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# A tethered generation: Exploring the role of mobile phones in the daily life of young people

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## Abstract

The increasing global ubiquity of mobile phones has called into question their efficacy as dynamic tools for engagement and participation in daily life. While there is little argument in their growth as primary communication tools, scholars have actively debated their role as conduits for dynamic and diverse, information flow. This study explores how an international cohort of university students uses mobile phones for daily communication and information needs. In spring 2012, 793 students from 8 universities on 3 continents participated in a 24-hour mobile tracking exercise and reflection to answer the questions: How are college students using mobile phones for daily communication and information needs? and, how do college students perceive of the role of mobile phones for communication and information needs in their daily lives? The findings point to a population tethered to their mobile devices primarily through social networking apps, to the extent that they find it increasingly difficult to distinguish relationships that exist in their pockets from those that exist in their physical surroundings. While the participants acknowledged the diverse and participatory capacity of mobile devices, their dependence on the phone for connecting to peers left them skeptical of the phone's efficacy for productive connectivity, vibrant communication, and diverse information consumption in daily life. The study concludes with suggestions for more inclusive and active engagement in the dynamic potential of phones that are not necessitated by a response to large-scale political or civil injustices.

## Keywords

Civic engagement, global media, media literacy, mobile phones, participatory culture

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## Introduction: A mobile permaculture

Around the world today, the adoption of mobile media phones and the advancement of mobile technologies have been growing at a dizzying pace (Horst & Miller, 2006). In 2012, 5.9 billion cell phone subscriptions existed around the world, equating to an 87% global penetration rate and 79% in the developing world (Internet Telecommunications Union [ITU], 2012). Over the last 4 years, mobile broadband has increased 45% annually (ITU, 2012). Today there exist twice as many mobile broadband subscriptions as there are fixed broadband ones.

The vast growth in ownership of broadband capable mobile phones has been accompanied by a similarly large increase in time spent using mobile platforms for information and communication purposes. In 2012, the time spent with mobile platforms was up 120%, while PC time was down 4% in relation to 2011 (Nielsen, 2012). China leads the globe in mobile phone adoption, with Brazil and India forecasted as top growth areas going forward (International Data Corporation [IDC], 2012). In the Asia-Pacific region, the Middle East, and Latin America specifically, mobile phones are increasingly used for consumer purchasing, social networking, and entertainment viewing (Nielsen, 2012).

The introduction of multifaceted "smart" phones has led to a growing field of inquiry exploring how increasingly mobile societies communicate, collaborate, and engage in person and public communication (Dahlgren, 2012; Katz, 2008; McNair, 2009; Papacharissi, 2009). Scholars have extolled the potential of mobile technologies to offer new models for civic engagement (Gordon, Schirra, & Hollander, 2011; Gupta, Bouvier, & Gordon, 2012) and inclusive participatory capacities (Allan, 2012; Rheingold, 2008b).

At the same time, mobile phones have played an increasingly central role in the formation of digital media competencies in young citizens (Ashley, Lyden, & Fasbinder, 2012; Martens, 2010; Squire, 2009). In *Civic Engagement on the Move*, Lasica (2008) writes: "Growing evidence suggests that people—particularly the young—have begun using mobile devices in ways that help to strengthen civic engagement, undergird social participation and buttress our sense of belonging to something that transcends the self and the clan" (p. 1). From using mobile phones to communicate with friends and family to interacting with local governments and joining like-minded network communities, the mobile phone now has the capacity to facilitate widespread and dynamic collaboration, coordination, and participation.

This study adds to the growing body of knowledge on young people and mobile culture by investigating the dispositions of an international population of college students towards the mobile phone for communication and information purposes. The findings point to a population tethered to their mobile devices primarily through social networking apps, to the extent that that they find it increasingly difficult to distinguish relationships that exist in their pockets from those that exist in their physical surroundings. This tethering has extended self-centered social communication into all facets of daily life. And while the participants in this study acknowledged the multifaceted, diverse, and participatory capacity of the mobile devices, their dependence on the phone for staying connected to peers left them skeptical of the phone's efficacy for productive connectivity, vibrant communication, and diverse information consumption in daily life.

