

Examining Relationship Between Social Media and Cross-Cultural World Mindedness Among College Students: A Cross-Sectional Study

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Abstract

Background: There is a cultural shift happening in which social media has overtaken television as the main source of information, as surveyed of 18- to 24- year-olds. Today, 7 in 10 Americans use social media, an increase of 60% usage since 2005. With the increased usage in social media, it is important to examine the impact it has on society. **Objective:** This study aims to explore the relationship between social media and cross-cultural world-mindedness. The authors wanted to investigate the degree to which cultural perception was impacted by social media use by addressing social cognitive theory and media systems dependency theory. Specifically, the investigators wanted to assess if the type and amount of social media, or media dependence, influenced cultural world-mindedness. **Methods:** A cross-sectional analysis examined social media use and dependence, perception of environmental protection, tolerance of diversity, world citizenship, and resource sharing. **Results:** Results indicated there was a weak, negative relationship between environmental protection and social media use and dependence; a weak, positive relationship between world citizenship and social media use and dependence; and a weak, positive relationship between resource sharing and social media factors. To examine political affiliation differences in world-mindedness, a one-way ANOVA was conducted. Results indicated that overall, group differences were present, $F(4, 1183) = 98.40, p < .001, \eta^2 = .25$. Based on the effect size (η^2), it was apparent that a large effect was present. Post hoc testing using Bonferroni comparisons indicated that republicans were significantly lower in world-mindedness than all other groups, $p < .001$. **Conclusion:** The strongest predictor of world-mindedness was political affiliation, with weaker relationships found between social media frequency and environmental protection, world citizenship, and resource sharing. The frequency of social media may be less important than the selection of media messages.

Keywords

Media Systems Dependency Theory (MSDT), Social Cognitive Theory (SCT), Cross-cultural World-mindedness, Social Cognition, Social Media

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1. Introduction

There is a cultural shift happening in which social media has overtaken television as the main source of information, as surveyed of 18- to 24-year-olds [1]. Today, 7 in 10

Americans use social media, an increase of 60% usage since 2005 [2]. With the increased usage in social media, it is important to examine the impact it has on society. Sidani et al. showed that U.S. young adults who spent more time on social media were more than twice as likely to report eating

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concerns compared to those that spent less time on social media. Brunborg et al. reported the more time adolescents spent on social media the “greater likelihood of heavy episodic drinking, even after adjusting for grade level, impulsivity, sensation seeking, symptoms of depression, and peer relationship problems.”

How we acquire knowledge about others and ourselves is as equally important as to how we use that information to make interpretations or judgements during social interactions. The purpose of the current study was to investigate the degree to which cultural perception was impacted by social media use by addressing social cognitive theory and media systems dependency theory. Specifically, the aim of this study was to assess if the type and amount of social media, or media dependence, influenced cultural world-mindedness.

2. Background

2.1. Social Cognitive Theory

Social Cognitive Theory (SCT) posits a reciprocal deterministic relationship between the individual cognitive factors, their environment, and behavior all interacting to influence behavior [3]. In other words, collective messages and figures seen in the media can influence our perceptions of the world and thereby our behaviors. A key concept of SCT is observational learning, which occurs through interpersonal or media displays of the behavior [4]. For example, Bonds-Raacke et al. found positive media portrayal of gay or lesbian characters were associated with more positive attitudes towards gay men and lesbians. Hefner et al. reported “individuals who use social media become media producers, and so the impact of their actions can create a chain reaction that may influence others’ beliefs and attitudes.” These actions can be deemed negative or positive SCT behaviors. A positive SCT behavior encouragement can be found among student activist groups using social media to coordinate political actions, express political views, and for issue-oriented advocacy [5]. A negative SCT behavior encouragement can be found in the spread of misinformation and the perceived outcome expectation of the social media user.

2.2. Media Systems Dependency Theory

The impact of media, specifically social media, has been widely studied to understand individual behavior and knowledge or perceptions about self and others. Media Systems Dependency Theory (MSDT) is the study of an individual's reliance on media to satisfy information needs, provide meaning, and possible distractions from their social world and relate to the cognitive, affective, and behavioral constructs of MSDT, respectively [6]. Like SCT, the

affective, behavioral, and cognitive constructs in the MSDT model explores the impact media has on feelings of representation, behavioral activation, and attitude formation.

