Social Media for Society 5.0: Nostalgia Function and Social Connectedness

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Abstract
Society 5.0 post-pandemic has an essential need in accordance with its existentialism as a human being, namely, to feel connected to each other. A valuable lesson from the COVID-19 pandemic shows that limiting interactions with other people doesn't stop people from staying connected. They use social media as a tool to connect themselves with others personally and widely. This study consists of two studies that aim to provide empirical evidence that the use of social media plays a role in predicting the psychological function of nostalgia (study 1), and the function of nostalgia plays a role in predicting social connectedness (study 2). The results showed that social media had a significant role in predicting the nostalgia function, and the nostalgia function was shown to play a significant role in predicting social connectedness. The findings of this study suggest that using social media as a form of social media memory can trigger nostalgic memories, allowing people to experience nostalgia and social connectedness in the current day.

Keywords
Memory nostalgic, nostalgia, social connectedness, social media, social media memory

1. Introduction
Three years of pandemic have brought several impacts to people such as, academic stress, loneliness which plagues youth in several countries (Groarke et al. 2020; Lee et al. 2020; Rinaldi 2021), and the need to accept the reality of shifting routines and way of life in establishing interpersonal relationships with friends or family (Smith et al. 2020). During this COVID-19 pandemic, humans are faced with a paradox that the more often interpersonal relationships occur, the higher the risk of contracting the COVID-19 virus. Throughout the time, this condition is being considered as a ‘normal’ condition that everybody will face. If this condition made by the paradox is not addressed carefully, psychological issues such as isolation or loneliness, as well as low well-being would become more prevalent.

Despite the shifts caused by the pandemic, modernization will continue and the human need for relationships with each other will continue to exist as a form of self-existence (Fromm and Anderson 2002). Human-made technology is primarily designed to suit human needs in terms of interpersonal relationships. This fact is considered to help fulfill the need to establish interpersonal relationships, although there are those who think that the same technology can also worsen one's mental health. The use of technology is particularly relevant, including to promote social connectivity, based on the reality of modern society's needs, or so called Society 5.0, to always be connected with others and pay attention to mental health.
Social connectedness reflects the need for human’s cognition to be able to interact with the social world (Lee et al. 2001). Individuals who are connected to the social world have characteristics including feeling close to others, easy to make friends with others, easy to be recognized by others, and highly participating in social activities (Lee et al. 2001). With social connectedness, humans can minimize the loneliness they feel as an effect of the modernization of the world (Fromm and Anderson 2002). One of the inner resources that humans must help create social connectedness is nostalgia (Vess et al. 2012). Feeling connected towards others is one of the psychological functions of nostalgia (Hepper et al. 2012; Vess et al. 2012). Nostalgia is more than simply a pleasant memory; it is a priceless memory that has been shown to have a variety of impacts on us (Hepper et al. 2012; Routledge et al. 2013; Sedikides and Wildschut 2018, 2020; Vess et al. 2012), earning it the title of inner resource.

Modern civilization in the Society 5.0 era is believed to have behavioral habits of using technology such as social media not only to stay connected, but also to make social media a social media memory (Jacobsen and Beer 2021). Nostalgia as a memory can be freely stored on social media, which will form new experiences for users and even share the positive impacts of nostalgia with others (Jacobsen and Beer 2021; Zinchenko 2011).

1.1 Objectives
This study aims to obtain empirical evidence regarding positive attitudes and the use of social media to obtain the psychological function of nostalgia (Study 1), as well as the role of nostalgia in predicting social connectedness in modern society (Study 2). Therefore, the hypothesis that is being proposed in this study is, as follow:
H1: User attitudes on social media play a role in predicting the nostalgia function (Study 1).
H2: Function nostalgia plays a role in predicting social connectedness (Study 2).

