Use of de-polarizing techniques to influence students in a Cultural Heritage setting

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Abstract

De-polarizing techniques may be useful in trying to achieve social goals in a cultural heritage setting. The questions which techniques to use and when to use them is not clear. As an example, we discuss two techniques to increase openness to diversity of opinion. We then discuss results and possible explanations and the importance of testing. We then discuss possible ethical issues in trying to social engineer more openness and diversity of opinions.

Keywords

Cultural Heritage, Persuasive Computing, Diversity

1. Introduction

In a previous position paper [1] we argued for the benefits of letting the user choose what policy of opposing opinions they would like to hear (encouraging diversity of opinions). This was done transparently according to user preference. They could choose to hear only their own opinion (someone who was closed to differing opinions (for an amalgam of reasons)) or differing opinions (they recognized their own view and wanted to hear other opinions to broaden their horizon) or people who wanted to hear a mix of opinions).   This seemed a reasonable solution to using persuasive techniques but not being manipulative. In this paper we wish to examine the use of de-polarizing techniques in order to accomplish a social goal for an additional stakeholder (society, a museum, or cultural heritage site). The idea being we expose students at cultural heritage sites to hear a diversity of opinions. The social goal that we are aiming for is mainly increasing openness, but also perhaps inclusion and belonging by allowing differing opinions.

2. Background

Political and cultural polarization blights the public arenas in democratic societies posing ongoing threats to the social cohesion and the political process [2]. Growing attention is focused on the role of social media and mobile assisted realms in promoting polarization. Algorithms driving social media and mobile information consumption increase individuals' exposure to information enhancing preconceived opinions [3]. This creates "echo chambers" in which self-confirming evidence is adopted uncritically while opposing views are rejected as "fake news" and adversaries are demonized [4].History education and heritage sites have also become arenas of polarized politicized debates. Interpretations of the past which shed doubt on a nation's moral image or threaten to harm its esteem are deemed unpatriotic and ostracized while conservative and time accustomed historical

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symbols are criticized as colonialist and racist [5]

However, heritage sites may also offer trajectories for dialogue and pluralistic engagement. Thus, for example, Dutch museums dealing with controversial heritage such as slave trade or collaboration with Nazism created activities in which visiting students take up the roles of various historical agents, research their lives and engage with other[6] . Mobile learning in museums can also offer visitors the chance of an individualized active engagement with historical artefacts, making meaningful personalized structuring and interpretation of the exhibits according to their opinions [7]. Still, it is unclear whether encountering another person's opinion about the past or individualized interpretation of heritage facilitates depolarization [8]. Debate with peers presenting opposing opinions may actually lead to entrenchment due to confirmation bias and face keeping [9]. Similarly, tracing a personalized path and interpretation based on a mobile learning system may lead learners to establish their own polarizing echo chamber in the museum.

3. Method

The sample consisted of 196 students from four schools in the Haifa District in the Israeli public education system. Of these, 52 were in 10th grade (26.53%) and 144 were in 11th grade (73.47%). Of the 186 students who answered the gender question, 97 answered "female" (52.15%), 86 answered "male" (46.77%, 3 answered "Other" (1.61%). Of the 186 students who answered the question "To which identity group do I belong" 151 answered "Jewish" (81.18%), 19 answered "Christian" (10.22%), 16 answered "Don't know" (8.6%). Of the 188 who answered the definition of their degree of religiosity, 146 defined themselves as "secular" (77.66%), 40 defined themselves as "traditional" (21.28%) and 2 as "religious" (1.06%).

As part of the study the students were presented with two opinions concerning an historical event which related to one of the exhibits. The students were previously asked what their opinion was of the cause of that particular event. We measured student's openness using the Active open mindedness (AOT) questionnaire [2]. The students were reminded of their own opinion and then exposed to two other opinions which they were asked to analyze by coloring the statements in the opinion to whether they agreed or disagreed with the statement. The two possible configurations (experimental conditions) that the students were exposed to were: 1) Two different opinions, , the reasoning behind this is that the more exposure to differing opinions the more likelihood of achieving understanding; 2) One opinion which was similar to the user's opinion followed by an opinion which was different, the reasoning behind this is that the first similar opinion opens him up to future different opinions (self-affirmation, then understanding).
The process itself consists of three screens. In the first he is asked to analyze the text based on 4 criteria, marking each of the following options with a different color: 1) I agree with the arguments 2) I understand but disagree 3) Items that caused me to rethink my views and I am still formulating my response 4) Items that I totally disagree with. They then select what is their relationship to the view presented.
In the second screen they see what they colored as 2 (understand but disagree) and 3 (rethink) and are asked to give reasons for each of their colorings. In the third screen they see their coloring again and are asked: a) what are the values embedded in the view presented and b) independent of your individual opinion what is your evaluation of the historical arguments used.
AOT was measured 4 times, twice during the museum visit (before and after activities) and two weeks later before an activity conducted at the school

Figure 1: Example of User Interface to allow de-polarization by colorings different opinions

4. Discussions

Since this is position paper, we won't go into details concerning the results. After 1-2 classes, we had results which pointed to increased openness using the presentation of the same opinion, followed by a differing opinion. However as more data came in, the results began to point to the fact that this technique reduced openness and that providing two different opinion provided more openness overall.

In the beginning, we thought this pointed to the fact that giving a similar opinion would make students at ease and more willing to accept the different opinion that followed. However, results showed that giving the first a similar opinion caused a confirmation bias, which actually reduced openness.

The question arises to the ethics of using these techniques, while we don't think it is necessary to inform the students of these techniques, since this part of the educational process. However, what is perhaps open to debate is whether we need to label the opinion. Perhaps a general transparency warning that a variety of opinions will be presented. Another question are all different opinions legitimate. That is, perhaps opinions that are hateful, demeaning, or anti-patriotic would need to be censored? A distinction should be made between actual student opinions and those brought by the institution. Also, the categories given are not equivalent hateful and demeaning answers can be easily (ethically) deleted, while anti-factual posts are more problematic (perhaps more educational to provide fact-checking), and deleting anti-patriotic posts could be controversial (while not deleting them raises questions of why taxpayer dollars are supporting this).

We could not use personality testing to test students since this was prohibited by the Ministry of Education, thus the only personalization possible would be based on AOT. We did not see any statistical evidence that there were correlations between openness and effective de-polarization techniques

5. Conclusions

Use of persuasive techniques for students can be useful to achieve social goals. Society as a stakeholder has legitimate reasons to try to achieve openness to a diverse set of opinions, using cultural heritage as a context. However, issues of transparency and levels of persuasion must be considered to avoid manipulative actions
In addition, the human psyche is very fickle and when using such techniques, it is important to test to see that it brings the desired results. Not always are applicable theories correct for particular contexts. In addition, people react differently to different techniques, so it may be important to understand which techniques work best for which students. This can be done on a personal individualized manner or can be based on personality traits such as openness.
Overall, we believe additional research needs to be done within this area, perhaps with opinions generated by AI. This on one hand could relieve the burden of generating many different types of opinions, however, probably would require human review especially when working with students.

Declaration on Generative AI
The author(s) have not employed any Generative AI tools.

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