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### Abstract:

This paper reports on a workshop hosted at the University of Massachusetts Amherst in September, 2018. The workshop, called "Giving Voice to the Voiceless: The Use of Digital Technologies by Marginalized Groups", focused on discussing how marginalized groups use digital technologies to raise their voices. At the workshop, a diverse group of scholars and doctoral students presented research projects and perspectives on the role that digital technologies have in activist projects that represent marginalized groups that have gained momentum in the last few years. The studies and viewpoints presented shed light on four areas in which IS research can expand our understanding about how marginalized groups use digital technologies to address societal challenges: 1) the rise of cyberactivism, 2) resource mobilization for cyberactivism, 3) cyberactivism by and with marginalized groups, and 4) research methods for examining how marginalized groups use digital technologies.

**Keywords:** Digital Technologies, Marginalized Groups, Cyberactivism, Social Movements, Digital Activism, Indigenous, Protest, ICT and Societal Challenges, Activists.

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## 1 Introduction

New digital technologies provide socially marginalized people—that is, individuals who are excluded from economic, social, and political life (Walsh, 2006)—around the world a means through which they can make their voices heard. Even though traditional media (e.g., television media) have the societal function to represent the interests of all members in society, they often downplay marginalized people’s grievances and needs and instead focus on content for dominant or popular groups (Lievrouw, 2011). Power elites have received criticism for co-opting traditional media to perpetuate their interests and ignoring or misrepresenting perspectives that challenge their interests (Miranda, Young, & Yetgin, 2016). In addition to underrepresentation in traditional media outlets, marginalized groups frequently face exclusion from decision-making bodies. In deliberating societal issues, members from the dominant culture tend to initiate communication, and their ideas have more influence (Sunstein, 2002).

However, in recent years, the proliferation of digital technologies has created unprecedented opportunities for expression and interaction among activists and marginalized groups. These people have found digital technologies “to be inexpensive, powerful tools” for circumventing the limitations of traditional media (Lievrouw, 2011, p. 2). Digital technologies provide a platform for surfacing points of view that would otherwise “be invisible, silenced, or squelched in general debate” (Sunstein, 2002, p. 190). Digital technologies such as the Internet have made many social movements possible and, thus, given previously excluded people an opportunity to express their voice and coordinate their campaigns to spur change.

The realization that digital technologies offer potential benefits to improve the livelihood of the less-privileged is not new or recent (Desouza et al., 2007; Walsham, Robey, & Sahay, 2007). However, it remains unclear how marginalized people use digital technologies to raise their voices and promote their causes. Unfortunately, hate groups, terrorists, and other fringe groups have appropriated these same technologies to spread their messages. Hate groups also use the ICT-enabled protest tactics that empower marginalized groups to oppress others (Young, 2018).

Therefore, in September, 2018, a group of scholars and doctoral students convened in a workshop hosted at the University of Massachusetts Amherst to discuss these issues. The workshop participants presented their findings from their research projects about how marginalized groups use digital technologies to raise their voice. They also considered how marginalized groups might best achieve value and minimize harm from using these powerful and pervasive tools.

This workshop traces its roots to the 2006 International Conference on Information Systems (ICIS). There, a panel of scholars urged Association for Information Systems (AIS) members to apply their ICT-related skills and knowledge to important social problems such as poverty and marginalization. In a follow-on *Communications of the Association for Information Systems (CAIS)* paper, Rick Watson trenchantly observed: “The world is not flat; it is a few well-connected peaks of prosperity separated by large valleys of poverty” (Desouza et al., 2007, p. 271). Panelists called for action research and other forms of exploratory and collaborative research to investigate challenges in deriving value from ICT applications in underserved communities (Desouza et al., 2007, p. 268). Also, in 2007, the foreword to an *MIS Quarterly* special issue on information systems in developing countries articulated an agenda for research to investigate causes and consequences of the digital divide; how marginalized people actually use IS; and the dynamic interplay of institutional, cultural, and technical facets (Desouza et al., 2007; Walsham et al., 2007).

Thus, the workshop and this report represent one answer to these various calls. The studies and viewpoints that we present in this paper point to four areas in which IS research can expand our understanding about how marginalized groups use digital technologies: 1) the rise of cyberactivism, 2) resource mobilization for cyberactivism, 3) cyberactivism by and with marginalized groups, and 4) research methods for examining how marginalized groups use digital technologies.

