

**Longing for What One Has Never Known: Examining the Influence of Anemoia,
Nostalgia, and Optimism on Mood**

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Abstract

Nostalgia is a commonly experienced and researched emotion, that has been found to have a multitude of positive effects, such as heightened mood and optimism. However, the closely related concept of anemoia, longing for a time or place one has not experienced before, has received limited attention in research thus far. The aim of this study was to compare the overall effect of nostalgia and anemoia on mood, and to examine, in particular, the moderating role of optimism in this relationship. The data of 85 participants of an online questionnaire were analyzed. Contrary to previous observations, our results showed no significant effect of either nostalgia or anemoia on mood, and no moderating effect of optimism. Despite the lack of significant findings, an interesting pattern appeared in our data, namely we observed that only highly optimistic people experience a mood-enhancing effect when engaging in nostalgia and anemoia. This pattern provides valuable directions for future research on anemoia. In addition, the nearly significant effects of anemoia and nostalgia as mood enhancers should be explored further.

Keywords: nostalgia, anemoia, mood, optimism, emotion research, event reflection task

Longing for What One Has Never Known: Examining the Influence of Anemoia, Nostalgia, and Optimism on Mood

Nostalgia is an emotion that has been extensively studied and recognized for its ability to inspire and evoke feelings of longing and sentimentality (Layous et al., 2022). Its positive effects on mood are well established, making it a significant phenomenon in the realm of emotion research and its potential implications for psychological well-being (Layous et al., 2022). A related concept that has not received as wide a recognition as nostalgia is “anemoia”. Similar to nostalgia, it seems likely that anemoia can trigger longing and sentimentality as well. In contrast to nostalgia which refers to real experiences from the past, anemoia describes a phenomenon that refers to a time or place that one has never experienced before (Koenig, 2021). Thus, while the feeling of nostalgia refers to a real memory, anemoia is an imaginary experience, the use of imagination expanding its applicability in the development and regulation of emotions. Imagination has been shown to be a powerful tool in enhancing well-being in the treatment of trauma (Haen, 2020), and in relieving the impact of the COVID pandemic (van Mulukom & Clasen, 2021).

Likewise, understanding the emotional impact of anemoia could have implications for psychological well-being, such as in new treatment approaches and in our understanding of how individuals perceive and respond to emotions in various contexts. Moreover, it is worth to investigate the role of moderating variables on anemoia. Optimism, especially, is a factor known to influence how individuals perceive and respond to emotions (Seher Balcı Çelik, 2008). Therefore, this study aims to compare the effects of both nostalgia and anemoia on mood, and the extent to which optimism moderates these effects.

Mood

According to the Cambridge Dictionary, mood refers to an individual’s emotional state at a particular time (*MOOD / Meaning in the Cambridge English Dictionary*, n.d.). Research

has shown that our mood has a consistent impact on how we perceive ourselves, others, and the environment around us (Abele & Gendolla, 1999). According to Abele and Gendolla (1999), everyone experiences a more or less negative or positive mood on a continual basis, which can greatly influence our judgment of our surroundings and encounters. Our mood can affect various aspects of our well-being and mental health, with far-reaching effects that can extend to our daily lives (Bar, 2009), such as intense dwelling on the past or adding to depressive symptoms (Wels et al., 2018). Knapp and Clark (1991) furthermore supported and confirmed the general notion that individuals in a negative mood have limited capacities for problem-solving and consequently were lacking an important cognitive ability to cope with stress and problems. They found that participants in a negative mood were not as easily able to engage in self-gratification as those in a positive or neutral mood (Knapp & Clark, 1991). Additionally, individuals in a negative mood showed less interest in their surroundings and the research task compared to participants in a positive or neutral mood. Therefore, it is even more important to invest in the search of factors like anemoia improving people's mood.