# Mobile technologies, young people, and mediated lifestyles

Recent global uprisings in the Middle East, North Africa, and beyond have amplified the discussion of mobile platforms as key tools for activism, engagement, and participation in contemporary society. In his 2012 book, *Networks of Outrage and Hope*, Manuel Castells (2012) argues that social movements are driven largely by digital tools and social media platforms. While his work is contested by some as deterministic and reductionist (see Fuchs, 2012), Castells begs discussion on how mobile technologies are reshaping engagement not only in the case of large-scale civic and social uprisings, but also in the context of daily engagement with personal and public matters.

Much scholarship has extolled the new opportunities that social technologies and mobile platforms have for increased collaborative endeavors (Benkler, 2006; Lessig, 2008; Shirky 2008, 2010; Surwowiecki, 2005), more engaged and active civic participation (Bennett, 2008; Dahlgren, 2012; Dalton, 2009; Loader, 2007; Rheingold, 2008a; Zukin, Keeter, Andolina, Jenkins, & Dell Carpini, 2006), a sense of social connectedness (Ellison, Steinfield, & Lampe, 2010; Fowler & Christakis, 2010; Haythornthwaite, 2005; Romer, Hall Jamieson, & Pasek, 2009; Shah, McLeod, & Lee, 2009), and global avenues for cross-cultural communication (Castells, Qiu, & Fernandez-Ardevol, 2006; Comer & Wikle, 2008; Mihailidis, 2013). Katz (2007) noted that while still largely up for debate, research "suggests that mobile phones tend to be used in reinforcing strong social ties, while computer-mediated text-based media tend to be used in expanding relationships with weak ties (Kim, Kim, Park, & Rice, 2007)" (p. 390).

At the same time, pressing complexities in the digital mediasphere along the lines of "communication-effects gaps" (Coleman & Price, 2012, p. 38) and "participation gaps" (Jenkins, 2006, p. 257), have brought into question to what extent digital media technologies create avenues for social and political impact (Dean, 2005; Gladwell, 2010; Morozov, 2010). Much of this inquiry has focused primarily on large-scale civic uprisings that have captured wide audiences. Less research has explored the perception of mobile phones as facilitators of daily communication and information needs. Volumes by Katz (2008), Ling and Campbell (2012), and Ling and Pedersen (2005) provide strong foundations for how mobile communications are impacting individuals and communities in everyday communicative contexts.

As young people increasingly rely on mobile phones for daily communication and information needs, the quality and vibrancy of this facilitation has come into question. Turkle (2003, 2005, 2006) describes this growing dependence as "tethering": the reliance on technology to facilitate self-worth, community, and communication. She notes that "our new intimacy with machines compels us to speak of a new state of the self, itself … a new place for the situation of a tethered self" (Turkle, 2006, p. 1). Turkle (2006) sees the growing dependence on mobile phones as an act of self-establishment, where youth, through their mobile devices, "turn other persons into 'self-objects' to shore up their fragile sense of self" (p. 128).

While the concept of tethering is not entirely new, mobile technologies have greatly expanded the integration of human behavior within artificial spaces. These new paths for communication have expanded the idea that young people are "always there" (Urry,

2007), and that this tethered existence places the self at the center of the mediated equation (Goggin, 2009; Srivastava, 2005). Research has also found that social connectedness is a driving factor for the growing attachment to mobile phones (Goh, Ang, Chua, & Lee, 2009; Wei & Lo, 2006). How people perceive self-value, worth, and their place in community extends from how they understand the affordances and limits provided by new modes of engagement and dialog through mobile spaces. To address this idea, the first research question utilizes a mobile use tracking exercise to explore the daily mobile phone use of college students:

> RQ1: How are college students using mobile phones for daily communication and information needs?

At the same time, building competencies for mobile communication can engage young people in more critical understanding of information consumption, sharing, creation, and dissemination via mobile phones (Istvan, 2011; Parry, 2011). Campbell and Kwak (2010) found that those with higher levels of comfort with mobile technologies and who used them for informational purposes reported more involvement in civic life. In a study of young people use of mobile phones for constructions of formal and nonformal learning, Squire and Dikkers (2008) found that students embraced learning through the mobile devices in both settings: "Most notably, mobile media technologies are contributing to a greater personal efficacy for these users, which may be contributing to a variety of social trends because use is so wide spread" (p. 461). To explore the level of comfort with the mobile phone, and its conceived value to students, the second research questions for this study asked:

> RQ2. How do college students perceive of the role of mobile phones for communication and information needs in their daily lives?

