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Joseph Kahne, Ellen Middaugh, Nam-Jin Lee and Jessica T. Feezell

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Joseph Kahne and Ellen Middaugh

Mills College, USA

Nam-Jin Lee

College of Charleston, USA

Jessica T. Feezell

University of California Santa Barbara, USA

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 and civic and political engagement of youth (aged 16–21), we find that most youth do not report exposure to echo chambers or divergent perspectives. Rather, most report either being exposed to views that *both* align with and diverge from their own, or they report not interacting with others about their views on societal issues at all. We also find that particular forms of online participatory activity, digital media literacy activities, and political interest are related to increased reports of exposure to diverse perspectives.

Keywords

civic and political development, digital media, exposure to echo chambers, youth

Corresponding author:

Joseph Kahne, School of Education, Mills College, 5000 MacArthur Blvd., Oakland, CA 94613, USA

Email: jkahne@mills.edu

Introduction

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: 36–45) and that, when online, individuals often 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 that internet users will experience what Negroponte (1995: 153) labeled 'the Daily Me,' wherein one encounters only the individuals, information, and perspectives in which she is interested. Indeed, commentators have expressed concern that internet use will lead to isolated enclaves of like-minded individuals (Sunstein, 2007: 3–7), where participants enter echo chambers in a process sometimes called 'cyberbalkanization' (Van Alstyne and Brynjolfsson, 1997: 3).

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 essential support for a free and democratic society (e.g., Arendt, 1968: 241; Dewey, 1916: 81–99). Perhaps most notably, Mill (1956/1859: 21) viewed such exposure as essential if one was to pursue truth and have confidence in one's opinions.

Recently, perceptions of increased partisanship and data indicating greater geographic clustering of like-minded citizens (Bishop, 2009) have focused attention on the significance of exposure to diverse perspectives. Indeed, as Gelman and colleagues (2008: 129–154) find, American voters and politicians have become increasingly polarized in recent years, expressing increasingly negative views of individuals from opposing parties, wider gaps in beliefs about important social issues, and more extreme beliefs about social issues. These discrepancies suggest that productive conversations across political difference are becoming more challenging and perhaps more important.

The question of whether the internet encourages or deters exposure to diverse perspectives is critical to the health of our democracy, particularly as it applies to youth. Not only are youth heavy users and early adopters of digital media (Krueger, 2002; Mossberger et al., 2008), they are also more likely than their older counterparts to interface with civic and political issues in this way. During the 2008 presidential campaign, 41 percent of those aged 18–29 watched candidate interviews, debates, speeches, and commercials online, without the filter of mainstream media. Indeed, when it comes to internet use, there is a generational divide. While 37 percent of those aged 18–24 obtained campaign information from social networking sites (more than from newspapers), only 4 percent aged 30–39 did so. For older citizens, these numbers drop still further (Kohut, 2008).

A focus on youth also makes sense because the transition from late adolescence to early adulthood is a time of significant development of civic and political identities (Erikson, 1968: 128–135). It is a time when many consider and invest in particular social, political, and moral ideologies. Indeed, many at this age pass through a period of moratorium, where they are capable of and eager to experiment with differing ideas and different identities; this process ultimately leads to a more fully developed and integrated adult identity (Marcia, 1980). Additionally, grappling with diverse viewpoints has been identified as key to developing a mature political-moral understanding,

a central component of a mature civic identity (Youniss and Yates, 1997: 21–36). Given the role of digital media in young people's lives, it is important to know whether it is providing them with the developmentally important opportunity to engage with diverse perspectives.

We seek to fill important gaps in our understanding of the relationship between digital media and the quality of civic and political life. We use a two-wave panel survey design to examine how often youth participants (surveyed at age 16–18 and again at age 19–21) perceive online conversations to be representative of views that align with and differ from their own. In addition, we use these data to identify factors that influence the frequency of individuals' perceived encounters with diverse viewpoints. Before embarking on this analysis, we review the arguments and evidence related to how internet use may enhance or limit users' exposure to diverse viewpoints as well as literature on three factors that research suggests may impact the likelihood of youth experiences with online diversity: political interest, participation in online communities, and access to adult support for digital media literacy.

