast, the *dynamic integration theory* (DIT; Labouvie-Vief, 2003; Labouvie-Vief & Medler, 2002) predicts age-related increases in hedonic emotional experiences. This theory suggests that older adults—despite a decline of adaptive abilities, such as deteriorating health or declining cognitive abilities—are better able to optimize their affect, that is, to enhance positive emotions and to dampen negative emotions. As a result, older adults maintain levels of hedonic well-being that are similar to or even higher than those of younger adults. Thus, DIT regards older adults as hedonically motivated emotion optimizers (Labouvie-Vief & Medler, 2002).

In summary, SST and DIT are somewhat contradictory in their prediction of emotional complexity in old age and eudaimonic and hedonic experiences, respectively. Whereas the former treat older adults as rather eudaimonically motivated, the latter conceived them as rather hedonistic. However, research in entertainment preferences seems to favor the perspective of the SST. Oliver and Raney (2011), for instance, did find modest increases in eudaimonic motivations with increasing age. Similarly, Mares et al. (2008) found that, compared to middle-aged and younger participants, older people showed significantly higher preferences for heartwarming and emotional films whereas younger people preferred funny (i.e., comedies),
sad, and dark films. In a recent study by Bartsch (2012), older adults were more motivated to seek entertainment gratifications that are related to social and emotional meaningfulness and contemplativeness than younger adults. Within older viewers, contemplative gratifications were the most important aspects whereas fear- and sadness-related gratifications were least important.

Meaningful cinematic experiences

A central feature of films that provide the aforementioned contemplative gratifications is their potential to provide meaning or simply their meaningfulness. However, one might argue that the terms meaning and meaningfulness are not yet well defined in entertainment research. There are several definitions of the word “meaning” (Park & Folkman, 1996). On the most basic level, meaning is the connection between at least two entities that is established not on the basis of the entities themselves, but by the perceiving mind (Baumeister & Vohs, 2002). However, this rather basic definition of meaning does not necessarily come to mind when one considers meaningfulness. Park and Folkman (1996) used the concept of meaning in the context of stress and coping: According to the authors, “[ . . . ] meaning refers to perceptions of significance” (p. 116). They distinguish between two levels of meaning: global meaning, defined as a person’s “basic goals and fundamental assumptions, beliefs, and expectations about the world” (p. 116) and situational meaning, which is “[ . . . ] the meaning that is formed in the interaction between a person’s global meaning and the circumstances of a particular person-environment transaction” (p. 116). According to Baumeister (1991; also see Baumeister & Vohs, 2002) meaning is contingent upon the satisfaction of four needs. The first is a need for purpose; people want to interpret events as being purposive. The second is a need for value and justification. The third is a need for efficacy. The fourth is a need for self-worth. Extending this framework, Baumeister and Leary (1995) mention the need to belong. These five needs correspond well with the five aforementioned dimensions of eudaimonic entertainment. Satisfying all those needs finally leads to perceived meaning that can also be achieved by watching a meaningful film, if the film focuses “[ . . . ] to a greater extent on questions of human moral virtues, it demonstrates such virtues (or ramifications of the lack thereof), it teaches or inspires insight into these virtues, or it causes viewers to contemplate them and what it means to live a ‘just’ or ‘true’ life” (Oliver & Bartsch, 2011, p. 31). Thus, meaningful entertainment offerings can teach onlookers about culturally grown values, about the importance of human relationships or inner beauty, and ultimately about the meaning of life. As a result, viewers undergo so-called meaningful cinematic experiences (Oliver & Hartmann, 2010). These experiences occur whenever onlookers can make connections between their own lives and the lives of the depicted characters or the portrayed situations. These connections can be made on multiple dimensions. A viewer may, for instance, compare one’s own autonomously led life with the life of a certain character or feel a certain connection with this character. A multidimensional conceptualization of eudaimonic entertainment can grasp these connections in a
detailed manner. Taking these considerations and the abovementioned results of life span developmental studies into account, one might argue that because older adults are more interested in meaningful experiences than younger adults (cf. Bartsch, 2012; Mares et al., 2008) older adults also experience higher levels of eudaimonic entertainment. Therefore, we hypothesize that given a meaningful film, older adults experience higher levels of eudaimonic entertainment than younger adults (H1).