The research questions are positioned to explore how the mobile phone, at the center of a digital generation (Palfrey & Gasser, 2010; Prensky, 2001; Tapscott, 2008), is perceived as a dynamic platform for communication and information purposes (Ling, 2004). They explore both the habits and perceptions of mobile phone use to identify possible avenues for developing mobile competencies in young citizens.

## Exploring mobile habits and dispositions of university students

### Participants

To explore the role of mobile phones in the lives of college students, this study utilized a sample of 793 students from 8 universities in 4 countries on 3 continents,[1] collectively representing 52 nationalities.[2] College-aged students were selected for this study based on their increasing reliance on mobile technologies for daily information and communication needs (Harris Interactive, 2013; Loader, 2007). College students are at a formative stage in their lives, where particular worldviews tend to be more engagement-based—protest,

rights, justice—and less duty-based—taxes, military, voting (Dalton, 2009). Exploring this particular stage in the life of young people can illuminate the use of mobile phones for daily engagement in digital culture.

At the same time, college students' perceptions of technologies may be couched in "cynical chic," (Buckingham, 1993; Gamson, 1992) where they tend to see cynically posturing towards engagement as "cool." This may skew the study towards outcomes that are slightly cynical. To mitigate this trend, this study utilized both tracking and reflection exercises that explore not only perception but also use. Further, the diversity of the sample helps mitigate the assumptions about college students' worldviews, as the participants here represent a wide demographic.

Of the entire sample, 67% (*n* = 531) were female, and 33% (*n* = 262) were male. Over 95% fell between the 18–23 year age range, with 32% of the sample in their first year of studies, 43% in the second year, 18% in the third year, and the remaining 7% in their fourth year of studies. A majority of the sample participants' major course of study was in communications-related fields (63%). The remaining majors were spread across academic disciplines. The sample reported using mobile phones (66%) more than any other technology, followed by laptop computers (48%). Over half of the sample did not own a desktop computer.

One hundred percent of the sample owned mobile phones, of which 84% were smartphones that offered apps, and the other 16% were Internet-enabled phones. The iPhone operating system was clearly the most used (40%), followed by a virtual tie between Blackberry RIM (20%) and Android (20%). Only 2% of students reported using a Windows platform phone, and 2% using Nokia Symbian. No other operating systems were mentioned by the sample. Iberoamericana University in Mexico City had the highest percentage of smartphone users (96%), followed by Emerson College (91%), and the American University of Beirut (90%). The University of St. Cyril and Methodius in Trnava had the lowest number of smartphone owners at 56% of the population who participated in the study.

## Tracking mobile use

In the fall of 2011, a mobile information tracking form was designed to gather detailed data on what students did with their mobile phones over a 24-hour period. The data-tracking instrument was concerned primarily with communication and information exchange through the mobile phone. The form itself consisted of 26 prompts for the students to track, across three categories: *consuming, sharing, and creating*. Students were asked to keep track of how many times they published content, shared links, read stories, posted status updates, etcetera. The form did not track the number of phone calls or time spent talking. The instrument was tested and finalized in January 2012, and then distributed along with a presurvey and instructions to the participating research institutions. The instructions included a detailed tracking sheet which students used to keep tallies of the types of actions they were doing on their mobile phones over the 24-hour period. The instructions included a link to an online version of the tracking form, where participants were instructed to enter their data after their tracking period was complete. Faculty administered the assignment between March 1 and May 31, 2012.

After the tracking data was entered online, the participants were directed to a final cue for a textual reflection of the tracking experience. The reflection form asked for them, in approximately 500 words, to express open-ended feedback that addressed the following general questions:

> Did you feel attached to your mobile device? What particular features of your mobile device do you feel most attached to? How do you think mobile devices have enhanced your daily life? What have they impacted in a negative way? Do you think mobile phones are a necessity in your life? What parts of them do you "need"? Do you think society is at a disadvantage without them?