The paper proceeds as follows. In Section 2, we describe the workshop. In Section 3, we discuss relevant theoretical perspectives and concepts. In Section 4, we summarize the presentations. Finally, in Section 5, we discuss directions for future research and conclude the paper.

## 2 Description of the Workshop

The University of Massachusetts Amherst and the Worldwide Universities Network (WUN)—which comprises 23 universities from 13 countries on six continents—jointly sponsored the workshop. WUN has

the following vision: “As a leading international higher education and research network, we will be a force in developing innovative solutions to some of the world’s most significant challenges” (Worldwide Universities Network, n.d.).

The two-day workshop constituted just one among several WUN-sponsored workshops that involved member institutions that undertook a collaborative research program to study how activist groups use social media for global collaboration. Eleven faculty members from nine universities and five doctoral students from four universities attended the workshop. We list the workshop participants in Table 1.

**Table 1. Workshop Participants**

<b>Faculty</b>	<b>Field</b>	<b>Institution</b>	<b>Country</b>
Rudolph Bedeley	Operations and IS	University of Massachusetts Amherst	USA
Angelica Bernal	Political science	University of Massachusetts Amherst	USA
Donal Carbaugh	Communication	University of Massachusetts Amherst	USA
Hameed Chughtai	IS management	University of Southampton	UK
Elizabeth Davidson	IT management	University of Hawai'i Mānoa	USA
Janis Gogan	Operations and IT	Bentley University, Massachusetts	USA
Steven Gordon	Operations and IS	Babson College, Massachusetts	USA
Dorothy Leidner	Information systems	Baylor University, Texas	USA
Michael Myers	Information systems	University of Auckland	NZ
Emmanuelle Vaast	Information systems	McGill University	Canada
Amber Young	Information systems	University of Arkansas	USA
<b>Doctoral students</b>	<b>Field</b>	<b>Institution</b>	<b>Country</b>
Jose Carlos Arriola Ortiz	Information systems	University of Auckland	NZ
Jordana George	Information systems	Baylor University, USA	USA
Eean Grimshaw	Communication	University of Massachusetts Amherst	USA
Margaret Pulver	IT management	University of Hawai'i Mānoa	USA
Ariel Wigdor	Information systems	University of Massachusetts Amherst	USA

### 3 Theoretical Foundations

Several theoretical foundations pertain to how marginalized groups use digital technologies: critical social theory, social movement framing theory, and resource mobilization theory.

Critical social theory provides insights into power relations and institutions that enforce marginalization. Critical theory focuses on “social issues such as freedom, power, social control, and values with respect to the development, use, and impact of information technology” (Myers & Klein, 2011, p. 17). Seeing marginalization as rooted in colonization, critical postcolonial theories consider relationships and dynamics that are not evident in studies that take a dominant-society perspective (Lin & Myers, 2015). Applied to studies in the information communication and technology for development (ICT4D) literature (e.g., Masiero, 2018; Poveda & Roberts, 2018; Young, 2018) and appearing sparsely in other IS literatures (e.g., Lee & Myers, 2004), critical social theory represents a useful lens to understand how marginalized groups are heard (and not heard) through digital media.

Social movement framing theory (Benford & Snow, 2000) contributes to explaining how the use of digital media can produce and diffuse meanings that promote diagnostic consensus about problems’ facets, prognostic consensus about specific solutions to such problems, and motivational calls to action. In an IS context, social movement framing theory shows that one can use ICT tools to produce social movement culture via diffusing social movement frames and tactics (Yetgin, Young, & Miranda, 2012). IS scholars have widely used social movement framing theory to study social movements (e.g., Barrett, Heracleous, & Walsham, 2013; Etudo, 2017; Kim & Miranda, 2011; Miranda et al., 2016; Young, 2018).

Resource mobilization theory (RMT) represents another foundation that IS scholars can use to investigate how marginalized groups use digital technology. RMT identifies “persistence and legitimacy” (Selander & Jarvenpaa, 2016, p. 334) as highly salient characteristics of actions a group can take when using social media or other digital technologies to advance their causes. Mediation theory, which relates to RMT, represents yet another foundation (Lievrouw, 2011, p. 214).