2. Literature Review
2.1 Nostalgia
Routledge et al. (2013) defined nostalgia as a sentimental experience that can be described as a mixed emotional state (Cheung et al. 2020; Newman et al. 2019), or even as an emotional positive state (Wildschut et al. 2011). Although negative events can trigger the emergence of nostalgia as a memory (Newman et al. 2019), it cannot be denied that research evidence shows the various positive effects of nostalgia for humans (Cheung et al. 2013; Cheung et al. 2020; Sedikides and Wildschut 2020; Wildschut et al. 2010; Zhou et al. 2008). Recent research on nostalgia showed that the type of anticipated nostalgia is considered to be able to anticipate the nostalgic feeling of an experience that could be unpleasant, which is recalled in the future (Cheung et al. 2020). Therefore, it further reinforces the positive function of nostalgia for well-being and self.

Nostalgia has several functions that are the focus of this research, namely positive affect, self-regard, social connectedness, and meaning in life (Hepper et al. 2012; Routledge et al. 2013). In particular, this study focuses more on the nostalgia function on social connectedness. Previous studies have shown that nostalgic memories have an effect on a person in perceiving the existence of social connectedness (Wildschut et al. 2010).

2.2 Social Connectedness
Social connectedness is viewed as a self-attribute that represents the awareness of long-term interpersonal closeness with the larger social world (Lee and Robbins 1995). Furthermore, social connectedness is understood as a sense of closeness to others which is very crucial for a sense of belonging to someone and is based on the experience of proximal and distal relationships (for example, parents, peers, strangers, community, and society) (Lee et al. 2001). As a result, social connectedness is interpreted or perceived as a sense of closeness to other individuals in this study.

As a construct that is considered multidimensional, social connectedness has two main elements, namely: 1) relational component that presupposes bonding with other people; 2) component of autonomy which refers to how individuals feel when they are valued in a relationship (Barber and Schluterman 2008). Individuals feel socially connected not only through interactions with others but also by feeling connected and validated by others. Certain antecedents, such as similar features and drive, are needed for individuals to connect. By lowering anxiety and sadness, social engagement brings comfort and well-being.
3. Methods
3.1 Method Study 1
Study 1 was conducted to test H₁. This study is a predictive correlational study conducted by giving self-report questionnaires to participants through LimeSurvey. The participants were given informed consent regarding what they should do, their rights as participants, and the consequences of this study. There were 170 participants aged between 18-71 years (M=27, SD=13) consisting of 19% (33) male and 81% (137) female.

3.2 Method Study 2
Study 2 was conducted to test H₂. This study is a predictive correlational study conducted by giving self-report questionnaires to participants through LimeSurvey. The study was conducted on 128 active users of social media, aged between 18-29 years (M=21.23, SD=1.82), male 38% (49) and female 62% (79). All participants are students from various universities in Jakarta, Indonesia.

4. Data Collection
4.1 Data Collection Study 1
There are 2 instruments used in study 1. First, attitudes in using social media are measured using the Media and Technology Usage and Attitudes Scale-MTUAS (Rosen et al. 2013) which was adapted in Indonesian version. The authors of this study only look at the attitude of people who use social media and overlook the frequency with which they use it. This is done with the understanding that using technology to acquire a positive effect from nostalgia may be done by focusing on attitude rather than the frequency with which social media is used. On the other hand, in the current digital world, particularly in the situation of persons who use social media more frequently owing to a lack of space, it is difficult to place limitations on how often they use social media. The attitude scale in social media usage consists of 12 items, has 3 dimensions, namely positive attitude, anxiety or dependence, and negative attitude. In this study, the internal consistency obtained from attitudes in social media usage is $\alpha=0.756$.

Second, nostalgia is measured using the State Functions of Nostalgia Scale (Hepper et al., 2012) which has been adapted in Indonesian for use in this study (Abraham et al. 2020). This instrument consists of 16 items (scale 1=strongly disagree to 6=strongly agree). The four nostalgia functions measured in this instrument consist of positive affect, self-regard, social connectedness, and meaning in life. The internal consistency of this measuring instrument is $\alpha=0.940$.