Factors influencing mood are just as diverse as its effects. Three examples illustrating the diversity of contextual factors that influence mood would be increased sociability, sunlight and memories. Firstly, research by van den Berg et al. (2020) suggests that increased sociability, i.e. traveling together with peers, can positively impact our mood and, therefore, have an impact on our well-being. Secondly, research by Kämpfer and Mutz (2013) found that the amount of sunlight we receive can also influence our mood. They hypothesized that due to a sunlight-induced increase of serotonin, positive emotions and therefore also a positive mood will be activated. Thirdly, and particularly significant for this study, Gillihan et al. (2007) observed that recalling autobiographical memories can have a mood-altering effect. Positive memories will enhance the mood, while negative memory will worsen it. A hypothesis introduced to explain this effect has been that remembering an autobiographical

memory goes hand in hand with remembering the emotion felt in that moment (Gillihan et al., 2007).

Nostalgia, an emotion closely tied to one's autobiography, has also been shown to influence mood (Leunissen et al., 2020). Although autobiographical memories have a major impact on a person's mood, the role of imaginal contextual factors on mood regulation has not been thoroughly examined yet. This leads us to consider the influence of nostalgia (autobiographical memories) and, contrastingly, anemoia (non-autobiographical memory) on mood.

Nostalgia

Described as a sentimental longing for the past (Newman et al., 2022), Nostalgia is a common experienced feeling by many (FioRito & Routledge, 2020). In the study of Wildschut and Sedikides (2006), 79% of participants reported feeling nostalgic at least once a week, if not more. Its character is widely acknowledged, and it is often described as bittersweet, evoking a range of emotions that can make one feel torn between the sadness of reminiscing about the past and the joy of remembering happy memories. (Layous, 2022). Despite the fact that nostalgia is often triggered by negative events (Newman et al., 2022), it is connected to a multitude of positive outcomes, such as heightened well-being (Layous et al., 2022), increased meaning in life (Abeyta & Juhl, 2022), enhanced self-esteem (Cheung et al., 2013) and a greater sense of hopefulness for the future (FioRito & Routledge, 2020).

Nostalgia has been shown to have a number of key effects. Two are primarily noteworthy: Firstly, it was recognized to positively impact social connectedness. For instance, FioRito and Routledge (2020) reported that nostalgic content can make up to 75% in a conversation, thereby highlighting nostalgia's potential as a means of social bonding. This social connectedness, in turn, fosters a sense of belonging and support, which can lead to increased self-esteem, optimism, and well-being (Sedikides, 2016). On top of that, Li et al.

(2023) argue that nostalgic memories are closely linked to social relationships, affections, and significant life events, providing further evidence for the role of nostalgia in promoting social connectedness. By fostering social connectedness, nostalgia can have a chain reaction of reduced loneliness, increased well-being, and greater life satisfaction overall.

Secondly, it has also been shown to influence the perceived meaning in life. Research by Sedikides et al. (2017) provided the insight that by remembering social bonds and the overcoming of past hardships, meaning in life is enhanced. Another consequence of more meaning in life is a stronger goal pursuit. By perceiving coherence of one's life, reattributing mental resources to one's most significant goals becomes easier and more natural. Particularly relevant for the present study is that nostalgia has also been shown to have a positive effect on mood. Although it may sometimes evoke feelings of sadness and longing, it can also elicit joy and reminiscence (Faul, 2020). Laylous et al. (2022) found that nostalgic reflection evokes positive affect by helping individuals remember the social support they receive from friends and family.

Research suggests that individuals in negative moods often turn to nostalgia, which can promote higher levels of positive affect compared to simply recalling an ordinary autobiographical memory (Faul, 2020). In fact, nostalgia has been shown to counteract negative moods “by bolstering positive emotions involving social connectedness and self-esteem” (Faul, 2020, p. 1104). Based on this, we predict that engaging in nostalgic reminiscence will lead to a heightened positive mood.

Anemoia

Despite the increasing attention given to nostalgia and its outcomes (Batcho, 2013), the related concept of “anemoia” has not been as thoroughly investigated.

The term “anemoia” is referring to the phenomenon of feeling nostalgic to a time or place that one has not experienced before (Koenig, 2021). A very descriptive example is

given by the blog-author “Ronan”, who describes in detail how the song “Learning to Fly” by Tom Petty and The Heartbreakers invokes in him the emotion of missing youthful teenage days in the US, a country he has not been growing up in, with detailed memories, he has not made himself (Ronan, 2019). This concept, called anemoia, has not been empirically studied within psychology to our knowledge.