Once the students submitted the 500-word reflection, they were provided a certificate of completion. All participants were asked to complete confidentiality forms that guaranteed anonymity and made clear that participation in the research was optional.

## Analysis

Upon completion of the data gathering, graduate students aggregated the demographic and tracking data. The presurvey provided context and demographic grounding for the sample. The tracking data was analyzed as an entire unit of data, and also compared between participating institutions.

The textual reflections were gathered into one large document and analyzed using grounded theory, a qualitative methodology in which trained coders identify certain codes in a set of texts. As the codes are determined they lead to the identification of categories that emerge from the data (Berg, 2007; Holton, 2007). In this study, coders were given a random sample of 80 out of the 630 total reflections. They identified certain predominant codes in the sample of reflections (sharing, expression, dependency, attachment, anxiety, friends, family, community, news, democracy, civic engagement, community, and relationships). The codes were not predetermined but rather emerged from the data, based on the content of the participant responses, a key mechanism for grounded theory (Charmaz, 2006).

Once the codes were determined, the researcher and research assistants then collapsed the codes into general categories—(a) sharing and expression, (b) dependency and attachment, and (c) news, democracy and civic engagement—which research assistants used to code all responses. Coders extracted excerpts from the reflections and placed them into one of the three categories. Lastly, the categories identified in the reflections were compared with the results of the tracking data.

## Limitations

This research was limited by the tracking exercise lasting only 24 hours. Cross-sectional surveys can limit the generalizability of the findings to larger populations. The use of a diverse participant base attempted to combat this limitation. Longer periods of tracking may also have provided a more diverse portrait of mobile phone uses. Further, there are bound to be inaccuracies in the tracking process, and so it must be assumed that students failed to track all information uses in a 24-hour period. Language barriers also may have

limited the ability for nonnative English speakers to fully express ideas and opinions. Lastly, the notion of tethering is specific to the mobile "smart" phone with full multimedia and Internet capabilities. That this study focused only on students at 4-year institutes of higher education limited the ability to extrapolate how the idea of "tethering" may apply to different populations, which this study could not address because of the relative sameness of mobile habits across the sample.

## Findings

The centrality of mobile phones in the lives of the young citizens in this study encroached upon all facets of their daily lives:

> I constantly check my phone for messages even though it does not ring or vibrate. I constantly look over and stare at my phone to check for that blinking light, and I cannot help it. I do it all the time, every day.

Accompanying this invasiveness was the growing dependence on the mobile phone in students' lives. "I am part of the mass of people that feel completely lost and almost naked without it," remarked one student. "When I am without it, it is like I lost my arm," noted another. One student put simply, "Checking my phone is the first thing I do when I wake up and the last thing I do before I go to sleep."

Regardless of location, students were using phones to let their social and peer circles know what they were doing, how, when, and why. They also found time in their day to engage in commenting, dialog, or expression in the spaces of peers, friends, and family. The findings here show a population that uses mobile "smart" phones to engage primarily in social networks, which results in a dependency on peers for a majority of daily communication and information. Their perceptions of mobile phone use highlight the tension between mobile phones as facilitators of daily information and communication, and at the same time a tethered sense of belonging and social inclusion.

### Social networks drive information and communication mobile phone habits of college students

The first research question explored the use of mobile phones for daily communication and information needs, and was addressed by the 24-hour tracking exercise. Not surprisingly, students showed a strong attachment to their phones for communication with peers. Students reported social networking (37%, $M = 3.83$) and text messaging (33%, $M = 4.63$) as the most common uses of their phones, more frequent than talking (31%, $M = 3.81$), listening to music 28% ($M = 3.48$), emailing (21%, $M = 3.42$) or web browsing (20%, $M = 3.49$). Interestingly, shopping ($M = 2.00$) and playing games ($M = 2.59$), were less frequently reported. After text messaging, 95% of the sample used social networking apps more frequently than any other function on their mobile phone. Students were logging into social networks primarily, and doing so multiple times in the 24-hour period. Thirty-one percent of the sample logged into social networking apps more than 13 times in a 24-hour period, 36% logged in 7–12 times a day, and over 76% of the

sample was checking in more than once per day. Facebook and Twitter were the dominant social networks reported, followed by a host of others used significantly less frequently.