Majchrzak, Markus, and Wareham (2016) discuss theoretical lenses, causal mechanisms, and/or hypothesized affordances/constraints pertinent to issues such as how marginalized groups use digital technology.

Table 2 provides key terms and definitions relevant to the summaries that we present in this paper:

**Table 2. Key Terms**

Key term	Definition
Social marginalization	The process of being excluded from economic, social, and political life (Walsh, 2006).
Cyberactivism / digital activism	“Social activism relying on the Internet” (Ghobadi & Clegg, 2015, p. 54), “political activism on the Internet” (McCaughey & Ayers, 2013, p. 1), or a “spectrum of activism ranging from individual protest actions to online social movements” (Yetgin et al., 2012, pp. 5-6).
Online social movement	A prolonged, organized effort to bring about or inhibit social, cultural, or political change in which many activities are organized through social media. A social movement may stem from, or involve, shorter-term activism efforts such as cyberactivism events or campaigns. If it focuses on the concerns of a marginalized group, it may be differentiated as (for example) a women’s movement or Indigenous social movement. One should not conflate social movements with collective action (actions that many individuals who work together take toward a common goal). While collective action may spur a social movement, and while social movements encompass collective actions toward the movement goal, many collective actions occur independent of social movements.
Micro-activism	Campaigning to bring about political or social change that reflects small-scale efforts such as sharing links or commenting on social media posts (Marichal, 2013).

## 4 The Presentations

In this section, we summarize each presentation across four subsections that correspond to the four areas in which IS research can expand our understanding about how marginalized groups use digital technologies.

The rise of cyberactivism:

- Michael Myers, the lead investigator, summarizes the project and describes the rise of transnational social movements among marginalized indigenous groups.
- Ariel Wigdor discusses Wikipedia as a platform for indigenous cyberactivism.
- Dorothy Leidner tempers optimism with a warning of how cyberactivism can go awry.

Resource mobilization for cyberactivism:

- Jordana George summarizes resource mobilization theory.
- Steven Gordon describes resource mobilization and environmental causes.
- Jose Ortiz examines online mobilization toward justice amid a social tragedy.

Cyberactivism by and with marginalized groups:

- Eean Grimshaw and Donal Carbaugh describe indigenous cultural activism on social media.
- Amber Young explains how cultural IT artifacts shape and are shaped by indigenous culture.
- Margaret Pulver describes how the Polynesian Voyaging Society used Facebook to connect with communities, organizations, and individuals.

Promising research methods for studies that examine how marginalized groups use digital technologies:

- Hameed Chughtai discusses qualitative methods challenges in studying marginalized people.

- Rudolph Bedeley discusses machine learning as a research method in the context of social media.
- Janis Gogan describes how case discussions can help researchers theorize about marginalization.

## 4.1 The Rise of Cyberactivism

### 4.1.1 Digital Technologies and the Transnationalization of Indigenous Movements (Michael Myers)

This research project focuses on how certain marginalized indigenous groups use social media, which includes how they use these technologies for global collaboration. Recent indigenous social movements have focused on restoring cultural identity and preserving natural resources (Young, 2018); for many groups, cultural and environmental issues are interwoven. This project intends to focus on how localized indigenous movements become transnational, collaborative movements via using the Internet, social media, and other digital technologies. Increasingly, indigenous peoples around the world no longer work in isolation: they collaborate across social media and attract international attention.

A recent example includes the “Idle No More” campaign, which originated in Canada as a local movement to protect indigenous environment and culture. Idle No More spread to other countries where indigenous communities adopted the #idlenomore concept to address their cultural and environmental issues. As Caven (2013) states: “What began as a resistance against an impending bill in Saskatchewan spilled across the border to the United States, ultimately spreading as far as Ukraine and New Zealand as a movement empowering Indigenous communities to stand up for their lands, rights, cultures, and sovereignty”.

This study will analyze social media data to understand network connections and bring together indigenous doctoral researchers to explore how activists organize effectively using social media. We also hope to develop and publish in-depth case studies of two or three such campaigns and movements.