Cognitive constructs explore the role of media as adding to or removing ambiguity to information, which is caused by incomplete or conflicting messaging. When an event happens, people generally rely on the media to remove ambiguity and thus the importance of media messaging and transparency is critical in accurately disseminating information. Attitude formation, agenda-setting, expansion of peoples' system of beliefs, and values are addition cognitive effects. Agenda-setting is the interactional process by which information is filtered and processed by people's interest and concern [6]. The information presented in the media is ongoing yet people have busy schedules and will oftentimes view content that reflects their own lives. For example, political identity can predict the type of news outlet used to learn about an event resulting in conservative viewers choosing conservative outlets and liberal viewers choosing liberal outlets.

Mehrad and Yousefi [7] discussed weaknesses of MSDT, specifically, “audience(s) merely select what they wish among what is presented by the media for them,” however, we aim to explore the autonomy of social media and how it changes MSDT and the presentation of information. This study will explore social media or social networking sites (SNS) and the role SNS plays in information processing and perception of information validity as it relates to world-mindedness. We believe SNS should be addressed separately from traditional media and explored similarly to MSDT.

2.3. Cross-Cultural World-Mindedness

World-mindedness refers to a person's social responsibility to think and care about their actions and how decisions affect and are affected globally [8,9]. What we know about cultures is influenced by past social interactions, whether direct or indirect. Stereotypes represent the cognition or beliefs about a social group; these can either be positive or negative perceptions about a group [10-11].

The two major forms of social identification at the national level are “patriotism” and “nationalism” [12]. Although ambiguities exist as to the definition and operationalization of these terms, they can be broadly differentiated to represent the positive and negative manifestations of national identity respectively [12]. Patriotism, the positive representation of national identity, refers to one’s feelings towards their country and alludes to one’s love for and pride or attachment to one’s nation [12]. Nationalism, the negative representation, refers to one’s perceptions of national superiority with an orientation towards national dominance [12]. Patriotism is

associated with a more cooperative or peaceful approach to the world where as nationalism, is associated with a more competitive or militaristic approach to the world.

Meyer and Milligan noted “world-mindedness requires cross-cultural communication in support of international activities to address global challenges, as well as shared understandings about responsibility for the well-being of the planet—for the individual, one’s group, one’s nation, and cross-national organizations [8].” Similar to group-based identity informed by social interactions with others, one’s interaction or connection to other global citizens predicted global citizenship identification [13]. Global citizenship is “awareness, caring, and embracing cultural diversity while promoting social justice and sustainability, coupled with a sense of responsibility to act” [13]. World-minded individuals are therefore more likely to see viewpoints that differ from their own as valuable, and appreciate cultural differences [13]. World-mindedness and media go hand-in-hand as interconnectedness facilitates media globalization, the change from the direct to digital interaction, and the impact social media has on the cultural milieu.

3. Methods

The survey for this study combined the Der-Karabetian Cross-Cultural World-Mindedness Scale and Pew Research Center Media Use Scale. The survey was reviewed by an internal ethics committee and received IRB expedited approval status through the primary investigators university.

Participants were recruited from three universities, two public and one private, in the southern region of the U.S.; university students were recruited through the university e-mail listserv. Participants were incentivized to complete the survey through a drawing at the end of the survey to win one of six \$50 Amazon gift cards. Gift card monies were provided by the primary investigators university.

The following research questions (RQ) were explored: (RQ1) Is there a correlation between social media usage and cross-cultural world-mindedness? (RQ2) Does media usage influence views of world citizenship? (RQ3) What factors influence media use? The survey was disseminated and collected using Qualtrics and analysed using SPSS. All participants had to acknowledge the consent form at the beginning of the online survey thereby providing consent by participation in the survey questions.

Participants included 1,357 university students with a mean age of 26.71 ± 9.79 years. 1,165 of 1,363 participants identified as female (85.5%), 665 participants identified as White (62.4%), and 527 identified as Democrat in political

affiliation (38.7%). It is important to note that some participants chose not to answer gender, therefore, percentages are expressed in valid percent. The investigator also acknowledges the unproportionate gender representation, limiting the external validity of the gender associated findings. Separate analyses were used to examine how gender, race, political affiliation, and social media use and dependence related to world-mindedness. Specifically, an independent-samples *t*-test was used to examine gender differences, ANOVA was used to examine race and political affiliation differences, and a multiple regression was used to examine how social media use and dependence related to world-mindedness. A large regression model that included all IVs was not feasible due to issues that arise with the inclusion of multiple categorical variables (i.e., not enough participants in each specific combination of categorical factors).