Nostalgia and anemoia both seem to share certain similarities. Firstly, both concepts involve feelings of longing and sentimentality, treasuring memories, even if they might not be real. Secondly, both seem to be triggered by present events or stimuli, such as music or movies (Michels-Ratliff & Ennis, 2016; Oh & Kim, 2020). Crucially, however, they differ in one key way; nostalgia involves longing for a past experience that one has actually lived through, while anemoia involves feeling nostalgic for a time or place that one has never actually experienced (Koenig, 2021). This difference, namely sentimentality in the face of an imagined versus a real memory, could be a possible reason for a different effect of anemoia on mood than nostalgia. However, despite its potential relevance to well-being, the impact of anemoia on mood remains yet unexplored. Furthermore, nostalgia and anemoia differ in their effects on mood: As opposed to nostalgia, which is thought to promote positive mood states by reminding individuals of their social bonds (Berg et al., 2020). The feeling of anemoia may lead individuals to perceive a lack of these bonds, resulting in a negative mood. Thus, we predict that anemoia may have a negative impact on mood. While the feeling of anemoia, or more the “imaginary remembering” might be a pleasant experience, the possibility of noticing the lack of the actual experience or the stark contrast of not having experienced remembered memory, might let an individual’s mood be negatively affected. However, while we predict that anemoia negatively affects mood, we do believe this effect might be moderated by another key variable, namely optimism.

Optimism

Dispositional optimism can be defined as the expectation that positive outcomes will generally occur (Amor & Taylor, 1998). It would, therefore, be categorized as someone's typical trait. Research has shown that optimism is positively related to better mental health, increased resilience to stressful life events, and even potential immune system changes (Segerstrom et al., 1998). Conversely, pessimists tend to expect negative outcomes and are therefore less likely to cope successfully. While optimists persist in their goal-directed efforts, pessimists may become passive and give up (Räikkönen et al., 1999). This contrast also extends to mood, as optimists are generally in a better mood than pessimists. Angosto et al. (2021) hypothesized two possible explanations for this phenomenon: Firstly, that individuals with optimistic traits tend to have lower levels of anxiety and stress (Brydon, 2009). This resistance is described to be due to resistant mental vigor, meaning that optimistic individuals might have higher vigor and are able to cope better with potentially stressful situations (Angosto et al., 2021). Secondly, optimistic people do not display as much mental fatigue, enabling them to endure more mental hardship and not be as quickly emotionally exhausted. This could be due to their ability to interpret even challenging events positively and therefore, to not despair.

Nostalgia is proven to have a positive impact on reinforcing and strengthening one's sense of optimism (Cheung et al., 2016). This optimism, in turn, is associated with greater levels of personal fulfillment, improved coping strategies, and overall happiness (Cheung et al., 2016). The reason for this connection lies in the concept of social-connectedness and self-esteem. By revisiting positive memories from one's past, they can strengthen their sense of identity and self-worth, which boosts our overall emotional resilience and proactive coping abilities, subsequently raising one's optimism (Cheung et al., 2016). Therefore, we believe that nostalgia positively influences mood, independently of optimism.

Building on the previously mentioned findings of Cheung et al. (2016), it could be a

possibility that individuals high in trait optimism have enough emotional resilience to cope with potential negative feelings of anemoia that might arise due to the realization of cherished memories not being real. This is prompted by optimism having a positive effect on a person's mood because of not being as emotionally affected by challenging events and by having better coping mechanisms such as hope and a positive outlook for the future. In the case of an anemoic memory, someone high in optimism may cope by believing in a possible future occurrence of the memory, or a strengthened ability to accept the falsehood of the memory. Consequently, we predict for individuals who exhibit low levels of optimism, that anemoia will have a negative impact, while for individuals high in optimism, it will have a positive impact. As previously mentioned, anemoia could possibly have negative effects on individuals by causing them to feel a lack of social connection and fulfillment. If someone has a low level of optimism, they may have difficulties coping with these feelings. On the other hand, someone high in optimism might feel inspired and hopeful in regard to their anemoic memories.