Age differences in multidimensional eudaimonic entertainment

Relatedness is both the need and the feeling of being connected with and loved by other people (Baumeister & Leary, 1995). According to SST, the need for social relatedness increases with age. Therefore, older adults, in consonance with their focus on emotionally meaningful goals, prioritize the maintenance of high-quality relationships (Carstensen et al., 2003). Applied to media exposure situations, relatedness means the feeling of being connected with the character(s) of a film that often goes along with so-called tender affective states (Oliver, 2008; Wirth et al., 2012). Thus, given a meaningful film, older adults are more likely to experience this dimension of eudaimonic entertainment than younger adults. That is, the higher need for meaningful connectedness among older adults could also manifest itself in a mediated context. Furthermore, there is evidence that older age is associated with shifts in affiliative emotions and greater concern for others (Richter & Kunzman, 2011; Sze, Gyurak, Goodkind, & Levenson, 2012). Therefore, we assume that older adults feel more connected to the character in a meaningful film and thus report higher levels of relatedness with that character than younger adults (H2).

According to Oliver and Hartmann (2010), meaningful films often depict central values of life or what it means to lead a good life in accordance with one’s values and ultimately how life should be (Waterman, 2008). Such values may consist of moral behaviors exerted by the character of a film that in turn activate certain values in the onlooker. Tamborini (2011) suggested a similar idea, arguing that character actions are evaluated on five different moral modules (harm/care, fairness, loyalty, authority, and purity). These modules are considered as “innate, synaptic connections” and “combine past experiences and emotion” (Tamborini, 2011, p. 40). Consequently, in most cases, these modules are activated in an automatic and intuitive rather than in a rational and effortful manner (Haidt, 2001). A character exerting or a story portraying moral behavior may activate these moral modules and, finally, encourage viewers to contemplate life’s meaning and inspire insight (cf. Tamborini, 2011). Furthermore, research has shown that values and orientations, such as family values, are more stable and more pronounced in older age (e.g., Blanchard-Fields, Hertzog, Stein, & Pak, 2001).

Another line of research repeatedly found that whereas fluid intelligence (i.e., the capacity to solve problems in novel situations or think logically) tends to decrease as age increases, crystalline intelligence (i.e. knowledge structures acquired over life time) tends to increase with age (e.g., Lindenberger, Mayr, & Kliegl, 1993). Thus,
one might assume that among older individuals, the development of moral modules that are also part of one’s knowledge structures is more pronounced and also more stable than among younger individuals. Therefore, we assume that given a cinematic portrayal that delivers central human values such as fairness, loyalty, or purity, older viewers experience the activation of central values to a greater extent than younger viewers (H3).

The dimension competence/personal growth of eudaimonic entertainment combines two dimensions of eudaimonic well-being, namely competence and personal growth. Research in eudaimonic well-being has shown that with older age, the experience of personal growth is decreasing (Ryff, 1989; Ryff & Singer, 2008). There is also evidence that the mental and physical changes associated with aging lead to a feeling of incompetence and reduced self-determination (Vallerand, O’Connor, & Hamel, 1995). On the other hand, given their increased ability to adapt their goals, older adults are likely to exert similar or even higher levels of perceived competence than younger adults (Carstensen et al., 2003). Moreover, in terms of eudaimonic entertainment, one has to take into account the mediated nature of the experience. Vorderer (2001), for instance, suggested that entertainment could be conceived as play providing viewers with experiences that ultimately help them to cope with the difficulties and challenges of their own lives (cf. Bauer, McAdams, & Pals, 2008). Accordingly, media exposure has been shown to have mood repairing and recreational effects (Reinecke et al., 2012). Thus, we assume that older adults, compared to younger adults, experience higher levels of competence/personal growth (H4).

Fourth, the dimension purpose in life/self-acceptance is defined as the activation of a belief that compared with a character of a sad, but meaningful film, one’s life has value. It has been repeatedly shown that self-acceptance increases with age (Erikson, 1980; Ryff & Singer, 2008). At the same time, SST posits that a sense of limited time leads to a need for a deeper meaning in life (Charles & Carstensen, 2010) and a tendency to remember more positive than negative and more emotionally meaningful events in their life than younger adults do (Carstensen et al., 2003; Mather & Carstensen, 2005). Therefore, it is suggestive to assume that given a poignant but meaningful film, this dimension of eudaimonic entertainment is more pronounced in older than in younger adults. Furthermore, it could also be interpreted as a social downward comparison with the respective film character (Mares & Cantor, 1992; Wirth et al., 2012). According to Carstensen et al. (2003), older adults engage more in downward than upward social comparison. Therefore, we hypothesize that older viewers experience purpose in life/self-acceptance to a greater extent than younger viewers (H5).