4.2 Data Collection Study 2
Data was collected through two instruments. First, nostalgia is measured through the State Functions of Nostalgia Scale (Hepper et al. 2012) which has been adapted in Indonesian (Abraham et al. 2020). The results of the calculation of internal consistency in this study for the four dimensions of this measuring instrument ranged from $\alpha=0.803$ to $\alpha=0.882$. Prior to completing this instrument, participants were instructed to review their own social media posts, particularly those that featured interactions with other individuals. Then they were asked to recall a nostalgic memory from the social media post and write down the nostalgic memory that came to mind. After that, participants completed 16 items on the State Functions of Nostalgia Scale.

The second instrument used to measure Social Connectedness is the Social Connectedness Scale- Revised (SCS-R) (Lee et al. 2001), which was first adapted into Indonesian by the authors themselves. The result of the calculation of the internal consistency of SCS-R in this study was $\alpha=0.879$. This instrument consists of 20 items with a scale of 1=strongly disagree to 6=strongly agree.

5. Results and Discussion
5.1 Results and Discussion Study 1
The result of hypothesis testing for H₁ can be seen in Table 1 and Figure 1. Based on the calculated data in Table 1, it is known that the attitude of using social media plays a significant role in predicting nostalgia (H₁), $R^2=0.074$, F(4.405, 3). Of the three dimensions that shape the attitudes of social media users, the positive attitude dimension gives the largest contribution to the relationship between social media users' attitudes and nostalgia ($\beta=26.2\%$), which means that the more positive a person's attitude towards using social media is, the more positive he/she will get nostalgia. The next dimension that contributes to this calculation is anxiety or dependence ($\beta=24.5\%$). Where this means that the more anxious a person is if they do not use their social media or are very dependent on their social media, then the positive psychological function of nostalgia becomes weak for that person. Meanwhile, the negative attitude
dimension does not have a significant role in predicting nostalgia. This means that a negative attitude of the use of social media does not contribute to the psychological function of nostalgia.

Table 1. Regression Calculation H1

<table>
<thead>
<tr>
<th>User attitude on social media → nostalgia function</th>
<th>Sum of square</th>
<th>df</th>
<th>Mean of square</th>
<th>F</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>User attitude on social media</td>
<td>2371.100</td>
<td>3</td>
<td>790.367</td>
<td>4.405</td>
<td>0.005</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>User attitude on social media</th>
<th>β</th>
<th>t-value</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive attitude → nostalgia</td>
<td>0.262</td>
<td>3.115</td>
<td>0.002</td>
</tr>
<tr>
<td>Negative attitude → nostalgia</td>
<td>0.090</td>
<td>1.181</td>
<td>0.239</td>
</tr>
<tr>
<td>Anxiety or dependence → nostalgia</td>
<td>-0.245</td>
<td>-2.879</td>
<td>0.005</td>
</tr>
</tbody>
</table>

Figure 1. Model Measurement H1

Attitudes in using social media play a role in predicting nostalgia, this is in line with what was expected by the authors. Modernization in society 5.0 has a positive assessment of technology that can facilitate human relations. Therefore, it is very natural that a positive attitude towards social media will make individuals get the psychological function of nostalgia. Modern society believes that technology such as social media can provide the right solution to the problems they face (Rosen et al. 2013). In this study, it was proven that social media not only functions as a medium for connection between individuals, but also as a tool to store and share nostalgic memories where the psychological effects of nostalgia can be felt together (Jacobsen and Beer 2021; Zinchenko 2011). Nostalgia has a function to provide positive affect, a sense of self-worth, to make a person feel connected to others, and to gain meaning in life that enables individuals to live their lives better. This is a solution to the psychological problems faced by humans. When modernization is stressful to a person and might lead to bad mental health, nostalgia, or recalling nostalgic memories and gaining good psychological functions from them, can help to alleviate this situation (Routledge et al. 2013; Sedikides and Wildschut 2020; Vess et al. 2012; Zhou et al. 2008).