In the 24-hour period, students regularly posted and commented on other posts on social networks through their mobile phone. Fifty-eight percent of the population reported sharing content 1–3 times per day via social networks on mobile phones; 10% shared content 4–6 times per day, and 20% reported sharing content 10 or more times per day. In addition to sharing content, students in this study were also commenting on information posted by peers. Nineteen percent commented on peer content more than 10 times per day, while 34% comment between 4–9 times per day. Outside of their social networks, sharing via mobile phones was far less common. Only 25% of the population reported sharing content via a web site, blog, or nonsocial networking app 1–3 times during the 24-hour period. Sharing more than three times per day outside of social networks was scant.

In terms of consuming information, students consumed content more frequently from social networks than from any particular app or web site. Sixteen percent of the population consumed visual content (images, videos) from social networks more than 10 times per day, while half consumed visual content at least four times in the 24-hour period. After social networks, text message was used most to consume content, but not nearly to the extent of social networks. Twenty-four percent of participants reported consuming visual content 1–3 times per day via text message, but less than 10% reported receiving any more content via text messages, and over 40% reported not sharing of content via text messages in the 24-hour period. Email was used least to share content. Over half of the population did not exchange content via email, and only 17% did so 1–3 times in the tracking exercise.

Consuming print content on mobile phones was less common than consuming visual content. Students consumed relatively small amounts of information that they sought themselves from a site or an app. Only 10% of the sample consumed more than three articles from an app that was not a social network. The number increased to 23% of students who consumed three or more articles by visiting to a specific web site on their phone. A majority of the sample reported not consuming any articles via a specific content app or the web in their tracking exercise.

On the contrary, the participants consumed more information on their mobile phones that came from social networks and texts. Over 30% of the sample reported consuming more than three articles that they received through social networks in a 24-hour period, and another 30% reported consuming 1–3 articles that were shared with them via social networks. Fourteen percent consumed more than three articles via text messaging, and 17% consumed 1–3 articles that were shared with them via text messages. Although the mobile phone is not a monolithic medium, it does rely heavily on social networks and peer-to-peer communication to facilitate communication and information consumption. While 40% of the sample had over 16 apps on their phone, they reported using only 4–6 apps (40%) or 1–3 apps (34%) on a daily basis. These apps were social networking, followed up by maps and weather.

The emerging trends from the tracking exercise point to a population that is attaching to their peers for a large majority of all information and communication habits on the

mobile phone. This may not be surprising in and of itself, but in the context of the students' perception of the mobile phone, the findings reveal a conflicted sense of the phone's value for daily life.

### A tethered dependency: Facilitating an anxiety-filled, peer-reliant sense of belonging

The second research question inquired about college students' perception of mobile phones in their daily lives. This question was posed to complement the tracking exercise and addressed by the reflections that students completed after tracking their mobile phone use. It was also included as a measure to protect against the cynical tendencies of college-aged students towards social and civic issues. Collectively over 600 students reflected on the role of mobile phones in their lives, totaling over 30,000 words. Below is a portrait of their reflections, which shows a population keenly aware of the potential for mobile technologies to provide stronger community dialog, more diverse information platforms, and more active participation in dialog of all kinds.

"I think this is great for not only myself but for society as a whole," wrote one student, "we become aware of things ... I like to inform my family and friends about current news they might not be aware of. I like reading any type of feedback, whether positive or negative, and sparking up debates." Echoed another student, "I feel like it has helped enhanced my daily habits in one way, as I can receive news quicker and instantly in some cases. I can respond to people on the move." At the same time, the dependency on mobile phones for social communication was significant, and the participants expressed concern. "My phone provides me with shallow feelings of connectivity and being loved or attended to," reflected one participant. Others mentioned mobile phones as "distractions" that "make us shallower and self-centered, as well as hungry for attention." Remarked one student: "I felt that I had a better relationship with my phone, than with people around me. I felt like I was taking better care of THAT relationship, than the one of the person in front of me."

The reflections revealed a tension between the centrality of mobile devices for daily communication and information needs, and the growing dependency on the mobile phone to facilitate a sense of belonging. While the population valued the social engagement provided by their phones, they perceived most of that communication as filling a need to feel included.