Finally, a similar argument applies to the eudaimonic entertainment dimension of autonomy: In motivational terms, the need for autonomy is a central aspect of people’s well-being (Kasser & Ryan, 1999; Ryan & Deci, 2001; Ryff, 1989). The fulfillment of this need is especially salient for elderly people (Kasser & Ryan, 1999; Langer & Rodin, 1976). However, in terms of eudaimonic entertainment, autonomy is conceived as a feeling of being in charge of one’s own life compared to the character
of a poignant movie (Wirth et al., 2012). Taking the positivity effect into account (i.e., a strategic process that leads older people to experience or to focus on more positive and fewer negative emotions and memories than younger adults; Mather & Carstensen, 2005), we argue that this positivity bias also exists during or after media exposure. In other words, older people should report more perceived autonomy than a younger comparison group after having watched a movie where the character is not well. This argument is in line with the fact that older people tend to engage more in downward than in upward comparison that, in turn, serves emotion regulation and ultimately a feeling of control (Heckhausen & Schulz, 1995). Therefore, we hypothesize that given a sad but meaningful film where the protagonist suffers, older adults experience higher levels of autonomy than younger adults do (H6).

Sad but meaningful films often elicit sadness but also mixed emotional experience. One example of such mixed-affect—the emotional state of poignancy—“results from appreciating the fragility of life” (Ersner-Hershfield, Mikels, Sullivan, & Carstensen, 2008, p. 159). Oliver and Raney (2011) could show that eudaimonic film preferences that entail motivations for deeper insights and contemplations of life profundities were associated with poignancy. Along with older persons’ higher need for meaningful emotional experiences and also with their improved ability to integrate both negative and positive experiences into their lives (also during viewing situations), this relationship should be stronger with increasing age. Thus, the association between dimensions of eudaimonic entertainment and mixed-affect are stronger among older people than among younger people. (H7).

The role of film endings
As mentioned above, eudaimonic entertainment is considered as resulting from both properties of the stimulus and the onlooker’s interaction with it. Thus, stimulus properties might also contribute to an increase or a decrease in eudaimonic entertainment. However, Wirth et al. (2012) found no differences in neither subdimension with regard to the ending (happy end vs. sad end) of the stimulus. One reason for this might be that the two experimental groups were fairly homogenous with regard to age. The film’s ending might have different effects on eudaimonic entertainment in terms of different age groups.

Appreciation of a narrative is increased by desirability and justness of its resolution. Affective disposition theory (ADT) states that, if liked characters who behave morally are benefited, positive affect increases. Conversely, whereas negative affect like sadness or distress should increase if liked characters are punished (Zillmann & Cantor, 1977). Accordingly, several studies have shown that sadness was most pronounced when the film had a negative ending (e.g., Hofer & Wirth, 2012; Zillmann & Cantor, 1977). As mentioned above, older people pursue emotional meaningful goals to a greater extent than younger adults and they are less interested in seeking tear-jerking entertainment than younger adults (cf. Bartsch, 2012; Mares et al., 2008). Also, it has been shown that older adults are more interested in experiencing positive than negative affect. Therefore, one might conclude that the effect of a sad in contrast
to a happy ending has a different effect on eudaimonic entertainment experiences among older compared to younger viewers. Concerning the dimension activation of central values the following effect can be assumed concerning older participants: Meaningful and poignant movies often depict sad stories where characters suffer from a burdensome life throughout the plot. A happy ending where the character did not suffer for nothing may meet especially older adults’ values and therefore lead to higher eudaimonic entertainment than a sad ending. In a similar vein, a happy ending may also be perceived as more meaningful to older adults. For instance, an ending where the character dies makes the imminent death more salient to older adults. Therefore, we hypothesize that the film ending has an effect on all dimensions of eudaimonic entertainment among older adults, but not among younger adults (H8).

Method

Participants
Eighty-four younger participants (66 women, 18 men) aged 18–28 years (\(M = 20.96, SD = 1.96\)) and 65 older participants (30 women, 35 men) aged 62–87 years (\(M = 72.52, SD = 6.90\)) took part in the study. The younger participants were undergraduate communication students at a large Swiss university. They received course credit for participation. The sample of older participants was drawn from the local community. These participants were recruited from a participant pool. Most of the older participants regularly visited courses at the senior university. Thus, the two samples were fairly homogenous concerning education, or more precisely, their general interest in scientific knowledge.