The internet's effect on exposure to political diversity: Arguments and evidence

Will the internet lead to echo chambers or facilitate exposure to divergent views? One common hypothesis is that it will result in individuals customizing what they see and do in ways that promote a socially isolating Daily Me. For example, Sunstein (2007: 3–7) 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 diverse public. In a related argument, Star (2010) posits that, in the past, when people read a newspaper for the sports coverage or to do a crossword puzzle, they still read the front page and were 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 propose an alternative hypothesis. Participation in online communities and activities related to interests such as hobbies or sports may foster broader networks and more diverse connections. Rheingold (2000: 36–45) argues that those who share a given interest are often, in other respects, 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 are face-to-face communities. Indeed, Jenkins (2010) has argued that, when it comes to the development of social capital (networks and collective resources that help community members work together when faced with common concerns), online interest-driven participatory cultures may provide today what bowling leagues provided in prior eras: gatherings wherein diverse individuals interact and form social capital.

Recent empirical work sheds light on ways that media practices, in particular, online ones, may influence exposure to diverse perspectives. Scholars find that when the capacity to select where one obtains 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 make echo chambers more likely. Farrell et al.'s (2008) study of blog readership is consistent with this pattern. They find that blog readers tend to be partisan and read blogs that align with their views, and that cross-cutting exposure is relatively rare. However, others find either weak or positive relationships between the capacity for selectivity and exposure to diverse viewpoints. For example, Garrett (2009) found that selectivity online only marginally diminishes exposure to perspectives that challenge an individual's previously held opinions. Stromer-Galley's (2006) interviews with participants in online discussion groups suggest that they value their interactions with those with differing viewpoints and are not lead to seek out like-minded individuals.

It appears that social boundaries are less defined online, making exposure to views that diverge from one's own more likely. Raine et al. (2005) found that 50 percent of internet users reported seeing campaign information by happenstance during the 2004 presidential election season while online for a different purpose. Furthermore, studies suggest that, controlling for education and other influences on political knowledge, internet use is related to greater exposure to diverse political views (Horrigan et al., 2004) and that face-to-face connections (friends, family, co-workers) have lower levels of opinion diversity than online sites that individuals tend to visit (Gentzkow and Shapiro, 2010).

In short, the emerging body of research on adults indicates that while the internet may provide access to highly partisan websites and blogs related to civic and political life, many of its features may broaden adults' exposure to diverse views, especially for individuals who do not have strong partisan leanings. Unfortunately, little information is provided about youth experiences with political diversity online. Youth spend more time online and may also engage in different activities than adults. It is important to learn more about youth exposure to diverse viewpoints and the factors that may shape that exposure.

The importance of political interest and political sophistication

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). On the other, those who are politically sophisticated are also more politically interested, leading them to seek out more news and divergent perspectives. Thus, political sophistication and political interest appear to promote increased exposure both to views that align with one's own and to those that do not. This likely explains why liberals who frequently visited liberal sites like <http://moveon.org> were also more likely to visit <http://www.foxnews.com> than the average online news reader. Similarly, conservatives who frequently visited conservative sites like <http://glennbeck.com> were more likely to also visit <http://www.nytimes.com> than the average online newsreader (Gentzkow and Shapiro, 2010).

Historically, youth tend to demonstrate lower levels of political interest and engagement than those over 30 (Gibson and Levine, 2003). Whether those who are interested in politics are gaining access to diverse viewpoints through their online activities is currently unknown.

Not all online activities are the same: The potential of online participatory activities

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). Here we focus on categories of participation that we have reason to believe may foster exposure to diverse perspectives. In particular, recent work by Jenkins et al. (2009) details the prevalence of online participatory cultures and their potential significance in civic and political life. In online participatory cultures, members create and share their creations with others, experienced members help the less experienced to 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, or other shared interests may become conduits for communication and mobilization. Moreover, these online contexts may create 'third spaces' (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 ... can let off steam, argue about the local politics or sports and make sense of the world' (Steinkuehler, 2005: 136).

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, between politically driven, nonpolitical interest-driven, and friendship-driven participation. These distinctions are prompted by the findings of Ito et al. (2010) regarding the developmental opportunities for youth provided by these different forms of participation.

Politically driven online participation receives frequent attention from scholars. Such participation includes communicating with others and seeking out and producing information about civic and political issues. Given that such interaction and exploration necessarily involves perspectives on civic and political issues, we expect that these activities lead to exposure to diverse perspectives.

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 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. Indeed, Wojcieszak and Mutz (2009) find that exposure to political disagreement is most likely to occur in nonpolitical chat rooms, where political discussions come up incidentally, rather than in politically driven discussion forums. At the same time, 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.