"There are moments through the day when I feel sad or bored or anxious," reflected another participant, "and instinctively I look for my iPhone and start to tap anywhere, even re-checking applications twice in less than half an hour." Students mentioned *checking phones "literally every 2 or 3 minutes for updates on text messages, Twitter, or even Facebook."* Many students claimed it was simply "impossible" to go a day without their phone. Some even saw this attachment as a way to cope with the anxiety that digital networks have caused: "I am very diligent about returning wall posts, tweets, comments and other feeds that are on my phone. Without this ability, I think it would stress me out or make me anxious about not knowing what is going on."

The implications of this attachment to phones permeated all parts of daily life, to the point where students mentioned, "hearing false ringtones," "feeling vibrations in pockets

where phones aren't," "pretending to look at the phone to avoid social awkwardness," "feeling alone in public," "refreshing Twitter and Facebook upwards of 40 times an hour." The sample did not describe this attachment as a way to keep up with information or to participate in dialog, but more as a means to "keep up to date," and "feel connected," with their network communities. This manifested itself in constant checking and rechecking, simply to see what people were doing and to make sure they were not "missing out."

The expressed dependency on mobile phones for students exposes some important questions around how much of their mobile phone use provides exposure to valuable information and communication, and how much is a form of tethering that, as Turkle notes, "turn other persons into 'self-objects' to shore up their fragile sense of self" (2006, p. 128). The need to feel included in social networks, coupled with a growing form of immediacy, positioned the phone as a nonoptional part of the daily communication habits of college students. For a majority of the participants, "when that phone rings, whether it is a call, text, email or notification, it sometimes feel like an emergency. You have to pay attention NOW." Students mentioned "unconsciously picking up my phone, praying for a text message or mention on Twitter," and saw the mobile phone as *"becoming a part of us: our best friend who will save all our secrets, pleasures and sorrows."* Indeed, "to be without a phone at your fingertips is to make yourself socially unavailable and almost anti-social."

The *always-on* culture facilitated by the mobile phone blurred the distinction between connecting with peers and being tethered to a device to formulate a sense of inclusion. Students valued the connective potential of the phone, noting "[Mobile phones] allow us to participate in areas of the media which we would otherwise be excluded from, and give us the chance to take part in global conversations," and "when I am texting or on Facebook, or reading the news, I feel connected to the world rather than just what I am surrounded by at that moment." At the same time however, the reliance on social networks to facilitate a large majority of their mobile phone use brings to question the extent to which they are expanding their diversity and scope of information consumption and communication, and to the real and perceived value of mobile phones for daily life in general.

## The tethered future: Harnessing the potential of mobile phones for digital culture

This study set out to provide insight into the role of the mobile phone as a tool for personal and public engagement. The first research question explored mobile habits of university students. The findings show that social networks were the drivers for communication and information consumption on the mobile phone. This places a heavy reliance on peers and acquaintances to facilitate daily exposure to information and communication. The second research question explored perceptions of the mobile phone in the daily life of students. While the students acknowledged the potential of the mobile phone for more inclusive and dynamic interactivity in both social and civic life, the heavy dependence on the phone for social networking resulted in a tethering that students admitted to but found problematic in numerous ways.

These findings reflect a population that is at a pivotal point in their development of identity and voice. The need to be continuously visible in social networks may reflect a need for social acceptance. This also may explain why, across the entire population, few if any differences could be found in what students were doing with their phones, what platforms they were using, and their communication habits. Clearly, the ability to communicate in large-scale ways across borders and cultures offers great opportunity for the future of social connectivity in a globalized world. However, like Ethan Zuckerman theorized in his work on *Listening to Global Voices*,[3] if young people are simply hearing from like-minded peers, the true reach of the phone may be reserved to perception rather than reality.

The implications of this study bring up some important considerations for a population that, at a very formative stage of their lives, rely so heavily on social networks to facilitate communication on mobile phones that they expressed anxiety and an inability to step away or shut off their phone. The potential of the mobile phone to be a vibrant multimedia platform lies not in more new apps that young people may stumble upon and utilize, but perhaps in their ability to harness the existing social connectivity of the phone for more diverse purposes. We already see evidence of this when large-scale political events grip the world, or in times of civic resistance and organization. However, in the context of daily use, the tethering of college students to their phones through social platforms fosters certain suggestions for how best to engage young people in the more dynamic potential of phones that are not necessitated by a response to large-scale political or civil injustices.

