



Youth Online Activity and Exposure to Diverse Perspectives



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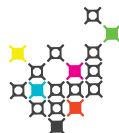
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Abstract

Some see the Internet as a means of exposure to divergent perspectives, while others believe that it is likely to foster echo chambers. We agree that it is important to attend to these possibilities, but we find that this discussion is often framed inappropriately. Drawing on a unique panel survey of the online practices of youth (ages 16–21) and on their civic and political engagement, we find that most youth are not consistently exposed to echo chambers or divergent perspectives. Rather, we find that most youth are exposed to views that align with *and* diverge from their own, or they are exposed to neither. We also find that political interest, particular forms of online participation, and digital media literacy education can promote greater exposure to these diverse perspectives.

Youth Online Activity and Exposure to Diverse Perspectives

Most big changes bring optimistic and pessimistic predictions. Hypotheses regarding the Internet's impact on democratic politics are no exception. Optimists have argued that the Internet provides unprecedented opportunities to engage with diverse publics (e.g., Rheingold, 2000). They predict that individuals will now encounter a wide range of information and perspectives. Others argue just the opposite. By enabling individuals to better select what they are exposed to, some believe Internet users will encounter what Negroponte labeled "the Daily Me," where one encounters only the individuals, information, and perspectives in which she is interested. Indeed, commentators have expressed concern that Internet use will lead to isolation in enclaves of like-minded individuals (Sunstein, 2001). Participants will enter echochambers in a process sometimes called "Cyberbalkanization."

Interest in these possibilities stems from the newness of the Internet, concerns that there is increasing polarization within society, and the belief that exposure to diverse perspectives on civic and political topics is fundamentally important. Indeed, political theorists have long extolled exposure to a wide range of perspectives as an essential support for a free and democratic society (e.g., Dewey, 1916; Arendt, 1968; Habermas, 1989). Perhaps most notably, J.S. Mill (1989/1859) viewed such exposure as essential if one was to pursue truth and to have confidence in one's opinions.

One relatively distinct aspect of this study is its focus on youth (aged 16–21). Interest in this population stems from several factors. First, youth are heavy users and early adopters of digital media (Krueger, 2002; Mossberger et al., 2008). Youth also commonly use digital media in connection with civic and political issues. During the 2008 presidential campaign, 41% of those aged 18–29 watched candidate interviews, debates, speeches, and commercials online without the filter of mainstream media. Indeed, when it comes to use of the Web, there is a generational divide. While 37% of those aged 18–24 obtained campaign information from social networking sites (more than from newspapers), only 4% aged 30–39 did so. For older citizens, these numbers drop still further (Kohut, 2008). Thus, youth practices are a logical focus when

assessing the civic and political significance of digital media and the nature of future engagement in this fast-changing domain.

The focus on youth also makes sense because late adolescence is a time of significant civic and political identity development (Erikson, 1968). It is a time when many youth consider and invest in particular social, political, and moral ideologies. Not unrelated, this is also a time when schools, colleges, youth organizations, religious groups, and parents make explicit and structured attempts to influence and support civic and political socialization. It seems quite possible that when youth are given structured opportunities to develop online abilities and to enact desired online practices, they may become more likely to enact such practices on their own. Studying whether youth take advantage of these opportunities is important, given that many youth lack the skills needed to fully tap the potential of online environments and that these skills are often inequitably distributed along lines of race, class, and gender (Hargittai, 2010).

Will the Internet lead to echo chambers or facilitate exposure to divergent views? One common hypothesis is that the Internet will result in individuals customizing what they see and do in ways that promote a socially isolating Daily Me. For example, Cass Sunstein (2001) writes that the ability of individuals to customize their interests and preferences will lead them to ignore many public interests that are not of personal concern. This may mean, for example, that individuals increasingly watch, read, or comment in forums that align with their perspectives, and it may mean that there are fewer forums that speak to a broad and diverse public. Making a related argument, Paul Star (2010) posits that when people read a paper for the sports coverage or to do a crossword puzzle, they still read the front page and are exposed to news about their community and the broader society. Currently, Star argues, individuals can go online and focus only on their primary interests, lessening broad-based exposure to public issues.

Others posit an alternative hypothesis. Participation in online communities and activities related to personal interests such as hobbies or sports may foster broader networks and more diverse connections. Howard Rheingold (2000) argues that those who share a given interest are, in other respects, often quite different. He contrasts this with geographic communities,

in which many people share similar experiences and, often, social and political perspectives (see Bishop, 2009 for details on geographically based ideological segregation). As a result, these online interest-driven communities may be more heterogeneous with respect to race, gender, and age than face-to-face communities. Indeed, Henry Jenkins (2010) has argued that, when it comes to the development of social capital, online interest-driven participatory cultures may provide today what bowling leagues provided in prior eras: communities where diverse individuals interact and form social capital.