In addition, we examine online friendship-driven participation. Rather than orienting around particular interests, friendship-driven participation centers on day-to-day interactions with peers seen at school or in the neighborhood. Such online activity often occurs through social media such as Facebook. One hypothesis is that such participation might isolate youth in social contexts where civic and political issues are not raised. Alternately, 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.

Can adults help? The role of digital media literacy

Parents, teachers, and after-school educators often place great emphasis on influencing young people's civic and political commitments, skills, and behaviors. Indeed, youth access structured opportunities through service-learning, school-based leadership and governance, youth organizations, and religious groups, which evidence suggests has a positive effect on civic and political engagement (Gibson and Levine, 2003). It seems quite possible that when youth are given structured opportunities to develop online skills and enact desired practices (like finding multiple perspectives on an issue), they may become more likely to do these things on their own. Studying the impact of digital media literacy activities is important, given that many youth lack the skills needed to fully tap the potential of online environments and because these skills are often inequitably distributed along the lines of race, class, and gender (Hargittai, 2010). It makes sense, therefore, to consider whether opportunities for digital media literacy activities in schools influence youths' overall exposure to views that align with and diverge from their own.

Research questions

In this study, we examine whether youth in our sample report encountering diverse viewpoints online, as well as the different factors that influence the likelihood of such experiences. The questions guiding this study include:

How frequently do youth perceive that their online conversations expose them to individuals with views that align with their own and to those with different perspectives?

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

How do politically driven, nonpolitical interest-driven, and friendship-driven online participation influence perceived exposure to views that align and diverge from one's own?

Are adult-guided digital media literacy activities related to increased reports of encounters with diverse political viewpoints in the online setting?



Figure 1. California Civic Survey (CCS) sampling and attrition, 2005–2009.

Methods

Sample

This sample was derived from a larger cross-sectional survey of youth civic engagement and civic education among 5505 high school juniors and seniors from 21 schools across California in the springs of 2005, 2006, and 2007 and from a second wave of surveys conducted in 2009, just after the 2008 election. Since items on exposure to online diversity were added in 2006, this study draws on the surveys collected in 2006, 2007, and 2009. Specifically, we include three overlapping samples of California youth: $N = 1928$ HS Juniors in 2006, $N = 436$ California youth aged approximately 19–22 who were surveyed in 2009 after the 2008 presidential election, and two-wave panel data from $N = 242$ of youth who were surveyed during their junior or senior years of high school in 2006 and 2007 and following the 2008 election. Entire classrooms of students took the surveys and classrooms were not selected based on student attributes or interest in our topic. Although not proportionally representative of California, schools were purposively selected to ensure a diverse range of demographic and academic characteristics. From this sample, approximately 1305 (28%) of the students 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. See Figure 1 for a summary of how the samples were derived for each set of analyses.

Table 1. Demographic and control variable values for sample.

	2008 Sample ($N = 436$)	Panel ($N = 242$)
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
Not reported	.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 attitudes (1–5):		
Conservatism	2.82 (1.08)	2.86 (1.09)
Wave 1 political interest	3.75 (1.17)	3.70 (1.16)
Wave 2 political interest	3.91 (1.04)	3.88 (1.02)

Note: Data are % unless otherwise indicated by Mean (SD) formatting. GPA: grade point average.

We examined differences between the original sample and that of individuals who took the survey in 2009 and found some differences based on gender, political interest, and grade point average (GPA) but no differences in digital media participation.

The panel samples referred to in this study were racially diverse, had a higher proportion of female than male participants (62% vs. 38%), and were likely to be enrolled in a four-year college (86%–89%; Table 1). Participants in these samples were also slightly more likely to be politically interested. While a national sample would have been 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.

Perceived exposure to shared interests and exposure to diverse perspectives. For the 2006 survey administered to Juniors ($N = 1928$), we developed four items to measure perceived exposure to shared interests and three items to measure perceived exposure to divergent perspectives. Perceived exposure to shared interests was assessed using a five-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.’ Perceived exposure to divergent 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 ‘Results,’ these items cohered into a single scale that was then edited down and tested with additional items resulting in a single 4-item measure administered in the wave 2 survey in 2009 ($N = 436$).

Political interest. Political interest was measured at each time period using a single item, ‘I am interested in political issues.’