The Present Research

This study aims to investigate the effects of nostalgia and anemoia on mood, with a specific focus on the moderating role of optimism. In this context, we test the following three hypotheses: Firstly, that nostalgia has a positive effect on mood (H1); secondly, that anemoia has an overall negative effect on mood (H2), and thirdly, that for those high in optimism, anemoia will have a positive effect on mood and for those low in optimism, anemoia has a negative effect on mood (H3). By examining the impact of these variables on mood, this study will shed light on the relatively unexplored concept of anemoia and its potential consequences for emotional well-being.

We believe the present study is novel in two key ways; firstly, while much research on nostalgia has been conducted, the concept of anemoia has yet been completely empirically

unexplored. Secondly, while much research focused on the effects of nostalgia on mood, the mediated relationship of optimism and nostalgia has not been explored extensively. Thus, this study also aims to contribute to a more nuanced understanding of the complex interplay between nostalgia, anemoia, and optimism on mood.

Method

Participants & Designs

In total, 164 cases were recruited from the researcher's network. First, 63 of these were excluded, as they were unable to satisfactorily complete the questionnaire. This means that participants were excluded as soon as they were unable to at least answer all answers up to the seriousness check. Of all the excluded cases due to incompleteness, only 6 reached the manipulation. Most answered few or no questions before stopping. We removed a single person who failed our seriousness check, due to indicating that they did not seriously engage with the questionnaire. Following that, further 15 participants were removed for engaging with the manipulation for less than 30 seconds. We made this decision based on the assumption that a period of less than 30 seconds is not enough to fully read the instructions and thoroughly engage with our manipulation. In total, 85 participants were included in the final analysis. Participants ranged in age from 18 to 60 years ($M = 28.09$, $SD = 11.37$), including 51 women, 31 men, two individuals of other gender, and one participant who did not want to indicate their gender. "Other" here refers to individuals who do not self-identify as male or female or who report a different gender identity.

We used a between-subject design with one independent variable with three conditions: nostalgia, anemoia and a control group. Participants were randomly assigned to the conditions. Our dependent variable was mood, and our moderator was trait optimism. The

present study has been part of a bigger project investigating multiple variables, but our focus only lays on optimism.¹

Materials & Procedure

The study was conducted online via the online survey software Qualtrics (<https://www.qualtrics.com>). Preceding the start of the questionnaire, all participants received an informed consent form explaining the aims and procedures of the study. Participants were informed that the study aimed to examine different psychological variables that may be related to the perception of events. However, to ensure unbiased data collection, participants were not told which specific variables were being examined. Before being exposed to the manipulation, participants were asked to complete questionnaires regarding their optimism.

Optimism

Our moderator variable was dispositional optimism ($\alpha = .78$). It has been measured through the Revised Life Orientation Test (LOT-R), a 10-item scale that measures the extent of the optimistic or pessimistic outlook individuals have on their future (Schou-Bredal et al., 2017). The scale includes four filler questions, such as “It is important for me to keep busy”, which are normally used to prevent participants from guessing the purpose of the study. The four filler questions were removed as they were deemed unnecessary for this study. Given the diversity of survey questions covering various topics, participants would not have been able to guess the study’s purpose, making the fillers redundant. The survey consisted of six items, rated on a 5-point Likert scale. An example of such a question would be: “In uncertain times, I usually expect the best”. Three items were reverse scored. The optimism score was formed from the mean of all items. After completing the optimism questionnaire, participants were then randomly assigned to one of the three conditions, nostalgia ($n = 29$), anemoia ($n = 32$) or the control group ($n = 24$).

¹ This study has been part of a collaborative project with additional variables that are not discussed in this paper, see Appendix A for further information.