Individuals' anxiety when they are away from their social media reduces the psychological function of nostalgia in themselves, which is something that can be understood. People in this digital era, including social media, are already quite familiar with or fully reliant on technology. There are a lot of activities and private lives that are open to public scrutiny. Therefore, it is valid to assume that social media is now known as social media memory, because nostalgic memory, which was previously private, has become public due to human attachment to technology (Jacobsen and Beer 2021). An important finding from this study is that the more worried a person is away from social media, the
less optimal the psychological function of nostalgia feels. An important finding from this study is that the more worried a person is away from social media, the less optimal the psychological function of nostalgia feels. Modern day societies, such as Society 5.0, are thought to have been hooked to social media because the memory attached to social media would elicit thoughts and memories from the past, allowing people to feel engaged with the present and the future (Jacobsen and Beer 2021). Therefore, it is valid to assume that being disconnected from social media makes understanding the psychological function of nostalgia difficult.

Negative attitude does not contribute to the psychological function of nostalgia. This is not in line with previous studies that attachment to social media is needed to benefit from nostalgic memories stored in social media (Jacobsen and Beer 2021). This finding is in line with statement that people who have a negative attitude toward social media are those who believe that utilizing it isolates them and wastes their time (Rosen et al. 2013). This finding is contrary to the results of research conducted by Jacobsen et al. (2021) which shows the benefits of social media as social media memory. But in this study, all the participants are social media users in all levels of social media engagement. Which means that some of the social media users are not ‘fanatic’ person to the social media itself. The limitation of the study is not focus on the social media ‘fanatic’ users or very actively using social media. The authors cannot make generalized this study result on all type of social media users.

5.2 Results and Discussion Study 2

The data in Table 2 shows the demographic diversity of the participants. The participants are all students who study in five areas of Jakarta. Most of them prefer to contact other people through social media such as through direct messages (43%). This shows that young people have a lifestyle to establish relationships with others through social media interactions. Even so, there are still those who prefer face-to-face interaction (34%).

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency (N)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>49</td>
<td>38</td>
</tr>
<tr>
<td>Female</td>
<td>79</td>
<td>62</td>
</tr>
<tr>
<td>Total</td>
<td>128</td>
<td>100</td>
</tr>
<tr>
<td><strong>Campus Location</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>West Jakarta</td>
<td>60</td>
<td>47%</td>
</tr>
<tr>
<td>Central Jakarta</td>
<td>17</td>
<td>13%</td>
</tr>
<tr>
<td>South Jakarta</td>
<td>25</td>
<td>19.5%</td>
</tr>
<tr>
<td>East Jakarta</td>
<td>16</td>
<td>12.5%</td>
</tr>
<tr>
<td>North Jakarta</td>
<td>10</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Year of Study</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First year</td>
<td>17</td>
<td>13.2%</td>
</tr>
<tr>
<td>Second year</td>
<td>12</td>
<td>9.3%</td>
</tr>
<tr>
<td>Third year</td>
<td>33</td>
<td>26%</td>
</tr>
<tr>
<td>Fourth year</td>
<td>41</td>
<td>32%</td>
</tr>
<tr>
<td>Fifth year</td>
<td>9</td>
<td>7%</td>
</tr>
<tr>
<td>Sixth year</td>
<td>2</td>
<td>1.5%</td>
</tr>
<tr>
<td>Seventh year</td>
<td>14</td>
<td>11%</td>
</tr>
<tr>
<td><strong>Preference to contact other people</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Face to face meeting</td>
<td>44</td>
<td>34%</td>
</tr>
<tr>
<td>Online meeting</td>
<td>19</td>
<td>15%</td>
</tr>
<tr>
<td>Social media interaction</td>
<td>55</td>
<td>43%</td>
</tr>
<tr>
<td>See posts on social media</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Response via comment and like in social media</td>
<td>6</td>
<td>5%</td>
</tr>
</tbody>
</table>

The H2 test results are shown in Table 3 and Figure 2. Table 3 shows that the psychological function of nostalgia plays a role in predicting social connectivity (H2), \( R^2 = 0.233 \), and \( F(38.252, 1) \). In this study, nostalgic memory in the form of posting with other individuals was used to increase nostalgic psychological function. The nostalgia function predicts social connectedness by 48.2%.