Online participatory activities. This survey examined three types of online participatory activities. ‘Politically driven participation’ included three items asking how often respondents use online platforms (blogs, social networking sites, email) to get information, share perspectives, or work on political issues. Items were averaged to create a single scale ($\alpha = .81$). ‘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.’ Internal reliability of these two items was relatively low ($\alpha = .41$), so they became individual items in further analyses. ‘Interest-driven participation’ included five items asking how often participants engaged in a variety of online activities supporting communities organized around recreational interests (e.g., hobbies, sports, anime). These items were averaged together to create a single scale ($\alpha = .80$). On the basis of the ethnographic work of Ito et al. (2010), we expected these kinds of online participatory activity to be distinct. Principle components analysis (PCA), conducted with all 10 participatory activity items, supported this assumption and resulted in three components (with eigenvalues >1.00 and item factor loadings of .40 or greater) that aligned with our theoretical assumptions (a detailed discussion of this analysis is presented in Kahne et al. 2011).

Supports for participation: instruction in digital media literacy. Instruction in digital media literacy included four items asking participants to report the extent to which their high school or college courses provided opportunities such as to ‘learn how to assess the trustworthiness of information they find on the Web.’ Items were averaged together to form a single scale ($\alpha = .82$).

Control variables

We employed extensive controls to isolate the effects stemming from demographics, parental involvement, educational attainment, and political orientation. For example, gender, ethnic identity, and race have been found to be related to both civic commitment 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 with parents who are civically active tend to become more active themselves (Jennings and Stoker, 2009). Discussion between parents and youth regarding 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 grade point averages and 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 Mutz and Martin, 2001; Verba and Nie, 1972).

Results

I. Few youth report that their online interaction exposes them only to views that align with their own. Many youth report that they are exposed both to people whose views align with their own and to people whose views diverge from their own. A sizable group report little exposure to others’ views on societal issues regardless of whether these views align with or diverge from their own.

The first goal of our analysis was to examine the extent to which youth perceive their online experiences exposing them to shared versus divergent perspectives. However, our data suggest that we must reframe our question. Specifically, we conducted principle components analysis (PCAs) with the initial seven items assessing whether youth perceived exposure to shared or divergent perspectives. Our analysis indicated that perceived 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 in terms of indicating perceived 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.

This suggests that youth who interact online with individuals they believe share their views are also likely to encounter those who they perceive as holding divergent views.

Table 2. Scale analysis results for online exposure to diversity for all survey versions.

	Factor loadings		
	2006 Juniors only	2006 Juniors only short scale	2009 post HS
I've had online conversations with people who are very different from people I spend time with in person.	.72	.75	
I feel I've gotten new perspectives on social issues because of my online activity.	.76	.78	.83
I feel like I've gotten to know people from different states or countries because of my online activity.	.79		
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.	.74		
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.	.74		
I feel like I've been able to connect with people who care about the same things I do through the Internet.	.83	.84	.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.	.81	.82	.88
I've had online conversations with people who have different values or political views than I do.			.73
Through the Internet, I have had debates about political issues with people who disagree with me.			
Variance (%)	60.4	65.8	69.7
Cronbach's α	.89	.82	.85
N	1734	1806	433

Similarly, youth who perceive little exposure to divergent perspectives generally perceive little exposure to shared perspectives. Indeed, only 5 percent of all youth reported high levels of exposure to views that align with their own without also reporting high exposure to divergent views.

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

Table 3. Relationship between political interest and perceived exposure to diverse perspectives.

	Perceived exposure to diverse perspectives, wave 2	
	B (SE)	β
Female	-.10 (.14)	-.04
High school GPA	-.02 (.11)	-.01
Parental involvement	.13 (.06)	.14*
Conservatism	-.11 (.06)	-.11 [^]
College student	-.11 (.22)	-.03
Black	-.04 (.34)	-.01
Hispanic	.10 (.18)	.04
Asian	.47 (.17)	.20**
Political interest, wave 1	.16 (.06)	.17*
Perceived exposure to diverse perspectives, wave 1	.30 (.06)	.30***
R ²	.24***	
N	237	

Note: GPA: grade point average. * $p < .05$, ** $p < .01$, *** $p < .001$, [^] $p < .10$.

II. Political interest is associated with increased reports of exposure to diverse perspectives.

The next set of analyses focused on the relationship between a participant's level of political interest and perceived exposure to diverse perspectives on civic and political issues. Ordinary least squares (OLS) regression was used to examine whether, controlling for wave 1 levels of perceived exposure to diverse perspectives as well as for relevant demographic and background variables, wave 1 political interest predicts wave 2 perceived exposure to diverse perspectives. There is evidence that youth with higher levels of political interest are more likely to report exposure to diverse perspectives ($\beta = .17, p < .05$; Table 3).