Design and stimulus material
The study employed a 2 (age group) \(\times\) 2 (sad end vs. happy end) between-subjects design. A shortened version of the film Dancer in the Dark (USA, 2000, directed by Lars von Trier, rated PG-13) was used as stimulus. The film, set in Washington State in 1964, features the Czech immigrant Selma Ježková (played by the Icelandic singer Björk). Selma has moved to the United States with her son Gene. She works in a local factory and lives a life in poverty in a mobile trailer on the property of town policeman Bill Houston and his wife Linda. She suffers from a hereditary degenerative disease diminishing her eyesight gradually and inexorably. Gene also suffers from this disease. In order to pay an operation that will prevent her son from suffering the same fate, she saves up every penny she earns in a tin cup in her kitchen. One day, Bill reveals to Selma that he is financially broke and cannot bear to tell his wife. Furthermore, Bill steals Selma’s life savings that were meant for Gene’s operation. When Selma finds out about the theft, she confronts Bill. The situation gets out of hand and Selma shoots him. Therefore, Selma is put on trial. She is sentenced to death by hanging. Yet, Selma refuses help as this would lead her life savings to be spent on her lawyer and not on Gene’s operation. The film was chosen as stimulus...
because it features a highly likeable character who acts in an exemplary manner and for whom a positive ending is likely to be desired.

The plot was introduced to the viewers through a prefix. This consisted of the storyline illustrated with pictures of the protagonists. The film stimulus had a duration of 30 minutes. Two endings were created which were also introduced with textual information presented on the screen in a cinematic manner (white characters on black background). The textual information was enriched with pictures of the respective character.

**Experimental manipulation**

One experimental group was informed that Selma was not hung at the end and that her son received the appropriate treatment (happy end; \( n_{\text{older}} = 30, n_{\text{younger}} = 43 \)). The sad end group (\( n_{\text{older}} = 35, n_{\text{younger}} = 41 \)) was informed that she was hung and that her son has gone blind (see Appendix A for detailed film endings). Participants were randomly assigned to one of the two experimental conditions.

**Procedure**

Upon arrival, each participant was welcomed and escorted to a carpeted laboratory, 21 × 15 feet in size. Participants were first asked to complete a preliminary personality questionnaire including demographic questions. After completion of the questionnaire, participants were randomly assigned to one of the two experimental groups. Then, they watched the stimulus movie in single sessions. Having watched the film, they filled out the second questionnaire containing the dependent variables. Finally, participants were asked whether they had already seen the movie. None of participants indicated they had seen the film before or were familiar with the plot. After completion, they were debriefed and dismissed.

**Measures**

*Eudaimonic entertainment experiences* were measured with items of the Eudaimonic-Experience Scale (EES; Wirth et al., 2012). Each dimension of eudaimonic entertainment was measured with three items. Participants could indicate how well each statement reflected their experience during the film, using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree): Relatedness (e.g., “It felt good to be captivated by the events around Selma and her son during the film.”), Activation of central values (e.g., “Precisely because the film was so distressing I had the feeling that the film delivered central values of life in an authentic way.”), Competence/personal growth (e.g., “I have a good feeling because the emotions that I felt during the film challenged me in a positive way.”), Purpose in life/self-acceptance (e.g., “I feel good because now that I have seen this film I recognize my life as fulfilled and meaningful.”), and Autonomy (e.g., “It is good to recognize that my life is not affected by adverse circumstances.”).

To assess sadness and joy during the movie, six items of the Differential Emotion Scale (DES; Izard, Dougherty, Bloxom, & Kotch, 1974) were used (i.e., sadness,
depressed, discouraged, joy, upbeat, and happy). Participants responded using a 5-point Likert scale to indicate how well the item described their feelings during the film, from 1 (not at all) to 5 (very strong). An exploratory factor analysis was conducted using the promax rotation (κ = 4) to reduce the items into subscales. Two factors were extracted that explained 72.11% of the variance, with each item having high loadings on one factor (> .50) and low loadings (< .30) on the other factor. The first factor, labeled “joy,” included the items joy, upbeat, and happy; the second factor, labeled “sadness,” included the items sadness, discouraged, and depressed. To assess mixed-affective reactions, we employed Ersner-Hershfield et al.’s (2008) procedures (see also Oliver & Raney, 2011). That is, mixed-affect scores were computed for each participant in terms of the minimum of their joy and sadness scores (formula: Min[joy, sadness]). Thus, if a person reported high levels of joy and sadness (e.g., 4), the mixed-affect score would also be high (i.e., 4). If a person reported low levels of sadness (e.g., 2) and high levels of joy (e.g., 4), the mixed-affect score would be 2. The range of the score is from one to five.

Results

Correlations between dependent variables, means, and standard deviations are depicted in Table 1.