Studies of factors influencing exposure to civic and political perspectives

Recent empirical work sheds light on ways that media practices and online practices, in particular, may influence exposure to diverse perspectives. Scholars find that when the capacity for selecting where one gets one's news increases, exposure to views that diverge from one's own is likely to decrease (Mutz and Martin, 2001). Since the Internet enhances the capacity for selectivity, one might assume that it will diminish exposure to different points of view and thus, potentially, make echo chambers more likely. However, the relationship between capacity for selectivity and exposure to divergent views appears to be weak in online settings, suggesting that selectivity functions differently online. For example, Garrett (2009) found that selectivity online only marginally diminished exposure to perspectives that challenge an individual's previously held opinions. It may be that social boundaries are weaker online. Online settings provide access to any given interaction to a larger number and a greater diversity of people. This may make exposure to views that diverge from one's own more likely, even when one is seeking to select their information or their audience. Indeed, Raine, Cornfield, and Horrigan (2005) found that 50% of internet users reported seeing campaign information by happenstance during the 2004 presidential election season when browsing for a different purpose. Consistent with that finding, Horrigan, Garrett, and Resnick (2004) found that with controls for education and other influences on political knowledge, Internet use was associated with greater exposure to diverse political views. Gentzkow and Shapiro (2010) found only a slight relationship between Internet use and the likelihood that individuals

would visit sites that dealt with news or politics where other visitors shared their ideological orientations, but that ideological segregation in neighborhoods, the workplace, families, and among trusted friends was much greater. Similarly, Mutz and Martin (2001) found that greater opinion diversity is available through the Internet than through interpersonal connections and that individuals have less ability and desire to exercise selective exposure to news media content than when choosing with whom they interact in a face-to-face context.

In addition to the role of media, scholars have also examined how political sophistication and political interest relate to exposure. On one hand, individuals with higher levels of political sophistication appear more likely to seek out perspectives that align with their own (Graber, 1984). At the same time, those who are politically sophisticated are generally also more politically interested, and so they seek out more news and divergent perspectives. Thus, political sophistication and political interest appear likely to promote both increased exposure to views that align with one's own and more exposure to views that do not. This likely explains why liberals who frequently visit liberal sites like <http://moveon.org> are also more likely to visit <http://www.foxnews.com> than the average online news reader. Similarly, conservatives who frequently visit conservative sites like <http://glennbeck.com> are more likely to also visit <http://www.nytimes.com> than the average online news reader (Gentzkow and Shapiro, 2010).

Research questions

Due to the importance of exposure to diverse perspectives on civic and political issues and to our interest in how youth online activities relate to such exposure, our first research question considers the nature of youth exposure to varied perspectives in online contexts. We ask: (Research question [RQ]1) *When online, to what degree are youth exposed to views that align with their own, and to what degree are they exposed to individuals with different perspectives?* Next, since the literature indicates that political interest influences adults' exposure to perspectives, we ask: (RQ2) *Does a young*

person's level of political interest influence her exposure online to views that are similar to or different from her own?

We then examine how different kinds of online activity influence exposure to perspectives on civic and political issues. Often, studies of the relationship between digital media and civic and political life focus solely on politically oriented activities (reading news or blogging about political issues), overall levels of Internet use, or use of particular platforms (e.g., Facebook). In this study, we focus on categories of participation that we have reason to believe may foster exposure to diverse perspectives. In particular, recent work by Henry Jenkins details both the prevalence of online participatory cultures and their potential significance for civic and political life (Jenkins et al., 2009). In online participatory cultures, members create and share their creations with others, experienced members help the less experienced acquire knowledge and skills and to solve problems, and participants develop a sense of connection with one another and with community norms (Jenkins et al., 2009). Networks that develop out of blogging, gaming communities, or other shared interests may become conduits for communication and mobilization. Moreover, these online contexts may create “third spaces” (spaces that are structured neither by work nor by family and friends) where, as Stowe Boyd writes, “people can meet and create those weak ties that make life a richer and more diverse place ... we can let off steam, argue about the local politics or sports and make sense of the world” (in Steinkuehler, 2005).

When conceptualizing the potential civic and political significance of online participatory activities in relation to exposure to diverse perspectives online, we think it is important to distinguish between the foci that drive these activities. In particular, we distinguish between politically driven, nonpolitical interest-driven, and friendship-driven participation. These distinctions are prompted by the findings of Ito et al. (2010) regarding the differing developmental opportunities for youth provided by these differing forms of participation.