Type of Nostalgia

Regardless of the condition to which participants were randomly assigned, they were all instructed to remember and write about an experience without providing identifying or overly detailed information. Participants in the nostalgia condition were asked to write about a nostalgic memory, while those in the anemoia condition were asked to write about something they felt nostalgic for but did not actually experience. To facilitate the task for participants and their understanding, we offered example sentences as inspirations for how an anemoic memory can look like. One example had been “You have a longing for the 70s even though you were not born at that time”. The control group was instructed to write about an ordinary event that they frequently encounter. We opted to employ the most widespread nostalgia manipulation technique, namely the Event Reflection Task, given its successful implementation in nostalgia research (Newman et al. 2020; Sedikides & Wildschut, 2018). The instructions for the anemoia condition were novel and developed by us. As there is no existing empirical research on anemoia, we approached it in a similar fashion as the nostalgia condition and provided participants with relevant examples to enhance their understanding of the concept. Similarly, we utilized the same control condition as is commonly used in nostalgia research as it has proven to be effective in previous studies (Abeyta & Juhl, 2022; Newman et al., 2020).

Manipulation Check

To ensure that our manipulation was successful and that participants could not guess the purpose of the study, we implemented a manipulation check and two distracter questions. The manipulation check consisted of one of the three manipulation check items used in the Event Reflection Task (Sedikides & Wildschut, 2018), specifically the statement “Right now, I’m feeling pretty nostalgic”, which participants were asked to rate on a 5-point Likert scale. The two distracter questions were also answered on a 5-point Likert scale and related to

participants concentration and current level of relaxation. By using these measures, we were able to ensure that the results of our study were not influenced by guessing or biased behavior.

Mood

We measured our dependent variable mood with the Scale of Positive and Negative Experience (SPANES; $\alpha = .88$; Li et al., 2013). It consists of 12 items, six of them reversely coded. Each individual's score is the mean of all items. Every question deals with the emotion of the participant, participants being able to indicate on a 5-point Likert scale how their mood currently is. An example would be "Positive", "Happy", or "Sad". At the end of the survey, we collected demographic information, employed the seriousness check, and debriefed participants.

Results

We used SPSS and the PROCESS macro to conduct the variance and regression analyses to test our hypotheses (Hayes, 2013). All required assumptions were met.

Manipulation Check

In order to evaluate the effectiveness of the manipulation, we conducted an ANOVA with the manipulation as the independent variable, and the manipulation check, asking participants if they are feeling nostalgic in this moment, as dependent variable. Although participants in the nostalgia ($M = 3.10$, $SD = 1.21$) and anemoia ($M = 3.03$, $SD = 1.26$) condition reported experiencing more nostalgia than those in the control condition ($M = 2.71$, $SD = 1.16$), this effect did not reach significance, $F(2, 82) = 0.77$, $p = .46$. This suggests that our manipulation was not fully effective, meaning our findings below should be interpreted with caution.

Effects of Nostalgia and Anemoia on Mood

We conducted an additional analysis to examine the validity of the three hypotheses: (H1) nostalgia has a positive effect on mood, (H2) anemoia has a negative effect on mood,

and (H3) optimism moderates the relationship between anemoia and mood, expecting a negative effect of anemoia on mood for participants scoring low in optimism and a positive effect for participants scoring high in optimism.

To test these hypotheses, we performed a regression analysis with the PROCESS macro using manipulation as our independent variable, mood as the dependent variable, and optimism as the moderator. In accordance with hypothesis (H1), we found that participants in the nostalgia condition ($M = 3.90$, $SD = .60$) reported a higher mood than those in the control condition ($M = 3.61$, $SD = .80$). While this effect was not significant, it was close to being so, $t(84) = 1.85$, $p = .07$. Secondly, contrary to what we predicted, participants in the anemoia condition ($M = 3.89$, $SD = 0.64$) also reported experiencing a higher mood than those in the control condition. We, instead, had predicted that anemoia would decrease mood. It should be noted, however, that this effect was not significant, $t(84) = 1.40$, $p = .16$. Lastly, we predicted that the effect of anemoia on mood would be moderated by optimism. We did not find support for this, $t(84) = 0.42$, $p = .67$. Similarly, although we have not predicted this, we found no support that the effect of nostalgia on mood is moderated by optimism, $t(84) = .68$, $p = .50$. While there has been no significance, an interesting pattern has been visible; specifically, individuals with a high level of optimism experience a mood boost when experiencing nostalgia, $t(84) = 1.71$, $p = .09$. The same tendency is seen in the anemoia condition: participants with a high level of optimism reported an improved mood, $t(84) = 1.27$, $p = .21$. These findings contradict our initial hypothesis, which suggested that anemoia would have a negative impact on the mood of those with low levels of optimism. Contrastingly, there has been no effect nostalgia, $t(84) = .81$, $p = .42$, and anemoia, $t(84) = .62$, $p = .53$, for individuals scoring low on optimism. This implies that for those high in optimism, both nostalgia and anemoia seem to possibly have a mood-increasing effect; while for those low in optimism, both have no effect.