In two studies, Wirth et al. (2012) have confirmed the factor structure of the eudaimonic entertainment experience scale. Using confirmatory factor analysis (CFA), they found eudaimonic entertainment to be a five-dimensional construct as deduced from theoretical considerations. Therefore, a CFA estimating a five-factor model using AMOS 20.0.0 was conducted. The analysis revealed an acceptable fit of χ²(135, N = 149) = 155.15, χ²/df = 1.94; RMSEA = .079; CFI = .950; SRMR = .064 (cf. Hu & Bentler, 1999; Schermelleh-Engel, Moosbrugger, & Müller, 2003). All subscales had good reliabilities (α = .78 to .86).

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<th>Descriptives of and Zero-Order Correlations Between Dependent Variables</th>
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<td>3. Competence/Personal growth</td>
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<td>4. Purpose in life/Self-acceptance</td>
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<td>5. Autonomy</td>
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*p < .05; **p < .01; ***p < .001.
Treatment check
A treatment check was conducted to determine whether the experimental manipulation was successful by means of the following item: “How did you experience the end of the film?” Participants could answer on a 5-point Likert scale ranging from 1 (very negative) to 5 (very positive) with $M = 2.93, SD = 1.62$. A two-factorial analysis of variance (ANOVA) revealed a significant main effect of the experimental manipulation, $F(1, 145) = 448.39, p < .001, \eta^2 = .76$. Participants in the sad end group experienced the end as significantly more negative ($M = 1.54, SD = 0.72$) than participants in the happy end group ($M = 4.34, SD = 0.87$). Age-group had no effect: $F(1, 145) = .281, ns$. Thus, for both older and younger participants, the manipulation of the film end was successful. The age group × experimental condition interaction was not significant. Both older and younger participants experienced the sad end as much sadder than the happy end.

Tests of hypotheses
To test the hypotheses, a multivariate analysis of variance (MANOVA) was conducted with age group and experimental manipulation (sad end vs. happy end) as the between-subjects factors. The analysis revealed a significant and large age effect, Wilks’ $\Lambda = 0.76$, $F(5, 141) = 8.90, p < .001, \eta^2 = .24$. On all five dimensions of eudaimonic entertainment, older adults scored higher than younger adults. In terms of the film ending, there was also a significant main effect of film ending with generally higher values for the happy end, Wilks’ $\Lambda = 0.92, F(5, 141) = 2.39, p < .05, \eta^2 = .08$. The film ending × age group interaction, however, was not significant, Wilks’ $\Lambda = 0.96, F(5, 141) = 1.18, ns$. Thus, the general hypothesis on age differences in eudaimonic entertainment (H1) could be confirmed. To deal with possible gender effects, we controlled for gender in the analyses. Gender did not affect any of the dimensions of eudaimonic entertainment.

To further examine the effects of age and film ending on each dimension of eudaimonic entertainment, five ANOVAs were conducted with the two factors. Means and standard deviations within the two age groups are depicted in Table 2. Older adults experienced a higher level of relatedness than younger adults, $F(1, 145) = 31.82, p < .001, \eta^2 = .18$. Neither the main effect of the experimental manipulation nor the interaction effect was significant. Therefore, H2 could be confirmed.

In terms of activation of central values, the analysis revealed a significant main effect of age, $F(1, 145) = 22.06, p < .001, \eta^2 = .12$. Older adults experienced eudaimonic entertainment to a higher degree than younger adults. H3 could therefore be confirmed.

Confirming H4–H6, the same age effect was found concerning competence/personal growth, $F(1, 145) = 5.86, p < .05, \eta^2 = .04$; purpose in life/self-acceptance, $F(1, 145) = 4.33, p < .05, \eta^2 = .03$; and autonomy, $F(1, 145) = 11.81, p < .01, \eta^2 = .08$.

To test H7, the mixed-affect scores were correlated with the five dimensions of eudaimonic entertainment for each of the two age groups. As depicted in Table 3, among older participants mixed-affect was correlated with all dimensions
Table 2  Mean Eudaimonic Entertainment Experience as a Function of Age

<table>
<thead>
<tr>
<th>Audience Response</th>
<th>Younger Adults (18–28)</th>
<th>Older Adults (62–87)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relatedness</td>
<td>2.92a (.85)</td>
<td>3.74b (.92)</td>
</tr>
<tr>
<td>Activation of central values</td>
<td>2.81a (1.02)</td>
<td>3.54b (1.03)</td>
</tr>
<tr>
<td>Competence/Personal growth</td>
<td>2.62a (1.03)</td>
<td>3.03b (1.12)</td>
</tr>
<tr>
<td>Purpose in life/Self-acceptance</td>
<td>2.46a (.99)</td>
<td>2.82b (1.26)</td>
</tr>
<tr>
<td>Autonomy</td>
<td>2.51a (.94)</td>
<td>3.08b (1.11)</td>
</tr>
<tr>
<td>Joy</td>
<td>1.48a (.60)</td>
<td>1.31a (.74)</td>
</tr>
<tr>
<td>Sadness</td>
<td>3.34a (.81)</td>
<td>3.09a (1.15)</td>
</tr>
<tr>
<td>Mixed-affect</td>
<td>1.44a (.55)</td>
<td>1.22b (.56)</td>
</tr>
</tbody>
</table>

Note: Numbers in parentheses are standard deviations. Within rows, means with no subscripts in common differ at \( p < .05 \).