Politically driven online participation receives frequent attention from scholars. Such participation includes discussing issues, seeking out and producing information about issues, and communicating with others online about civic or political issues. Given that such interaction and exploration

necessarily involves perspectives on civic and political issues, we expect that these activities lead individuals to be exposed to diverse perspectives.

In this study we also examine nonpolitical interest-driven activity. Such online activity enables youth to pursue interests in hobbies, popular culture, new technology, games, and sports (Ito et al., 2010). Rather than passively consuming content circulated online, participants produce online materials, generate ideas, provide feedback, and participate in online community activities. While these online activities are not political in nature, they are social, and they have the potential to bring together people who share an interest in a hobby but who have varied political views. Furthermore, the highly interactive and social natures of these activities potentially create opportunities for political discussion to emerge. Indeed, Wojcieszak and Mutz (2009) find that exposure to political disagreement is most likely to take place in nonpolitical chat rooms, where discussions of politics come up incidentally, rather than in politically driven online discussion forums. At the same time, as noted earlier, scholars have expressed concern that the pursuit of interests can distract individuals from attending to political topics and may isolate participants in communities of like-minded individuals. As a consequence, nonpolitical interest-driven participation might lower exposure to divergent perspectives. In short, the impact of nonpolitical interest-driven participation is uncertain, but worth investigating.

We also examine online friendship-driven participation. Rather than being oriented around particular interests, friendship-driven participation centers on day-to-day interactions with peers youth see at school or in their neighborhoods. Such online activity often takes place through social media such as Facebook. Do these activities matter when it comes to exposure to diverse perspectives? One hypothesis is that such participation might isolate youth in social contexts where civic and political issues are not raised. An alternative possibility is that the networked social contact that occurs through these forums exposes youth to diverse perspectives, even when political conversations are not the motivation for engaging in these friendship-driven forms of participation.

The degree to which youth play video games may also influence exposure to civic and political views that do and do not align with one's own.

Interest-driven communities arise in relation to many games. Individuals mod, create discussion boards, and create communities around many games and these may provide contexts in which civic and political issues are discussed. For example, Constance Steinkuehler (2005) finds that massively multiplayer online games can create “third places” where such discussions may well take place. These varied possibilities lead us to ask: (RQ3) *How do politically driven, nonpolitical interest-driven, and friendship-driven online participation, as well as youth video game play, influence exposure to views that align with and diverge from one’s own?*

Finally, one sizable difference between youth and adults is that parents, teachers, and after-school educators often place great emphasis on influencing young people’s civic and political commitments, skills, and behaviors. Given our focus on youth, it therefore makes sense to consider whether opportunities for digital media literacy education that occur in schools influence youths’ overall exposure to views that align with and diverge from their own. In particular, we ask: (RQ4) *How do opportunities for digital media literacy education in school relate to these individual’s overall exposure to views that do and do not align with their own?*

Methods

Sample

This study draws on survey data from a sample of $N = 436$ California youth aged approximately 19–22 who were surveyed after the 2008 presidential election, as well as two-wave panel data from $N = 242$ of these youth who were also surveyed during their junior or senior years of high school in 2006 and 2007.

This sample was derived from a larger cross-sectional survey of youth civic engagement and civic education among 5,505 high school juniors and seniors from 21 schools across California in the springs of 2005, 2006, and 2007. Although not proportionally representative of California, schools were purposively selected to ensure a diverse range of demographic and academic characteristics. From this sample, approximately 1,305 (28%) agreed to be contacted again, and 436 (33% of the recruitment pool and 8% of the total

pool) participated in the follow-up survey. The panel sample of $N = 242$ (out of the $N = 436$) represent those who participated in 2006 or 2007, when we began asking questions about youth digital media participation, and who took the follow-up survey in 2009.

We examined differences between the original sample and the sample of individuals who took the survey in 2009, and we found some differences based on gender, political interest, and GPA, but no differences between the samples in digital media participation.

As seen in Table 1, the resulting samples referred to in this study were racially diverse, had a higher proportion of female than male participants (62% vs. 38%), were likely to be enrolled in a 4-year college (86%–89%). Participants in this sample were also slightly more likely to be interested in politics. While a national sample would be preferable, we have no reason to believe that *relationships* between variables would differ in the broader population after controlling for demographic variables that differ between samples. We do, however, believe that the descriptions of distribution of youth online experience (discussed in Finding I) should be interpreted with caution.