We expect that the research findings will inform the wider indigenous community and groups about the benefits from and challenges in using social media and will contribute an evidence base that describes how digital technology use supports or impedes effective collaboration. The research might also encourage governments to explore new ways to engage and listen to their constituents.

### 4.1.2 Digital Activism on Wikipedia: A Subtle Approach to Confronting Marginalization (Ariel Wigdor)

Like many online collaboration communities, individuals often use Wikipedia as a forum for digital activism. Unlike rich media, which enable a variety of protest frames and tactics, digital activism on Wikipedia is subtle. Nevertheless, digital activists’ subtle influence on Wikipedia can make a genuine impact. One of the most visited sites on the Internet, Wikipedia has recruited thousands of volunteers into collaborative authorship to develop millions of articles. One can attribute Wikipedia’s success partly to strong community governance. Community norms include “guiding principles and dispute resolution policies to overcome conflicts among editors” (Love & Hirschheim, 2017, p. 329).

Wikipedia serves as an encyclopedic repository that contains transnational information about indigenous peoples. Salient to digital activism, Wikipedia facilitates self-organized project groups called WikiProjects that help people pursue shared knowledge goals. According to the WikiProject directory page, Wikipedia hosts four active projects related to indigenous peoples in the Americas and Australia with 13,179 articles and 345 active contributors (WikiProject, 2018). Additionally, Wikipedia has established article categories for indexing groups of indigenous peoples and notable individuals that identify as members of an indigenous culture. As an open collaboration community, Wikipedia has minimal participation costs, and authors from diverse backgrounds can access it. Indigenous groups rarely own traditional media platforms such as radio or television stations. Digital media such as Wikipedia give voice to indigenous groups that the concentrated hegemony of traditional media ownership has historically silenced (Miranda et al., 2016).

Although Wikipedia may potentially reduce bias in identity narratives about indigenous peoples and amplify marginalized groups’ voices, bias can still affect the platform. Even though it emphasizes community governance, oppressive frames of meaning may still seep in. For example, prior research has found that the platform’s centralized design stifles indigenous knowledge communities (van der Velden,

2013) and that the Wikipedia profiles for Fortune 1000 chief executive officers (CEOs) contain gender bias (Young, Wigdor, & Kane, 2016). Despite potential bias, indigenous peoples and digital activists should not overlook Wikipedia as an influential platform for projecting identity, promoting emancipation, and enacting social change. Given its capacity for social good or ill, digital activists challenging oppressive frames of meaning around indigenous identity should monitor Wikipedia and help ensure its integrity as a vehicle for marginalized voices.

### 4.1.3 Micro-activism Gone Awry (Dorothy Leidner)

Defined as digitally mediated activism to promote social movements, digital activism provides new avenues for individuals to engage in social activism. Activism focuses on effecting change by influencing others to action (George & Leidner, 2018). Compared with traditional activism, digital activism makes activism more accessible and location independent and, thereby, increases not only the radius of participation but also the potential for directing the activism at individuals, organizations, or issues far away from the activist. Social activism has the potential to create desirable change, to increase the transparency of governments and organizations, to fight for the rights of the disadvantaged, and to facilitate response to crises among other desirable ends. At its best, digital activism can enable community-driven grassroots environmental sustainability movements in exploited regions (Tim, Pan, Ractham, & Kaewkitipong, 2017). At its worst, digital activism may harbor groups that support malevolent acts, such as violence against women, as a mass attack by an incel member in 2018 recently demonstrated (Louie, 2018).

Traditionally, activism refers to organized action directed at a collective entity—an organization or a government, for example. However, a new form of activism that I refer to as micro-activism has begun to emerge. In such activism, an individual activist uses a social movement as justification to humiliate an individual whose beliefs or behaviors the individual activist believes to run contrary to the beliefs and behaviors that the social movement espouses.