Table 3  Zero-Order Correlations Between Eudaimonic Entertainment Experiences and Affective Reactions by Age

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Younger Adults (18–28)</th>
<th>Older Adults (62–87)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sadness</td>
<td>Joy</td>
</tr>
<tr>
<td>Relatedness</td>
<td>.16</td>
<td>.01</td>
</tr>
<tr>
<td>Activation of central values</td>
<td>.17</td>
<td>-.05</td>
</tr>
<tr>
<td>Competence/Personal growth</td>
<td>.08</td>
<td>.12</td>
</tr>
<tr>
<td>Purpose in life/Self-acceptance</td>
<td>.14</td>
<td>.06</td>
</tr>
<tr>
<td>Autonomy</td>
<td>.14</td>
<td>.04</td>
</tr>
</tbody>
</table>

\* \( p < .05 \); \** \( p < .01 \).

of eudaimonic entertainment. Among younger adults, none of the correlations was significant. Therefore, H7 could be confirmed. We also correlated joy and sadness with eudaimonic entertainment experiences. Among younger participants, none of the eudaimonic entertainment dimensions were correlated with sadness or joy. Among older participants, joy was correlated with all dimensions of eudaimonic entertainment (see Table 3).

To test hypothesis H8 that stated that the ending of the film would have an effect among older but not among younger adults, the two age groups were compared at the two levels of the experimental factor (happy end vs. sad end). None of the interaction effects was significant.

Given the multidimensionality of eudaimonic entertainment experiences, we had to conduct 10 single analyses to test H2 to H6 and H8. One might argue that testing the hypotheses separately on each subdimension of eudaimonic entertainment might cause alpha-error inflation. Therefore, we constructed a structural
Table 4 Influence of Age Group, Experimental Condition, and Interaction of Age and Experimental Manipulation on Eudaimonic Entertainment Dimensions

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Relatedness</th>
<th>Activation of Central Values</th>
<th>Competence/Personal Growth</th>
<th>Purpose in Life/Self-Acceptance</th>
<th>Autonomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Condition</td>
<td>b (SE)</td>
<td>b (SE)</td>
<td>b (SE)</td>
<td>b (SE)</td>
<td>b (SE)</td>
</tr>
<tr>
<td>(0 = happy end)</td>
<td>−.237 (.165)</td>
<td>−.374 (.119)***</td>
<td>.132 (.173)</td>
<td>−.295 (.194)</td>
<td>.130 (.169)</td>
</tr>
<tr>
<td>Age (centered)</td>
<td>.025 (.005)***</td>
<td>.015 (.003)***</td>
<td>.011 (.005)*</td>
<td>.015 (.005)**</td>
<td>.019 (.005)*****</td>
</tr>
<tr>
<td>Age × Experimental Condition</td>
<td>−.006 (.006)</td>
<td>−.007 (.004)</td>
<td>−.006 (.007)</td>
<td>−.014 (.007)</td>
<td>−.012 (.007)</td>
</tr>
</tbody>
</table>

Notes: Scores are unstandardized regression coefficients, standard errors in parentheses.
*p < .05; **p < .01; ***p < .001.

equation model with the five latent eudaimonia factors as endogenous variables and experimental manipulation, the centered age variable, and the age × experimental manipulation interaction as exogenous variables. The model had an acceptable fit of $\chi^2(108, N = 149) = 184.937$, $\chi^2/df = 1.71$; RMSEA = .069; CFI = .951; SRMR = .068. Structural paths are depicted in Table 4. As can be seen in Table 4, age had an effect on all dimensions of eudaimonic entertainment. However, there was a significant main effect of the experimental manipulation on activation of central values. That is, both older and younger participants had less activation of central values given a sad end. The interaction terms did not significantly influence the dimensions of eudaimonic entertainment.