INSERT TABLE 1 HERE

Measures

Exposure to shared interests and exposure to diverse perspectives: For the 2006 survey administration, we developed four items to measure youth exposure to shared interests and three items to measure youth exposure to diverse perspectives. Exposure to shared interests was assessed using a 5-point scale of agreement to statements like, “I feel like I’ve been able to connect with people who share my views about ways to create a better world through the Internet.” Exposure to diverse perspectives was assessed using a similar scale in response to statements like, “I feel like I’ve gotten new perspectives on societal issues because of my online activities.” As discussed in the Findings section, these items cohered into a single scale, which was then edited down and tested with additional items for the 2007 and Wave 2 survey administrations.

Political Interest: Political interest was measured at each time period using a single item, “I am interested in political issues.”

Varied forms of digital media participation: The survey examined four types of Internet activity. *Politically driven participation* items asked how often respondents (a) used blogs or social networking sites to share or discuss perspectives on social and political issues, (b) used the Internet to get information about political or social issues, and (c) used e-mail to communicate with others who are working on a political or social issue. We used a six-point scale ranging from “never” (0) to “several times a day” (5) and averaged the three scores ($\alpha = .81$). *Friendship-driven participation* items asked how frequently participants “used email, text-messaging, or instant messenger to communicate with friends and family” and “used blogs, diary, or social networking sites (like MySpace) to socialize with friends, family, or people you’ve met online”. *Interest-driven participation* items asked how often participants (a) used the Internet to organize social or recreational events (games, concerts, dances, competitions, etc.), (b) used the Internet to organize an online group, discussion or Web site, (c) went online to participate in a special interest community, such as a fan site or a site where you talk with others about a hobby, sport or special interest, (d) gave someone you don’t know feedback for something they wrote or put online, and (e) was a leader in an online community. Finally, *participatory gaming* items asked whether participants played networked games or participated in online activities related to gaming such as reading reviews, contributing reviews, or using player-generated code.

Supports for participation: instruction in digital media literacy. Instruction in digital media literacy items asked participants to report the extent to which their high school or college courses provided opportunities such as “learn how to assess the trustworthiness of information they find on the web.”

Control Variables

We employed extensive controls to isolate the effects stemming from demographics, parental involvement, educational attainment, and political

orientations. For example, gender, ethnic identity, and race have been found to be related to both civic commitments and civic and political engagement (Burns et al., 2001; Marcelo et al., 2007), although the nature of these relationships is not uniform for youth aged 15–25 (CIRCLE, 2007).

In addition, youth growing up in families with parents who are civically active tend to become more active themselves (Jennings and Stoker, 2009). Discussion between parents and youth revolving around civic and political issues has also been found to promote varied civic and political outcomes (Andolina et al., 2003). Accordingly, parental involvement was measured by the degree of agreement with two statements regarding the level of civic and political talk occurring at home and the level of parents' involvement in the community (interitem $r = .45$).

We also controlled for respondents' high school GPAs, four-year college attendance, since educational attainment is strongly related to varied forms of participation. Finally, we controlled for the effects stemming from political orientations, measuring *political ideology* ranging from "very liberal" (1) to "very conservative" (5). (For related research, see Verba and Nie, 1972; Mutz and Martin, 2001.)

Findings

1. Few youth interact only with those whose views align with their own. Many youth are exposed to those whose views align with AND diverge from their own. Some youth are exposed to neither.

The first goal of our analysis was to examine the extent to which youth experience shared versus divergent perspectives. However, our data suggested that we needed to reframe our question. Specifically, we conducted principle components analysis with the initial seven items indicating youth exposure to either shared or divergent perspectives. Our analysis indicated that exposure to shared interests and divergent perspectives were indicators of a single unidimensional construct (see Table 2). This finding was repeated with a set of four items that had the highest level of face validity as indicating experiences with shared interests (two items) and divergent perspectives (two items). Again, a single unidimensional construct was

suggested. This finding was replicated in multiple versions of the survey (see Table 2 for full descriptions of findings from each survey).

INSERT TABLE 2 HERE

This suggests that when youth interact online with those who share their views, they are also likely to encounter individuals who hold views that diverge from their own. Similarly, youth who have little exposure to divergent perspectives generally have little exposure to shared perspectives either. Indeed, only 5% of all youth reported high levels of exposure to views that align with their own without also reporting high exposure to views that diverge from their own.