Lastly, the main effect of our moderator does not reach statistical significance, $t(84) = 1.34$, $p = 0.18$, but its pattern is implying that individuals scoring high in optimism will also score high on mood.

Discussion

The aim of this study was to examine the main effect of nostalgia and anemoia on mood, and to examine their effect on mood moderated by optimism. Our research aimed to test the following three hypotheses: firstly, nostalgia has an overall positive effect on mood (H1), secondly, anemoia has an overall negative effect on mood (H2) and thirdly, individuals high in optimism will experience a mood improvement when engaging in anemoia while individuals low in optimism will experience a mood deterioration, when engaging in anemoia (H3). We found, however, no significance for any of the three hypotheses.

We observed that engaging in the nostalgic manipulation did not affect the mood of participants significantly (H1), despite the substantial body of literature and studies that have reported a positive impact of nostalgia on mood (e.g., Faul & De Brigard, 2022; Wildschut et al., 2006). Similarly, no significant effect of anemoia on mood was observed (H2). Lastly, there was no significant effect of optimism, either for nostalgia or anemoia (H3).

However, it is important to note that the effect of nostalgia on mood has been marginally significant, and there were, on a descriptive level, patterns regarding (H2) and (H3). The first pattern is suggestive of anemoia exerting a mood-enhancing influence, rather than a mood-deteriorating effect. The second one indicates that individuals high in optimism experienced mood enhancement from both nostalgia and anemoia. Surprisingly, for individuals low in optimism, neither nostalgia nor anemoia had an effect on mood. Additionally, we did not find a significant moderation effect of optimism on the relation between nostalgia and mood. Thus, our result is contrary to previous research, which suggests

that not only does nostalgia heighten optimism, but it also serves as an indicator for mood improvement when engaging in nostalgic memories (Faul & De Brigard, 2022).

There are possible reasons why this study was unable to replicate prior study results, which found significant effects such as a successful manipulation of nostalgia (Cheung et al., 2016), a significant relationship between nostalgia and mood (Faul & De Brigard, 2022), and a moderation effect of optimism on the nostalgia-mood relationship (Faul & De Brigard, 2022). In the following sections, we will examine two methodological reasons and three theoretical reasons that may account for these discrepancies.

Beginning with the methodological explanations, firstly, the chance of discovering a true effect has been reduced due to the low power stemming from the rather small sample size ($N = 85$). Note, however, that in case of hypothesis (H1), the effect of nostalgia on mood is close to significance, which aligns with previous studies on nostalgia (e.g. Newman et al., 2020).

Secondly, regarding hypotheses (H2) and (H3), no prior research has been conducted on anemoia. The limited availability of related literature and empirical findings on this topic present a challenge. Consequently, the design of our study could not rely on previous research findings or refer to established theoretical frameworks. Especially our manipulation, which aimed to engage participants in an anemoic memory, may not have been sufficiently effective. While we did try to reference our manipulation to the closely related concept of nostalgia and the successfully implemented Event Reflection Task, it is possible that this manipulation was not equally adequate in the context of anemoia.