**Discussion**

The purpose of this study was to examine age-related differences in entertainment experiences that are beyond mere pleasure. Based on both theories of adult emotional development and theories of eudaimonic well-being we predicted that older adults reported higher levels on all dimensions of eudaimonic entertainment after having watched a meaningful movie. Bartsch (2012) and Mares et al. (2008) could show that compared to younger adults, older adults are more interested in contemplative forms of entertainment that let onlookers contemplate life’s meaning, but also provide emotional stability. Furthermore, with increasing age, contemplative dramas are more favorably evaluated. With this study, we could show that older adults experienced higher levels of eudaimonic entertainment on five different dimensions after having watched a meaningful film. The awareness that lifetime is limited—a key premise of SST (Carstensen et al., 1999)—seems to increase more complex, socially, and emotionally meaningful cinematic experiences and finally lead to a more favorable evaluation of one’s competence and one’s own life. The results of this study are therefore in favor of SST. That is, older adults do not seem to be
hedonistic optimizers as proposed by DIT, but eudaimonically oriented “meaning seekers.” However, strictly speaking, this conclusion may be one-sided as we did not consider hedonic entertainment (i.e., enjoyment) in this study. A first—although rather implicit—answer to the question about differences in hedonic experiences between age groups can be found in Table 1. No differences in both joy and sadness between the two age groups were found. This result is in line with previous research (Kunzmann & Grühn, 2005; Tsai, Levenson, & Carstensen, 2000). However, future research should also integrate measures of hedonic entertainment in order to more fully understand entertainment experiences among older and younger audiences.

Whether the film ended in a positive or in a negative way, however, had a general effect on eudaimonic entertainment. However, inspecting both the univariate results and the results of the structural equation model revealed that only one subdimension—activation of central values—was affected by the end of the film. For both age-groups activation of central values was higher given a happy ending. The fact that the protagonist stays alive seems to meet participants’ central values. Given the sad end, the protagonist refuses legal help and nevertheless both she and her son die at the end. It seems that this end did not meet participants’ central values.

In contrast to H8, age and the experimental manipulation did not interact in affecting eudaimonic entertainment. Only a main effect of age was found. It seems that the gratifying feeling of being connected with the character(s) of the movie does not depend on whether the film has a positive or negative ending. This result makes sense since the feeling of connectedness with a character that feels authentic and supportive is something that gradually develops in the course of the reception process and is therefore not focused on the end of the film. The same explanation applies to competence/personal growth and autonomy. Whereas the former is a positively valenced feeling that arises when emotional or cognitive challenges caused by a film are successfully mastered during reception and the latter is a positive feeling when one is under the impression that he or she is in charge of one’s own life compared to the character of a somber movie. However, although the former dimension focuses on the viewing process and the latter on the onlooker’s life, both take the whole story into account and not just the end. In a nonmediated context the sense of connectedness and the sense of competence and autonomy have been shown to be particularly pronounced in older adults (Carstensen et al., 1999; Kasser & Ryan, 1999). It seems that this is also the case when the experiences are mediated.

Furthermore, it was also found that mixed-affect was related to all dimensions of eudaimonic entertainment, but only among older participants. In other words, for older viewers, more complex entertainment experiences go along with more complex emotional states. Interestingly, among older participants eudaimonic entertainment experiences were also highly correlated with joy. Thus, for older participants, eudaimonic entertainment experiences seem to be particularly positive. This finding could be interpreted as follows: The different dimensions of eudaimonic entertainment can also be regarded as some form of emotion regulation that taps different life domains that is more pronounced among older than among younger adults (Carstensen et al.,
Gross (1999) describes emotion regulation as the attempts people make to modify their emotional responses. He discerns between two broad emotion regulation strategies: antecedent- and response-focused emotion regulation. The former is conceived as a manipulation of the input system (Gross, 1999). That is, one can select either the situation to be in or the attentional deployment he or she wants to pay to certain aspects of a situation. Antecedent-focused emotion regulation also entails the monitoring of one’s emotional state. Alternatively, one might also reappraise the situation which he or she is in. This intensifies, diminishes, or prolongs the emotional response (Gross, 1999). The different subdimensions of eudaimonic entertainment could be some form of antecedent-focused emotion regulation because given a sad and mournful film the attention is directed to something else than the sad nature of the situations depicted (i.e., relatedness with the character, a general sense of autonomy compared with the character, a positive feeling of competence, or a general positive evaluation of one’s life). Thus, eudaimonic entertainment experiences could be regarded as a form of reappraisal that finally leads to positive emotions and well-being (see also Fredrickson, 2001). Research has shown that antecedent-focused emotion regulation is more pronounced among older adults than among younger adults (Carstensen et al., 2003), and this study has shown that this is also the case for subdimensions of eudaimonic entertainment experiences. However, future research should examine connections between age, emotion regulation strategies, and eudaimonic entertainment experiences.