Thus, rather than constructing two measures (exposure to echo chambers and exposure to divergent opinions), we constructed a single measure: exposure to diverse perspectives that assessed the degree to which youth were exposed to both shared and divergent perspectives. Overall, most youth (57%) reported at least some online exposure to those holding diverse perspectives, while a substantial group (34%) disagreed when asked if they had interactions with those who hold either similar or divergent perspectives and (9%) were uncertain.

II. Political interest leads to exposure to diverse perspectives

The next set of analyses focused on the relationship between participants' level of political interest and their exposure to diverse perspectives on civic and political issues. Ordinary Least Squares (OLS) regression was used to examine whether Wave 1 Political Interest predicts Wave 2 exposure to diverse perspectives, controlling for Wave 1 levels of exposure to diverse perspectives, as well as for relevant demographic and background variables. As seen in Table 3, there is evidence that youth with higher levels of political interest are more likely to report exposure to diverse perspectives ($\beta = .17, p < .05$).

INSERT TABLE 3 HERE

III. Both politically driven and nonpolitical interest-driven forms of online activity are associated with greater exposure to diverse perspectives

In the next set of analyses, we used OLS regression to examine the relationship between various online activities and exposure to diverse perspectives. Given that prior political interest and prior exposure to diverse

perspectives were found to be significantly related to the amount of exposure reported during Wave 2, they were included as controls. As seen in Table 4, participants' politically driven online activities were the strongest predictor of exposure to diverse perspectives ($\beta = .30, p < .001$), even more so than previous exposure to diverse perspectives and, not surprisingly, more so than general political interest, which became nonsignificant.

Also notable is the finding that nonpolitical interest-driven participation was related to experiences with exposure to diverse perspectives ($\beta = .21, p < .001$), even after controlling for politically driven activities. Interestingly, there was no relationship between friendship-driven activities and exposure to democratic online communities or between either overall video game play or participatory gaming and exposure to diverse perspectives.

INSERT TABLE 4 HERE

IV. Those who reported opportunities for digital media literacy education had higher levels of exposure to diverse perspectives

The final analysis used OLS regression to examine whether participants' experiences with supports for digital media literacy were related to increased exposure to diverse perspectives. As seen in Table 5, with demographic controls and controls for prior levels of exposure to diverse perspectives, digital media literacy education was significantly related to exposure to diverse perspectives ($\beta = .30, p < .001$). Indeed, having these opportunities was a stronger predictor than political interest ($\beta = .17, p < .05$) or previous exposure to exposure to diverse perspectives ($\beta = .27, p < .001$).

INSERT TABLE 5 HERE

Limitations

As noted earlier, most of the findings from this study are based on a sample of youth who agreed to participate in the follow-up study after the 2008 election. As a result, the distribution of exposure to diverse perspectives may be different in this sample compared with the population in general. Given the follow-up study sample's tendency toward higher levels of college attendance and political interest, the percentage of youth who are exposed to diverse perspectives may be biased upward. Our finding that exposure to

shared and divergent perspectives formed a unidimensional construct was replicated in our larger sample of high school students. Students did not self-select into that larger sample, so we expect that this pattern is fairly robust. Similarly, we have no reason to believe that the relationships we found between online activities and exposure to diverse perspectives are different than would be expected in the general population. We were able to include controls for demographic and background variables that distinguish this group from our initial sample. Clearly, in future work, it would be desirable to examine the frequency of these online experiences and their relationships to one another with a larger and nationally representative sample.

A second limitation has to do with the use of self-reported survey data. It is possible that youth over report their exposure to divergent viewpoints to the extent that they see engagement with political disagreement as a socially desirable response.

Finally, there is the potential concern that interest in politics or interest in online participation (which is related to exposure to diverse perspectives) lead youths to seek out media literacy opportunities. This could explain the relationship between media literacy opportunities and exposure to diverse perspectives. While we view this as a concern, our findings give us some confidence that media literacy opportunities exert a positive influence. Specifically, we were able to control for political interest and prior online exposure to diverse perspectives when testing the relationship between media literacy opportunities and online exposure to diverse perspective. In addition, we find that media literacy opportunities are a stronger predictor of exposure to diverse perspectives than either political interest or prior online exposure to diverse perspectives. Experimental methods would be needed to fully test these relationships, but in the absence of such studies, we believe that our findings provide useful groundwork.

Discussion and implications

Findings from this study highlight the importance of reframing the questions many are asking about ways in which the Internet may influence exposure to diverse perspectives on civic and political topics. Specifically,

many have expressed concern that online activities are leading individuals to only encounter those who share their perspectives. We find little evidence of this phenomenon. We find that most youth in our study that reported exposure to views that align with their own also reported exposure to views that do not. This finding agrees with studies of adults (see Brundidge and Rice, 2009). This finding is also consistent with a point made by Prior (2007) in his massive study of post-broadcast democracy. While the evidence is scant that individuals exclusively attend to news with a particular ideological orientation, he finds that the selectivity enabled by cable TV and the Internet exacerbates a gap between those who follow the news and those who do not.