4. Results

First, an independent-samples *t*-test was used to examine gender differences in world-mindedness. Results indicated that female participants had a higher level of world-mindedness than men, $t(1,332) = 6.65$, $p < .001$, $d = .44$. Based on the effect size (d), it was apparent that the group difference was moderate [14].

To examine political affiliation differences in world-mindedness, a one-way ANOVA was conducted. Results indicated that overall, group differences were present, $F(4, 1354) = 110.90$, $p < .001$, $\eta^2 = .25$ (see Table 1). Based on the effect size (η^2), it was apparent that a large effect was present [14]. Post hoc testing using Bonferroni comparisons indicated that Republicans were significantly lower in world-mindedness than all other groups, $p < .001$. In addition, Democrats reported significantly higher levels of world-mindedness than independents ($p < .001$) and no preference ($p < .001$), but not other ($p = .06$). Independents, other, and no preference affiliation groups did not significantly differ from one another ($p > .05$). A one-way ANOVA was used to examine political affiliations group differences on social media use. Results indicated there were significant differences among the political groups, $F(4, 1334) = 12.34$, $p < .001$, $\eta^2 = .03$. Based on the size of the eta2 effect, it was apparent that group differences were small [14]. Post hoc pairwise comparisons using the Bonferroni adjustment indicated that Democrats reported significantly higher usage than other political affiliations. In addition, Independents reported significantly lower usage than No Preference ($p = .03$).

Table 1. ANOVA used to examine group differences in political affiliations and world-mindedness.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	113.099	4	28.275	110.894	0.000

a. $\eta^2 = .247$ (eta squared) (Adjusted R Squared = .245).

b. Computed using alpha = .05

A similar one-way ANOVA was conducted to compare race/ethnicity differences on levels of world-mindedness. Results indicated that significant group differences were present, $F(3, 1188) = 4.37, p = .005, \eta^2 = .01$. Based on the small effect size of .01, it was apparent that group differences were minimal [14]. Post hoc tests using Bonferroni comparisons indicated that Asian participants had significantly higher levels of world-mindedness than White participants. There were no other significant pairwise differences.

Another one-way ANOVA was used to examine generation group differences on social media use. According to Pew Research Center [15] Gen Z are 22 and under, Millennials are 23- 38, Gen X are 39- 54, and Boomers are 55- 73. Results indicated there were significant differences among the

generation, $F(3, 1324) = 12.34, p < .001, \eta^2 = .19$. Based on the size of the eta² effect, it was apparent that group differences were large [14]. Post hoc pairwise comparisons using the Bonferroni adjustment indicated that Gen Z had significantly higher social media use than all other groups ($p < .001$). Similarly, Millennials had significantly higher frequency of SM use than Gen X and Boomers ($P < .001$). Finally, correlation analysis was used to examine the relationship between world-mindedness subscales and social media use and dependence. There was a weak, negative relationship between environmental protection and both social media use and dependence. There was also a weak, positive relationship between world citizenship and social media use and dependence. Lastly, there was a weak, positive relationship between resource sharing and both social media factors (see Table 2).

Table 2. Bivariate relationships between social media factors and world-mindedness.

	Social Media Use		Social Media Dependence	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
World Mindedness	-0.02	0.57	0.05	0.05
Environmental Protection	-0.21	<.001	-0.07	0.01
Tolerance of Diversity	-0.05	0.07	0.04	0.18
World Citizenship	0.16	<.001	0.06	0.02
Resource Sharing	0.06	0.01	0.06	0.02

Note. Pearson correlations (*r*) are displayed along with tests of significance (*p*). World Mindedness represents the mean of all items (i.e., the total scale score).

A regression analysis was used to predict the social media use using the four sub-scales for world-mindedness. There were many significant correlations between each subscale and social media frequency due to the large sample size, however, the strongest actual correlations share 4% of variance. Overall, the world-mindedness subscales predicted 1% of variance in social media use, $F(4, 1344) = 5.96, p < .001$. This regression analysis reflects the lack of variability in measuring media dependency and relied on one or two questions assessing media frequency.