On the other hand, Wildschut et al. (2006) provided for their nostalgic manipulation a more detailed description, such as “Immerse yourself in the nostalgic experience. How does it make you feel? [...]” (Wildschut et al., 2006, p. 987). Additionally, they let their participants have six minutes to fully reflect and write down their nostalgic memory. Instead of only

having a 30 second mark, we could have phrased our manipulation more extensively and let our participants know that they had a minimum of five minutes to complete it. However, due to our small sample size, we set the time mark for engaging with the manipulation as low as we thought it reasonable to include as many valid participants as possible. In particular, because our survey took 15 minutes to complete, we wanted to save time to motivate more people to participate. In future studies, moderator variables could be explored with shorter surveys, thus leaving more time to accommodate the anemoic manipulation.

A possible reason for not finding a significant effect of anemoia could be that the hypothesized effect might simply not exist. Anemoia has been, thus far, unexplored in research and its lack of impact on mood cannot be refuted by existing literature.

Secondly, while our initial hypothesis (H2) is built on the thought of a possible negative affect after realizing that anemoic memories have not been experienced by oneself, the observed positive pattern could be explained by comparing anemoia with daydreaming or fantasizing. According to Holmes et al. (2008), imagining positive events from the perspective of one own, can have an increase on experiencing positive emotions. It is important to note that participants imagined positive scenarios close to their daily and personal life, which is not a necessary criterion for anemoia. Contrastingly, as “Ronan” describes in his blog, his feelings of anemoia, the concept seems to be an expression of longing for something not yet experienced, diverging significantly from everyday life (Ronan 2019). Sedikides et al. (2015) theorized that nostalgia provenly improves the positivity of self-conception by idealizing one’s past. They explained this phenomenon due to an individual putting themselves as central figure of a sequence of positive events while reminiscing about their past. Prominent themes in nostalgic reflection encompass so-called “agency themes”, such as assertiveness, competence or success (Abele & Wojciszke, 2014). These agency themes act as indirect measures of self-esteem (Wojciszke et al., 2011) and

therefore, the perceived self-conception is heightened by engaging in nostalgic reflection. Applying this concept to anemoia, it explains the pattern of heightened mood when engaging in anemoia. Even if the imagined agency themes have not been actually experienced, reminiscing about potential “could-have-been” situations, no matter how far they are from possible, might enable individuals to feel good about themselves and heighten their positive self-conception.

Thirdly, there also has been no significance for the effect of anemoia on mood moderated by optimism (H3). But a pattern is visible, showing that individuals with high levels of optimism experience a mood boost when experiencing either nostalgia or anemoia, while for those low in optimism, no effect is visible. This is contradicting our third hypothesis. What we considered as fatal for individuals low in trait optimism, could be the explanation for the null effect on mood for participants low in optimism: We hypothesized that anemoia’s character of longing for something that one has not experienced yet, might have a negative impact on pessimistic individuals due to realizing that pleasant “memories” are not real or have not been experienced before. While we did hypothesize that optimistic participants will have a greater emotional buffer and therefore can counteract against possible negative affect, we predicted the opposite for individuals low in optimism. However, it is possible that due to anemoia’s definition of longing for something that one has not experienced before, the intensity of negative emotions might be reduced due to the lack of reference to strongly feel negative affect for something one has not had. This is in concordance with the research findings of Dejonckheere et al. (2021), who have demonstrated a link between the magnitude of negative and positive affect and personal event-related importance and event salience. The more salient and important an event is to an individual, the more the individual experiences positive or negative affect. Reminiscing about a memory one has not experienced yet, could

be too obscure and therefore too weak to have an influence on a person's event-related affect relation.

While our results must be interpreted with caution due to the revelation of no significant effect, close-to-significance patterns are visible. Consistent with previous research, nostalgia demonstrated a positive impact on mood, particularly in individuals with high levels of trait optimism. Our findings also suggest that anemoia follows a similar pattern to nostalgia. Highly optimistic participants engaging in anemoia were more likely to experience an improved mood, especially when considering the moderating role of optimism. These findings imply potential benefits for individuals engaging in nostalgia or anemoia, particularly those with high levels of optimism.