It is therefore important to highlight a different concern regarding the Internet's influence on exposure to divergent perspectives on civic and political issues. When online, some youth are exposed to views that both align with *and* diverge from their own. Other youth are exposed to little of either. The gap between those who are engaged with societal issues and those who are not, and the relation of this gap in engagement to online activity, is worthy of attention.

In addition, while the frame assumed in many discussions of the political dimensions of the Internet focuses on politically oriented online activity (reading the news online, going to political web sites, signing petitions, etc.), this study indicates that much online exposure to diverse perspectives on civic and political topics come from nonpolitical online activity. In particular, both online politically driven participation and nonpolitical interest-driven participation appear to foster exposure to perspectives on civic and political topics. The strong relationship to politically driven participation is not surprising. When engaging politically online, youth encounter both shared and divergent perspectives. Less commonly discussed and perhaps less anticipated are the relatively strong relationships between nonpolitical interest-driven participation and exposure to diverse perspectives. In predicting exposure to diverse perspectives, politically driven participation had a standardized beta of .30 and nonpolitical interest-driven participation had a standardized beta of .21.

Scholars have long recognized that discussions of civic and political issues can occur in nonpolitical associations (Putnam, 2000; Toqueville and

Grant, 2000). It appears that online nonpolitical interest-driven communities may create such settings for youth, providing a valuable form of social capital where diverse perspectives are discussed. In their study of chat-room conversations among adults, Wojcieszak and Mutz (2009) found that these nonpolitical contexts provided a higher percentage of opportunities for exposure to cross-cutting (divergent) perspectives than did politically oriented contexts. Indeed, the discussions that occur in nonpolitical online contexts may be particularly important because they can reach those who lack strong civic and political interests and provide more ideologically diverse environments. Thus, there is ample reason to focus on nonpolitical interest-driven online activity when considering factors that may promote civically and politically valuable forms of dialog among young citizens. Studies of the relationships between online practices and civic and political life that attend solely to politically driven online participation are likely to miss much that matters.

The findings (or lack thereof) regarding friendship-driven participation and participatory gaming are also of interest. Given that nonpolitical interest-driven participation prompts exposure to diverse civic and political perspectives, one might have assumed that networked socializing and participatory gaming would as well. We find, however, that they do not. It appears that the culture and norms that surround participation on social networks and with video game communities neither facilitate nor constrain discussion of societal issues. This highlights the need to better understand what may be different about nonpolitical interest-driven communities.

In some ways, the finding that participatory gaming does not prompt exposure to diverse civic and political topics while other interest-driven activities do parallels a finding in the broader literature on youth civic and political development. In general, extracurricular activities (which in many ways are interest driven) have been found to promote civic and political engagement (Smith, 1999; McFarland and Thomas, 2006), but participation on sports teams has not. While one senses that those who participate in online participatory game communities are different than those who participate in sports, it is interesting to note that these two forms of gaming appear to have similar relationships to civic and political outcomes. Given how frequently

youth play video games, more fine-grained studies of gaming environments appear worthwhile (Kahne et al. 2008).

Promoting youth exposure to diverse perspectives

Factors influencing exposure to diverse perspectives are of more than just academic interest. Indeed, given our focus on youth and the widely held belief that exposure to diverse perspectives are an essential component of a democratic society, it is important to consider implications for educators, policy makers, and others concerned with youth civic and political development. For example, this study indicates that political interest and politically driven online participation foster greater overall exposure to perspectives on civic and political topics. Interventions that promote civic and political interest and engagement may help to counter these trends (also see Prior, 2007). There is some evidence that such programs can be effective. Studies have found that when schools provide youth with opportunities to discuss current events and learn about causes and potential solutions for problems in their communities, that their interest in and engagement with politics increases (Gibson and Levine, 2003).

Similarly, given the significance of nonpolitical interest-driven activity, it makes sense to consider ways to increase the frequency of this form of participation. We found that while many youth engage in nonpolitical interest-driven activities to a limited degree, that few in our sample (roughly 10%) do so frequently. This estimate is consistent with findings from Ito et al.'s (2010) extensive ethnographic study. Just as a variety of institutions promote the value of extra-curricular face-to-face activities for young people, it may well be appropriate to also recognize and perhaps in some cases promote online nonpolitical interest-driven communities as a potential support for youth development.