5. Discussion

5.1. Principal Results

The main findings of this study was the relationship between political affiliation and world-mindedness. To address RQ1, social media did not predict world-mindedness, though there were some weak correlations, however, political affiliation did predict world-mindedness. RQ3 examined factors that

influenced social media use, borrowing from MSDT, political affiliation is a cognitive component of intentionally seeking media information that reflects personal beliefs. Political affiliation may determine types of social media and therefore could influence world-mindedness. Democrats reported greater world-mindedness compared to all other groups and Republicans reported the lowest world-mindedness. Although this study aimed to explore the relationship between social media and world-mindedness and Democrats used more social media among all groups, social media frequency was not a predictor in this study. Gen Z and Millennials had higher world-mindedness and used social media more, however, the effect size was very small ($\eta^2 = .01$), indicating that the differences were negligible. The strength of the relationships vary and because of the lack of variability among answers in the social media scale, some analyses were weakened.

Regarding social media use, in comparison to the results of this study to the Pew Research Center results, Facebook was also the primary social media platform (83.4%), however,

Instagram was the most often used several times a day (48.5%), compared to Facebook (44.3%). Much like the Pew Research Center study, younger generations used more media than older generations, with the highest frequency in the Gen Z category, followed by the Millennials. Given our sample, as expected, most of study participants were categorized as Gen Z ($n= 631$) and Millennials ($N= 530$) with the fewest identified as Boomers ($N= 29$).

In examination of the cultural perception among variables, moderate effect size was demonstrated with women scoring higher in world-mindedness than men. Clark cited differences among women and men toward racial attitudes, with women being more liberal [16]. However, due to unproportionate gender representation of the respondents, the researchers cannot assume these gender differences are valid. To reiterate RQ3, other determinants that influence cultural attitudes within the gender gap are religion, race, and marital status [11-13, 16]. Differences in partisan affiliation were present with Republicans significantly lower in world-mindedness and Democrats were significantly higher in world-mindedness, compared to other groups. Racial differences in world-mindedness were present with Asians having a significantly higher world-mindedness compared to Whites, with no other significant group differences established. No differences in marital status and world-mindedness were present, however, married participants did report lower social media use.

When examining the effects of social media usage and world-mindedness, weak relationships were found. Specifically, when examining the subcategories of world-mindedness, a negative relationship between social media usage and environmental protection was established, indicating that the more someone used sites like Instagram or Twitter, the less concerned they were with preserving the environment. In contrast, resource sharing and world citizenship were positively associated with higher social media usage. This addressed RQ2. Participants were more open to sharing their country's wealth and adjust their standard of living to facilitate a universal standard of living among all countries. Establishing a better instrument to assess social media use and its effect on attitude formation may impact future analyses.

There may be a connection between social media and cross-cultural world-mindedness, however, more investigation is needed. It is clear from this study that political affiliation influences world-mindedness, however, it is unclear if political affiliation and agenda-setting could determine social media behavioral influence. Generational age groups were predictive of social media frequency and dependency, however, it is not conclusive that the relationship is meaningful in world-mindedness. The authors recommend a

better instrument to assess MSDT to study the impacts media itself has on cross-cultural world-mindedness.

5.2. Limitations

Research findings indicate that a relationship between social media dependency and cross-cultural world-mindedness may exist. Albeit this, these relationships explained a small to moderate amount of variance. To better inform the role social media plays in how information is processed and understood, the researchers hypothesize that a better instrument to measure media usage and dependency is needed. Specifically, investigating further the role agenda-setting has in media use as it relates to political affiliation. Media bias may have a larger impact on how culture is perceived than exposure to media. Ha et al. concluded, "the potential effects on users' civic engagement by the habitual or spontaneous consumption of SNS is indicated in the MSDT" and supports the development of a better instrument to measure SNS consumption and its relationship to human behavior toward cultures unlike their own [17].

6. Conclusions

The implications of this study further highlight the need to explore the impact of social media on global citizenship. The collective messages we see in the media may influence our perceptions of the world and subsequently, our behavior. As our society becomes more diverse, how culture is portrayed in the media may have a direct impact on building positive cross-cultural relationships. In regards to this study, political affiliation did predict world-mindedness and therefore more exploration into social media use as it relates to agenda setting is recommended. In MDST, agenda setting is part of the cognitive construct where users filter information based on their interests and concerns. Therefore, a better understanding of how social media influences these perceptions can inform the construction of information that facilitates positive social responsibility.

Abbreviations

SCT: Social Cognitive Theory

MSDT: Media Systems Dependency Theory

IRB: Internal Review Board

ANOVA: Analysis of Variance

Conflicts of Interest

The authors have no conflicts of interest to disclose.

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