Limitations

In the following, we will discuss three potential limitations of the study. Firstly, our sampling procedure may have limited the diversity of our sample. We primarily recruited participants through personal contacts such as friends, family, acquaintances, and social media channels. Consequently, there is a risk that our sample may be predominantly composed of individuals who fall within the WEIRD category – white educated, industrialized, rich, and democratic. Given this limitation, it remains uncertain whether cultural, socio-economic, or political factors have influenced the perception of anemoia in our study. Further research is needed to explore the potential impact of these variables on the findings.

Secondly, by implementing the Event Reflection Task, we could only measure participants' nostalgic state at a single time point instead of capturing it over a specific period of time. Consequently, we were unable to assess an individual's trait nostalgia throughout their daily life. This could have been accomplished by having participants fill out diaries, documenting their feelings each day and noting the triggers and thoughts associated with their

nostalgic experiences. Therefore, this approach would have enabled us to better differentiate between participants who engage in nostalgia/anemoia more frequently than others.

Thirdly, another potential limitation could be that participants may not feel as engaged with the study when it is conducted online. Conducting an on-site experiment could enhance participants engagement with the experimental manipulations and increase their motivation to perform them accurately. Moreover, in a on-site setting, participants would be more likely to approach the researcher with any questions or uncertainties regarding the concept of anemoia, thereby facilitating clearer communication and resolving any ambiguities.

Future Research

In the further we will discuss four potential directions for future research to pursue: Firstly, an interesting investigation would be to explore the effects of anemoia in the context of social nudging, particularly in relation to advertising. A well-known example is the “Marlboro Man”, a nostalgic (anemoic) advertisement for Marlboro Cigarettes introduced in the late 1950s, portraying the image of the American Wild West. It was designed to evoke a sense of nostalgia that one could not have experienced before (anemoia), especially due to notion that although nobody can live that lifestyle anymore, one can at least smoke the same cigarettes as the Lone Rider (Roberts, 2006).

To provide a more comprehensive understanding of the subject, future research could explore whether there is a trait anemoia similar to trait nostalgia and investigate the prevalence of anemoic feelings among certain populations (e.g., gender differences, age groups, etc.). While previous research has shown no notable gender differences in nostalgia (Batcho, 1995), it is possible that such difference may exist for anemoia. Furthermore, it would be intriguing to investigate whether children experience higher levels of anemoia compared to adults or the elderly, given that children have been found to exhibit greater creativity (Kuzmickaja et al., 2015).

Additionally, the specific mechanism underlying anemoia and its effect on mood should be more extensively investigated to understand why anemoia may have positive effects on mood. Building on this, further research can examine whether there are certain conditions, such as having a passion for immersing oneself in other times (e.g. ancient Rome) or fictional worlds (e.g., science-fiction), act as mediators, intensifying the influence of anemoia on mood.

Moreover, replicating this study with a clinical sample, especially patients with affective disorders like depression, of a potentially much larger size, would be insightful to further explore the possibilities of including nostalgic and anemoic reminiscing in various treatment forms. In particular, the long-term effects of habitual engagement in nostalgic as well as anemoic feelings are important for further examination.

Conclusions

Overall, we could find no significant effect of nostalgia on mood, anemoia on mood, or nostalgia or anemoia on mood moderated by optimism. While we interpreted the patterns we observed, due to their lack of significance our results must be looked at with caution. Nevertheless, this study supports the notion that highly optimistic individuals will encounter an improved mood when engaging in nostalgia or anemoia. As well as, contrary to what we hypothesized, anemoia does not have a negative impact on mood, neither for individuals low in optimism nor in general. Anemoia represents a nostalgia-like experience that can potentially lead to benefits. Although our results lack significance, the findings of this study should nonetheless serve as an incentive for further research on anemoia and its role as a mood enhancer.

Appendix A

Complete Collaborative Research Project

Independent Variable	Moderator	Dependent Variable	Researcher
Nostalgia/Anemoia	Spirituality	Meaning in Life	J. Ali
Nostalgia/Anemoia	Loneliness	Mood	A. Christmann
Nostalgia/Anemoia	Creativity	Mood	A. Gullatz
Nostalgia/Anemoia	Optimism	Mood	M. Holzmann (this work)
Nostalgia/Anemoia	Resilience	Mood	W. Levenga

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