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Table 3. Regression Calculation H2

<table>
<thead>
<tr>
<th>Nostalgia function → social connectedness</th>
<th>Sum of square</th>
<th>df</th>
<th>Mean of square</th>
<th>F</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nostalgia function → social connectedness</td>
<td>5698.816</td>
<td>1</td>
<td>5698.816</td>
<td>38.252</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nostalgia function → social connectedness</th>
<th>β</th>
<th>t-value</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nostalgia function → social connectedness</td>
<td>0.482</td>
<td>6.256</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Figure 2. Model Measurement H2

The findings in this study are consistent with those of several other research that show nostalgia, which is purposely created through nostalgic memories, can affect social connectedness (Cheung et al. 2016). Furthermore, the findings of this study corroborate the assertion that social connectedness is important in providing meaning in life through nostalgia (Sedikides and Wildschut 2018). Based on the findings of this study, it can be concluded that posting with others on social media can activate the nostalgia function, resulting in the sensation of being connected to others.

The results of Study 2 prove the view of awareness of the importance of having close relationships with others and extends to a wider scope (Lee et al. 2001; Lee and Robbins 1995). This view is still considered relevant for Society 5.0. The effect of the COVID-19 pandemic, where previously there was a perception of self-isolation due to restrictions on space to interact with others, has made modern society post-pandemic still need social connectedness. This is in line with the predictions of modern extensionist psychology experts who say that modernization will not deny the true existence of humans, namely their need to stay connected and establish interpersonal relationships with other people (Fromm and Anderson 2002).

Posting on social media with other people creates a nostalgic memory, which is a positive function of social media memory. When a nostalgic memory evokes a pleasant emotion, it generates a sense of belonging to others, even if the individual is not physically there with the people in the post. This is in line with nostalgia's role of improving social relationships, attachment security, interpersonal skills, and social support (Wildschut et al. 2006). This study's empirical evidence will be a beneficial contribution to modern society. When circumstances prevent a person from making direct contact with others, memories recorded on social media allow that person to maintain a sense of social connectedness through nostalgia that arises in his thoughts and feelings.

This study features a restricted control group, indicating that the participants genuinely share posts on social media with others. A limitation of this study is the pandemic situation, which limits laboratory research.

6. Conclusion
6.1 Conclusion Study 1
Based on the findings of Study 1, it can be stated that using social media as a social media memory and obtaining the psychological function of nostalgia is natural for Society 5.0. The implication of this study 1 is that the nostalgic memory kept in one's social media is not anything private, but rather something public that others can enjoy. So that modern society can still benefit from the psychological function of nostalgia by using social media as a social media memory.
6.2 Conclusion Study 2

Social connectedness is an essential need in Society 5.0. This can still be enjoyed by modern society through the positive function of social media memory which contains nostalgic memory in the form of posts with other people. Future obstacles will not prohibit a person from fulfilling his or her desire to connect with other people. As a conclusion, empirical data suggests that social connectedness exists, which can be sensed through the nostalgia function caused by posting with other individuals on social media.

6.3 General Conclusion

In general, it can be concluded that social media is very relevant for society 5.0. Its function is to keep people feeling connected to each other, which is proven in this study. The positive benefit of social media memory is that it gives people a pleasant nostalgic function for themselves and makes them feel personally connected and extended to others. Humans' need to keep linked to their fellow humans is still evident in the present era.

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References


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