Examples abound in the popular press. For example, consider a certain Dr. Tigges from Plano, Texas. In responding to a questionnaire that a medical society to which he belonged sent him, he answered the question about whether a pay gap exists between male and female physicians, and if so, what the cause was and what steps physicians could take as individuals and as a community to address the gap by saying:

*Yes, there is a pay gap. Female physicians do not work as hard and do not see as many patients as male physicians. This is because they choose to, or they simply do not want to be rushed, or they do not want to work long hours.... Nothing needs to be “done” about this unless female physicians actually want to work harder and put in the hours.*

The *Dallas Medical Journal* and Dallas Morning News printed Dr. Tiggess' response. From there, many people tweeted and retweeted the news on Twitter. From all the attention it received on Twitter (from individuals who did not personally know Dr. Tigges in any capacity), a front-page article in the U.S. edition of *The Guardian* subsequently published an article on Dr. Tigges. Within a week, Dr. Tigges had succumbed to the negative publicity and resigned from his roles on the executive committee of Texas Health Plano's medical board and as chair of the hospital's credentialing committee. Many of the tweets about Dr. Tigges used the women's movement as the backdrop to condemn him even though he never said that female doctors were less competent than male doctors. Rather, he said only that, on average, female doctors see fewer patients either because they spend more time per patient or because they worked fewer hours per week.

Although rooted in a desire to expose individuals who mistreat others in word or deed, micro-activism risks oppressing its targets and, thereby, walks a fine line between furthering a cause and hypocritically engaging in precisely the type of behaviors that it decries. Micro-activism is an area ripe for research. Researchers could use various theories to understand and derive insights about micro-activism, such as theories about ethics, language, verbal abuse, civil strife, or personification to name but a few. I contend that digital activism that does not treat others with dignity and respect as its core principle represents digital activism that will inevitably divide people.

## 4.2 Resource Mobilization for Cyberactivism

### 4.2.1 Resource Mobilization for Political Activism (Jordana George)

Researchers developed resource mobilization (RM) theory in the turbulent 1970s as a counterpoint to the traditional “hearts and minds” theories that focused on social movement legitimacy and success based on common grievances (McCarthy & Zald, 1973). At its core, RMT proposes that, to succeed, a movement needs to mobilize resources—money, labor, facilities, and legitimacy—more than diffuse individuals’ attitudes about the movement and its cause. We revisit RM theory today because the technology landscape has changed the social and political landscape. Resources themselves have changed. Traditional RM theory is an organization-level theory that explicitly acknowledges the relevance and importance of social movement organizations (SMOs) in social movements (Selander & Jarvenpaa, 2016). RMT suggests that SMOs require numerous resources to operationalize their objectives. However, resources comprise more than time, money, and effort. They can include anything that furthers a movement’s aims, such as efficient organization, location, logistics, funding, labor, votes, access to influencers, and knowledge that expands beyond the membership.

Our world has seen many changes since the theory first appeared, such as the types of resources available. For example, new resources include digital access and skills, new types of digital funding, and social networks (Tilly & Wood, 2015). Digital access and skills include Internet access, Internet quality, the range of available equipment, and the varying levels of technical skill. Funding has exploded with the advent of online donations, crowdfunding, and revenue generation through click-thru. Last, social networks have increased access to wider audiences, which allows SMOs to distribute messages and organize events quickly.

In this presentation, I examined the implications of these new resources in funding, geo-synchronicity, and, particularly, social networks. Regarding funding, new digital revenue-generating options can reduce SMOs’ reliance on traditional donations and may result in less organizational compromise to make donors happy as organizations would return fewer favors in exchange for large donations. Geo-synchronicity (i.e., being at the same time and place) impacts SMOs as members do not have to exist in the same place or meet at the same time (Agarwal, Lim, & Wigand, 2012). Rather, they can use social media, chats, discussion boards, and other digital communication resources, which can result in more efficient organizations, faster coalition building, and stronger international support. However, geo-synchronicity also permits outsiders to infiltrate such communication resources’ due to the ease with which one can access them. As a result, messages could become diluted or hijacked for others’ benefit. Social networks also can aid efficiency and speed action as news travels faster and wider. Social media reinforces values and keeps members involved with reminders about actions and events (Majchrzak, Faraj, Kane, & Azad, 2013). In considering these implications together and if resource mobilization indicates SMO control of resources, then digital technologies bring about a new level of self-efficacy and individual control through micro-activism, which could mean mixed results for SMOs due to more efficient recruiting and messaging combined with less control over individuals, which can distort a movement’s message.

In conclusion, with the modifications that I suggest above, RM theory remains a valid lens for viewing current political activism. Today’s technology environment has changed traditional resources, and successful organizations must learn to harness and leverage both new digital resources and participants’ use of them.