The findings of this study might have broader implications beyond entertainment research. For example, from a functional life span development perspective (e.g., Martin, Jäncke, & Röcke, 2012), meaningful films could be used as a means to enable stabilization (i.e., a dynamic process that allows for flexibility with regard to environmental demands) because they might help (older) individuals to better accept their life or to develop a feeling of connectedness or competence and autonomy. A multidimensional measure of eudaimonic entertainment experiences such as we use in this work might help to understand the beneficial effects of meaningful movies and shed light on recreational or even therapeutic effects of entertainment media (cf. Reinecke et al., 2012). Especially for persons with deficits in autonomy, competence, or relatedness, entertainment media can be a useful means of finding meaning. One can, for instance, better accept one’s own life after having watched a certain film, enjoy a feeling of accomplishment to have mastered the challenge of a deeply moving story and the emotions associated with it, or realize that he or she can lead his or her life in a relatively autonomous manner (compared to the character of a movie). Accordingly, Wirth et al. (2012) mention not only the recreational but also the therapeutic effects of entertainment media exposure. Treating eudaimonic entertainment as a multidimensional concept can lead to a fine-grained understanding of beneficial media effects. Treating it as a broad concept would mask this differentiated picture of benefits. However, as these considerations are rather speculative, further research is needed (for instance, with clinical samples or persons with certain deficits)
that empirically examines therapeutic benefits of eudaimonically entertaining media offerings.

Finally, from a methodological perspective, this article shows the added value of not only considering undergraduate students in media effects research, but also taking into account other age groups.

**Limitations**

Despite its promising results, this study also has its limitations. First, it is important to mention that, concerning its cross-sectional nature, this study confounds age and cohort effects. That is, this study does only argue in developmental and not in generational terms (Mares & Woodard, 2006; Mares et al., 2008). Another limitation may be found in the fact that the results of this study are based on a single film. As mentioned above, eudaimonic entertainment experiences are influenced by both properties of the stimulus and properties of the viewer. Given the story of the film, an alternative interpretation of the results is possible. The differences between the two age groups in relatedness, for instance, may be due to the fact that older participants could better relate to the main character’s role of a parent. Thus, given a single movie, the results of this study are difficult to be transferred to meaningful movies in general. Future studies should, therefore, replicate the current findings with other films of different genres.

However, we believe that this study has further refined our understanding of more complex entertainment gratifications. Developmental differences seem to play an important role in eudaimonic entertainment experiences. When time is limited, the importance of emotionally meaningful goals, and the appreciation of the fragility and the value of human life increase. This general tendency of older adults toward the establishment of meaning, the maintenance of close social relationships, and a certain feeling of competence and autonomy also seems to be present in movie viewing situations. Thus, taking the older audience into account and just relying on undergraduate samples provides a more detailed picture of nonhedonic entertainment experiences.

**Acknowledgments**

We thank Laetitia Burkhard, Annalisa Stefanelli, and Nicole Laine who conducted the experiment and handled everything concerning participants.

**Note**

1 Wirth et al. (2012) also reported a second-order factor model, although it did not substantially improve model fit. The same model was also examined with the present data. However, it did not reveal an acceptable model fit. One might argue, however, that eudaimonia is one single experience. Thus, all items should load on one single “eudaimonia”-factor. However, a CFA where all items loaded on a single eudaimonia-factor showed a poor model fit: \( \chi^2(180, N = 149) = 584.15, \chi^2/df = 3.25; \) RMSEA = .124; CFI = .688; SRMR = .120.
References


**Appendix A: Etiquettes Used for Film Endings**

**Happy End**

Selma was not hung. Luke took compassion on Selma and Gene. He offered Selma to defend her for free so that Gene could undergo surgery. Selma paid Bill off in installments. In court, Luke could prove that the money belonged to Selma. He also convinced the jury that Selma killed Bill because he asked her to do so. Finally, Selma was found not guilty.

Gene underwent surgery which prevented him from going blind. Selma and Gene moved to Jeff. Later on, Jeff and Selma got married.

**Sad End**

The next day, Selma was hung. Jeff, Kathy, and also Gene attended the hanging.

The court found that the money was Bill’s and that it had to be given back. Linda was awarded compensation for pain and suffering. Gene went blind because there was no money left to pay his surgery. Jeff excluded Gene from his life because he reminded him of Selma. Kathy tried to take care of Gene but he did not allow anyone to get close to him anymore.