Responses to the tethering phenomenon found in this study revolve around the development of digital and media competencies that incorporate more diverse engagement in the context of daily mobile use for civic engagement and digital citizenship (Campbell & Kwak, 2010). One way to envision a more dynamic engagement of college students with mobile phones is to position mobile use in a *participatory context*. Because the mobile phone tethered students to peers, they were more than ready to share, express, contribute, and participate in dialog within their social networks. Using the lens of participatory culture can help broaden the understanding of this behavior to encompass an inclusive, borderless, and reciprocal community of information seekers and sharers, and which can "make it possible for average consumers to archive, annotate, appropriate, and recirculate media content in powerful new ways" (Jenkins, 2006, p. 8).

The study also showed that students appreciated the opportunity to be part of groups that are culturally diverse. In fact, they were so aware of their social connections to others, that they felt discomfort or anxiety if they were not allowed to consistently be part of those networks. Focusing on the *shared narratives* that phones enable can help exploit the meaningful and enhanced knowledge creation, development, and sharing from a diverse group of users (Chua, 2002). If the phone is positioned to reflect the shared value created by social communication (Shirky, 2010), the participants in this study may see their mobile communication as contributing a distinct voice to active, engaged, and diverse narratives.

Across the nationalities represented in the population of this study, a large majority used their phones, from morning to night, to connect with their social networks to share, express, and communicate. That the study utilized a diverse sample to reach such a

uniform finding has significance for the future of mobile phones in a globalizing world. Other recent studies (see Bertel, 2013) have shown similar trends in student dependence on mobile phones for a growing majority of daily needs. Kuznekoff and Titsworth (2013) recently found negative correlations in mobile phone use and learning in formal classrooms. The growing dependence on the mobile phone for social tethering found in this study is in tension with the phones role in the home, in the school, and workplace, for nonsocial purposes. This study can help to elaborate on some of those tensions, as they exist absent of specific borders, places, or location.

Like many other emerging technologies, how young people learn to use mobile phones will ultimately dictate their value to daily social and civic life. The more that formal institutions, from the home to the classroom, find ways to integrate mobile phones, technologies, and social platforms into the purview of their daily routines, the greater the opportunity will be for mobile technologies to play a more central and inclusive role in daily civic life. Future research can build on this exploration to investigate the specific content of mobile sharing: what are students commenting on, posting, and sharing? More directed exploration into the reach of mobile communication could help gauge the true distance and diversity enabled by mobile technologies. And finally, comparative studies based on gender, nationality, or class may help differentiate certain trends in mobile use from others. The mobile phone has become the dominant tool in the lives of college students today. This study hopes to provide a base for understanding the use and perception of the phone for social and civic participation in daily life.

## Funding

## Notes

1. Participating universities and student population at each institution. United States: Emerson College ($n = 67$), Florida International University ($n = 190$), Hofstra University ($n = 17$), University of Maryland ($n = 170$); Mexico, Iberoamericana University ($n = 105$); Lebanon, American University of Beirut ($n = 28$); England, Bournemouth University ($n = 110$); Slovakia, University of St. Cyril and Methodius in Trnava ($n = 104$).
2. Nationalities represented in the study: Afghanistan, Algeria, Argentina, Australia, Botswana, Brazil, Bulgaria, Cameroon, Chile, China, Colombia, Cuba, Denmark, Dominican Republic, El Salvador, Estonia, France, Germany, Haiti, India, Indonesia, Iraq, Ireland, Italy, Jamaica, Japan, Jordan, South Korea, Kosovo, Lebanon, Mexico, Moldova, Morocco, Nigeria, Pakistan, Panama, Peru, Philippines, Russia, Saudi Arabia, Slovakia, Somalia, Spain, Sudan, Syria, Trinidad and Tobago, Turkmenistan, United Kingdom, United States, Venezuela, Vietnam, Zimbabwe.
3. http://www.ted.com/talks/ethan_zuckerman.html

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