Findings in this study that digital media literacy education is strongly associated with higher levels of online exposure to diverse perspectives are also encouraging. They suggest that schools and potentially those working in after-school programs, parents, religious groups, peers, and others may be able to support desired practices by working directly with youth and supporting the development of digital media habits and skills. In a related paper (authors) that focuses solely on digital media literacy education, we also

found that digital media literacy education appears to be equitably distributed and positively related to other desired forms of online civic and political engagement.

More research into this area is needed. Tightly controlled and experimental studies, as well as studies that provide more detail on the nature of media literacy education that is employed, might well provide greater clarity about the ways in which education, the design of online spaces, and activities associated with participatory cultures can promote desired practices.

Focusing on the potential value of exposure to diverse perspectives also highlights a significant additional need. We need to know more about how youth experience and engage with diverse perspectives when they encounter them. Clearly, there are potential benefits to such opportunities. Political theorists have long argued that such exposure is a prime mechanism for ensuring thoughtful engagement with civic and political possibilities. John Dewey (1916, Ch. 7), for example, wrote that the strength of a democratic community could be assessed by the number of interests that are consciously shared and by the degree of full and free interplay with other perspectives and modes of association. Achieving either without the other is insufficient. Recognition of shared interests provides essential support for participation and for deepening and clarifying one's perspectives. Interplay with alternative perspectives and modes of association provides a fundamentally important support for reflection and growth (Mill, 1989/1859). Moreover, exposure to divergent perspectives has been found to foster individual's perspective-taking ability, knowledge of the rationales put forth by those with whom they disagree, and political tolerance for those with differing perspectives (Price et al., 2002; Mutz, 2006). At the same time, as summarized by Delli Carpini, Cook, and Jacobs (2004), public deliberation, as it commonly occurs in unstructured settings, has been found to be unrepresentative of participants, polarizing, and subject to multiple biases; it may also turn individuals off from participation.

There is not yet a large body of work that considers how these issues play out in online contexts. Iyengar et al. (2003) found that online and face-to-face deliberative polls both fostered positive outcomes. This study, however, focused on intentionally structured and moderated contexts. It is therefore

important to better understand the impact of exposure to those with diverse perspectives when it occurs in the course of unmoderated online activity. Williams (2007) finds that out-group antagonism is lower online than offline. This may make boundary crossing more possible online. At the same time, Winner (2005) points out that online communication enables participants to remain anonymous and thus to engage in aggressive or uncivil discourse without consequence. This may discourage engagement with diverse perspectives. Winner notes that, “when diverse viewpoints do emerge, there is often a nastiness characteristic of online discussion. People stay around long enough to deliver a few shots and then vanish, a luxury that the Internet allows, but that geographically situated communities often make less likely because one has to get up the next day and face one’s neighbors” (p. 129).

In short, while there is much reason to believe that exposure to diverse perspectives will often be valuable, there are similarly many reasons to believe that youth (and adults) do not always engage with diverse views in ways that are most likely to support informed, reflective, and respectful dialogue. This study does not identify the contexts in which one or another form of engagement with diverse perspectives takes place, but it does begin to map the terrain for such a conversation. For example, it highlights the limits of looking at only politically oriented online sites. It might well be that conversations that are part of politically driven contexts are often different from those that are a part of nonpolitical interest-driven contexts. Moreover, it seems quite possible that media literacy education that addresses such issues, as well as features of online contexts (monitoring of participation, for example), might influence both the quantity and the qualities of engagement.

We are still just beginning to understand the factors shaping both the frequency and the quality of online exposure to divergent perspectives, and of online engagement with civic and political life more generally. Given the increasing centrality of the web to political life, investigations of the significance of online politically driven and nonpolitical interest-driven participation are clearly warranted, as are studies that identify ways of more fully realizing the positive potential while limiting the problematic possibilities of these participatory contexts.