### 4.2.2 The Political Power of Social Media in the Dakota Access Pipeline Protests (Steven Gordon)

In this presentation, I applied my prior research on the political power of social media to analyze indigenous Americans’ protest against the Dakota Access Pipeline (DAPL). This underground pipeline connects the Bakken shale oil fields in North Dakota with the oil tank farm in Pakota, Illinois, and passes near the Standing Rock Indian Reservation (SRIR) and under Lake Oahe just north of the SRIR. The shoreline and public lands around Lake Oahe contain Native American artifacts and cultural resources that various legislative acts protect. Additionally, the SRIR gets much of its water from Lake Oahe. Ultimately, the protests proved unsuccessful with pipeline construction completed and oil shipping beginning in June, 2017.

Previous studies have discussed social media’s potential to foster democracy (e.g., Shirky, 2011; Baylor, 1996). However, world events have demonstrated that social media’s power to effect political action goes

well beyond establishing democratic governments (Gordon, 2017). According to my research, social media exert political power in five ways: 1) raising awareness and engagement, 2) framing arguments, 3) engaging with mass media, 4) organizing and mobilizing protest and occupation, and 5) obtaining resources. Quite possibly, even optimally using social media would not likely have prevented the DAPL given the political mood in the US in 2016. Nevertheless, from analyzing how Native Americans' used social media at the time, I found that they could have used it more effectively. Specifically, despite the pipeline proposal's presentation in 2014 and a small occupation at Sacred Stone Camp starting in April, 2016, social media use with the #NoDAPL hashtag did not pick up steam until September, 2016. In framing their arguments on social media, activists did not consider that they could have engaged a broad audience rather than focusing on "red power"; colonial control over native lands; and potential harm to Native American sites, graves, and water quality. Native Americans needed to make it more of a "justice" story that would appeal to those outside the Native American community. Activists made few requests for resources on social media requests. Further, activists needed to interact more with traditional media via social media. People directly affected by the DAPL complained that the story was the biggest story that no one's covering.

### 4.2.3 Social Media's Role in Mass Mobilization in Response to Social Tragedies (Jose Ortiz)

Using social media to organize mass mobilizations constitutes a relatively new phenomenon, and mass mobilization has emerged at an unprecedented pace. Thus far, the literature on social media has not yet investigated how or why the way in which individuals collectively make sense of tragic events through social media leads to mass mobilization. In this presentation, I describe findings from my research on crowd protests that diverse activist groups organized through Twitter in the aftermath of a Guatemalan tragedy.

On March 8, 2017, 19 teenage girls died when a fire broke out in a state-run home for minors, Virgen de la Asunción, on the outskirts of Guatemala City (The New Yorker, 2017). Virgen de la Asunción, a care home that the Guatemalan Government operated, protected children under the age of 18 who had suffered abuse or been abandoned. Content posted on social media played a significant role in escalating this tragedy into a *legitimation crisis* for the government. By repeatedly creating and diffusing messages that blamed public authorities for the death of the girls, activist media organizations funneled feelings of dissent among Guatemalan citizens that spurred massive protests against the government. The tragedy motivated a movement that unified and mobilized thousands of Guatemalans into a single cause: to bring the tragedy's perpetrators to justice.

Immediately after the tragedy occurred, media organizations flooded the Twittersphere with *factual* tweets in the form of messages that informed the general population that something terrible just happened. Subsequently, activist media organizations posted *framing* tweets, which identified the victims (*injustice* tweets) and accused the culprits (*accusatory* tweets). Now that these media had framed the tragedy as a crime that the state perpetuated against innocent girls, activist groups, through *mobilizer* and *motivational* tweets, made calls to collective action to protest. The widely shared belief amongst the citizenry that their government had committed an unprecedented injustice led to thousands of Guatemalans to mobilize onto the streets.

Previous studies argue that, when people can communicate effectively with one another, efforts at organizing a collective response will have a better chance to succeed (Oh, Eom, & Rao, 2015; Shirky, 2011). This case study contributes to the IS literature by explaining how social media (in this case, Twitter) enabled citizens to collectively construct meaning powerful enough to mobilize thousands of people via creating factual, framing, mobilizing, and motivational content.