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

Next we used OLS regression to examine the relationship between varied online participatory activities and perceived exposure to diverse perspectives. Because prior political interest and prior perceived exposure to diverse perspectives were found to be significantly related to the amount of exposure reported during wave 2, they were included as controls. Participants' politically driven online activities were the strongest predictor of perceived exposure to diverse perspectives ($\beta = .36, p < .001$; Table 4), 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 reports of exposure to diverse perspectives ($\beta = .12, p < .05$) even after controlling for

Table 4. Relationship between online participatory activity and perceived exposure to diverse perspectives.

	Perceived exposure to diverse perspectives, wave 2	
	B (SE)	β
Female	-.15 (.13)	-.07
GPA	-.02 (.10)	-.01
Parent involvement	.05 (.06)	.05
Conservatism	-.10 (.05)	-.10
College	-.28 (.20)	-.08
Black	-.15 (.30)	-.03
Hispanic	-.04 (.16)	-.02
Asian	.32 (.15)	.14*
Wave 1 controls:		
Political interest	.08 (.06)	.08
Perceived exposure to diverse perspectives	.21 (.06)	.21**
Wave 2 online participation		
Politically driven participation	.28 (.05)	.36***
E-mail	.13 (.10)	.07
Blogs and social media	.05 (.04)	.06
Interest-driven participation	.27 (.14)	.12*
R ²	.41***	
N	236	

Note: GPA: grade point average. * $p < .05$, ** $p < .01$, *** $p < .01$, ^ $p < .10$.

politically driven activities. Interestingly, there was no relationship between friendship-driven activities and perceived exposure to diverse perspectives.

IV. Those who reported taking part in digital media literacy activities in school more frequently reported exposure to diverse perspectives.

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

Discussion and implications

Our findings highlight the importance of reframing discussions about the internet's influence on exposure to diverse perspectives on civic and political topics. Specifically,

Table 5. Relationship between digital media literacy opportunities and perceived exposure to diverse perspectives.

	Perceived exposure to diverse perspectives, wave 2	
	B (SE)	β
Female	-.33 (.14)	-.15*
GPA	.00 (.11)	.00
Parent involvement	.09 (.06)	.09
Conservatism	-.16 (.06)	-.16***
College	.00 (.27)	.00
Black	-.10 (.34)	-.02
Hispanic	.02 (.17)	.01
Asian	.38 (.16)	.16*
Wave 1 controls:		
Political interest	.16 (.06)	.17*
Perceived exposure to diverse perspectives	.27 (.06)	.27***
Wave 2 digital media literacy opportunities	.41 (.08)	.30***
R ²	.34***	
N	221	

Note: GPA: grade point average. * $p < .05$, ** $p < .01$, *** $p < .001$, $^{\wedge}p < .10$.

discussions have centered on whether the internet exposes youth to echo chambers *or* to diverse viewpoints. We found that few youth reported exposure to views that align with their own without also reporting exposure to views that do not. Studies of adults come to similar conclusions (see Brundidge and Rice, 2009 for a review).

Thus, while continued attention to the prevalence and impact of highly partisan online contexts is warranted, our study highlights a different concern. When online, many youth appear to get little exposure to any perspectives at all. Indeed, the internet may be expanding choice in ways that enable many youth to avoid exposure to civic and political issues. This concern parallels one raised by Prior (2007: 214–248) in his massive study of post broadcast democracy. While 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. The gap between those who are engaged with societal issues and those who are not, and the relationship of this gap to engagement in 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 websites, signing petitions, etc.), we found that reports of online exposure to diverse perspectives on civic and political topics were associated with political and nonpolitical online activity. The strong relationship to politically driven participation is not surprising. Less anticipated is the relationship between nonpolitical interest-driven participation and reports of exposure to diverse perspectives.

Scholars have long recognized that nonpolitical associations can serve as sites of civic and political connection and engagement (Putnam, 2000: 65–115; Toqueville and Grant, 2000: 171–173). 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.

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, the common belief that exposure to diverse perspectives is an essential support for a democratic society, and increasing concerns regarding the partisan nature of civic and political dialog, it is important to consider what educators, policy makers, and others concerned with youths' civic and political development can do. For example, this study indicates that political interest and politically driven online participation foster greater overall exposure to perspectives on civic and political topics (see also Prior, 2007). There is some evidence that programs can effectively foster political interest and engagement. 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, 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. Ito et al.'s (2010) extensive ethnographic study estimated that only about 10 percent of youth were heavily engaged with interest-driven activities. Just as a variety of institutions promote the value of extracurricular face-to-face activities for young people, it may well be appropriate to also recognize and promote online nonpolitical interest-driven communities as a potential support for youth development.