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Table 1. Demographic and Control Variable Values for Sample

	2008 Sample (<i>N</i> = 436)	Panel (<i>N</i> = 242)
Race/ethnicity:		
White (%)	28.4	31.4
African American (%)	3.4	4.6
Hispanic (%)	27.1	26.4
Asian (%)	26.8	30.5
Other (%)	14	7.1
NR (%)	.2	0
Female (%)	62	62
Educational achievement:		
Four-year college aspiration (%)	66	62
Four-year college student	86	89
GPA level (out of 4)	2.85 (.67)	2.81 (.66)
Parental involvement (1-5)	3.19 (1.12)	3.19 (1.13)
Mother is a college graduate (%)	36	38
Political attitude:		
Conservatism (1-5)	2.82 (1.08)	2.86 (1.09)
Wave 1 political interest (1-5)	3.75 (1.17)	3.70 (1.16)
Wave 2 political interest (1-5)	3.91 (1.04)	3.88 (1.02)

Table 2. Scale Analysis Results for Online Exposure to Diversity for All Survey Versions

	Factor Loadings				
	2006 Junior	2006 Junior (Short)	2006-2007 Senior	2007 Post-HS Sample	2009
I've had online conversations with people who are very different from people I spend time with in person.	0.70	0.75	0.72	0.76	
I feel I've gotten new perspectives on social issues because of my online activity.	0.74	0.78	0.84	0.85	0.83
I feel like I've gotten to know people from different states or countries because of my online activity.	0.77				
I feel like the internet lets me explore interests and parts of my identity that I can't explore with my family and off-line friends.	0.80				
I feel like I am able to express opinions about social issues, politics, etc. online that I wouldn't share with my friends and family.	0.72				
I feel like I've been able to connect with people who care about the same things I do through the internet.	0.83	0.84	0.87	0.86	0.89
I feel like I've been able to connect with people who share my views about ways to create a better world through the internet.	0.80	0.82	0.88	0.86	0.88
I've had online conversations with people who have different values or political views than I do.					0.73
Through the internet, I have had debates about political issues with people who disagree with me.				0.75	
Variance (%)	58.6	63.8	68.5	66.8	69.7
Chronbach's α	0.88	0.81	0.84	0.87	0.85
N	577	583	408	300	433

Table 3. Relationship between Political Interest and Exposure to Diverse Perspectives

	Exposure to Diverse Perspectives, Wave 2		
	B (SE)	β	
	-0.10	-	
Female	(0.14)	0.04	
	-0.02	-	
High school GPA	(0.11)	0.01	
	0.13	0.14	*
Parental involvement	(0.06)		
	-0.11	-0.11	^
Conservatism	(0.06)		
	-0.11	-	
College student	(0.22)	0.03	
	-0.04	-	
Black	(0.34)	0.01	
	0.10	0.04	
Hispanic	(0.18)		
	0.47	0.20	**
Asian	(0.17)		
Political interest, wave 1	0.16	0.17	*
	(0.06)		
Exposure to diverse perspectives, wave 1	0.30	0.30	***
	(0.06)		
R^2	0.24		***
Observations	237		

Table 4. Relationship between Online Participation and Exposure to Diverse Perspectives

	Exposure to Diverse Perspectives, Wave 2		
	B (SE)	β	
Female	-0.08 (0.15)	-0.04	
GPA	-0.03 (0.10)	-0.02	
Parent involvement	0.03 (0.06)	0.04	
Conservatism	-0.10 (0.05)	-0.10	^
College	-0.28 (0.20)	-0.08	
Black	-0.11 (0.30)	-0.02	
Hispanic	-0.05 (0.16)	-0.02	
Asian	0.31 (0.15)	0.13	*
Wave 1 controls:			
Political interest	0.09 (0.06)	0.10	
Exposure to diverse perspectives	0.19 (0.06)	0.19	**
Wave 2 online participation:			
Politically driven participation	0.24 (0.05)	0.30	***
Friendship-driven participation:			
E-mail	0.13 (0.10)	0.07	
Blogs and social media	0.04 (0.04)	0.05	
Gaming frequency	0.01 (0.04)	0.01	
Participatory gaming	0.01 (0.05)	0.01	
Interest-driven participation	0.19 (0.06)	0.21	**
R^2	0.43***		
N	235		

Table 5. Relationship between Digital Media Literacy Opportunities and Exposure to Diverse Perspectives

	Exposure to Diverse Perspectives, Wave 2		
	B (SE)	β	
	-0.33		
Female	(0.14)	-0.15	*
GPA	0.00 (0.11)	0.00	
	0.09		
Parent involvement	(0.06)	0.09	
	-0.16		
Conservatism	(0.06)	-0.16	**
	0.00		
College	(0.27)	0.00	
	-0.10		
Black	(0.34)	-0.02	
	0.02		
Hispanic	(0.17)	0.01	
	0.38		
Asian	(0.16)	0.16	*
Wave 1 controls:			
	0.16		
Political interest	(0.06)	0.17	*
Exposure to diverse perspectives	0.27 (0.06)	0.27	***
Wave 2 media literacy opportunities	0.41 (0.08)	0.30	***
R^2	.34***		
N	221		