Our finding that digital media literacy activities are strongly associated with higher levels of perceived online exposure to diverse perspectives is also encouraging. This suggests that schools and potentially people working in after-school programs and religious groups, parents, mentors, and peers may be able to support desired practices by working directly with youth to develop digital media habits and skills. In addition, in a related paper (Kahne et al., 2012) that provides a more extensive discussion of the civic implications of digital media literacy activities, we found that digital media literacy activities were equitably distributed and that not only do they increase exposure to diverse

perspectives, but they are also positively related to politically driven forms of online engagement. More research into this area is needed. Tightly controlled and experimental studies, as well as studies providing more detail on the nature of media literacy activities, may provide greater clarity about the ways in which digital media literacy activities, 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 must 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. Dewey (1916: 81–99), 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 supports participation while deepening and clarifying one's perspectives. Alternative perspectives and modes of association provide a fundamentally important support for reflection and growth (Mill, 1956/1859: 21). Moreover, exposure to divergent perspectives has been found to foster an individual's perspective-taking ability, knowledge of the rationales put forth by those who disagree, and political tolerance for those with differing perspectives (Mutz, 2006: 62–69; Price et al., 2002). At the same time, as summarized by Delli Carpini et al., (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 both online and face-to-face deliberative polls fostered positive outcomes. However, they 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 outgroup 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 engage in aggressive or uncivil discourse without consequence. This may discourage engagement with diverse perspectives. He 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, for example, respectful or disrespectful engagement with diverse perspectives occur, but it

does begin to identify some of the contexts one might consider. 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 possible that digital media literacy activities addressing such issues, as well as features of online contexts (e.g., monitoring of participation), might influence both the quantity and the qualities of engagement.

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 than in 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 perceived 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 perceived 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 regards 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. They may also be over-reporting their engagement with civic and political life. Ideally, we would be able to track where youth spend time online and the diversity of the content of their conversations to address our research questions. Unfortunately, not only is this methodology costly and labor intensive, it creates a number of privacy concerns for the participant. In light of the almost complete dearth of research on this topic with youth, we believe that this research makes a positive contribution toward understanding youth online experiences with political diversity. We are actively seeking to further validate these self-reported instruments in future studies.

Another potential concern is that interest in politics or online participation (which is related to exposure to diverse perspectives) leads youths to seek out digital media literacy activities. This could explain the relationship between digital media literacy activities and exposure to diverse perspectives. While we view this as a concern, our findings give us some confidence that digital media literacy activities 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 digital media literacy activities and online exposure to diverse perspectives. In addition, we find that digital media literacy activities are a stronger predictor of exposure to diverse

perspectives than either political interest or prior online exposure to diverse perspectives. Experimental methods are needed to fully test these relationships, but in the absence of such studies, we believe that our findings provide useful groundwork.

Finally, it should be noted that this sample is rooted in the US context, where internet restrictions are low and access is high relative to many nations. Findings in terms of political discussion online by youth may be dramatically different in contexts where political debate is discouraged or at times blocked.

Conclusion

We are still just beginning to understand the factors shaping the frequency and the quality of online exposure to divergent perspectives, and online engagement with civic and political life more generally. Given the increasing geographical segregation of those holding particular partisan outlooks and the ways the Web might ease access to both highly partisan sites and to individuals with varying viewpoints, a better understanding of the frequency, qualities, and impact of online exposure to diverse perspectives is needed. In addition, investigations of the significance of online politically driven and nonpolitical interest-driven participation in relation to exposure to diverse perspectives are clearly warranted. Studies that identify ways digital media literacy efforts can promote desired practices are also needed.

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Joseph Kahne is the Davidson Professor of Education at Mills College, Director of the Civic Engagement Research Group, and Chair of the MacArthur Research Network on Youth and Participatory Politics. His research focuses on ways school practices and new media can influence youth civic and political development.

Ellen Middaugh (PhD, UC Berkeley) is Associate Director of the Civic Engagement Research Group at Mills College. Her research interests focus on the effects of local contexts (including online contexts) on youth civic development and civic education.

Nam-Jin Lee is an assistant professor in the Department of Communication at the College of Charleston. His main research areas include media framing, political discussion, public opinion, civic engagement, and youth socialization.

Jessica T. Feezell is a lecturer in the Department of Political Science at the University of California Santa Barbara. Her research interests include political communication and the influence of information technology on political and civic engagement.