## 4.3 Cyberactivism by and with Marginalized Groups

### 4.3.1 Blackfeet (Amskapi Piikuni) Country, Identity, and Social Media (Eean Grimshaw and Donal Carbaugh)

The indigenous people identified as Blackfeet (in English) or Amskapi Piikuni (in their Blackfoot language) reside on a reserve in northern Montana on the Canadian border. The Blackfeet are part of a larger group of peoples known as the Blackfoot Confederacy, which includes other reserves in Canada.

Prior studies have examined communication in the Blackfeet culture (e.g., Carbaugh & Wolf, 1999), such as the way in which individuals use and interpret silence in classrooms, the cultural form of narrative

distinctive to Blackfeet as a resource for contemporary lives, oral literature, and listening as a form of practice (e.g., Carbaugh & Grimshaw, 2018; Carbaugh, 2004, 2005; Carbaugh & Wolf, 1999; Clark & Brennan, 1991).

In our presentation, we focused on the how Blackfeet participants use social media today, such as to advocate others to clean up litter in their local areas, to vote for favored political candidates, to examine the importance of the Blackfoot language, and to discuss issues of identity or what it means to be a good tribal member. In addition to these issues in the public sphere, we discussed how Blackfoot members sought aid via social media, such as various pleas for assistance (e.g., material things and spiritual matters as prayer). Since few Blackfeet people exist (approximately 15,000 members) and live across over a million acres, it becomes clear that social media serve a variety of purposes. Indeed, social media allow for the Blackfoot people to create a public forum, which they could not do so previously. This forum enables Blackfoot people to distribute news and information, conduct political activism, and discuss personal matters. We concluded by discussing how social media enable participants to engage in shared discourse and, thus, in new ways to actively engage as members in the community.

### 4.3.2 IT Artifacts as Cultural Artifacts: Cultural Entrepreneurship of Cultural Identity (Amber Young)

Cultural artifacts (such as art and architecture) constitute a society's "constructed physical and social environment" (Schein, 1985, p. 14). Cultural artifacts contain clues about a society's or social group's culture and identity. An IT artifact refers to IT that "enable(s) or support(s) some task(s) embedded within a context" (Benbasat & Zmud, 2003, p. 186). Like anthropology, the IS field is artifact centric (Avison & Myers, 1995). Thus, conceptualizing IT artifacts as cultural artifacts creates a natural synergy.

Applying the literature on cultural artifacts to conceptualize IT cultural artifacts emancipates people from understanding IT as merely tools that serve only instrumental functions. Instead, we can see IT cultural artifacts as depots for social memories and cultural knowledge: they represent and empower the cultural groups from which they are born. Furthermore, this representation and empowerment outlive the people who design and develop IT artifacts as their presence and meaning can endure outside of the physical and temporal context that their creators imagined.

Cultural entrepreneurs create cultural artifacts, and creating artifacts produces culture. Thus, IT designers and developers are cultural entrepreneurs engaged in producing cultural IT artifacts. They may make produce such artifacts to shape public consciousness around a political topic. For example, when designers and developers create IT cultural artifacts for indigenous groups, they (perhaps unknowingly) engage in socially constructing cultural identity. By making choices about which cultural information to embed in IT artifacts and how, IT designers and developers play an important role in determining what aspects of culture the artifacts emphasize, privilege, or ignore.

Identity narrative control poses an important issue for indigenous groups who have an underrepresented voice in traditional media. New media reduce authorship costs (relative to traditional media costs) and new opportunities to shape cultural meanings on a larger scale. In my research, I bring attention to the important role IT designers and developers play in shaping identity narratives through cultural entrepreneurship.

### 4.3.3 The Polynesian Voyaging Society and the Hōkūle'a Crew Facebook Page (Margaret Pulver)

Social networking platforms (SNPs) such as Facebook, YouTube, Twitter, and Instagram provide opportunities for individuals and organizations to create and maintain a variety of social relations. Of course, these platforms have some disadvantages, but one can use them to better enable community engagement (Boyd & Ellison, 2007; Ellison & Boyd, 2013; Zhang & Leung, 2015)

The Hōkūle'a, a double-hulled sailing canoe that revived celestial navigation, wayfinding, and voyaging in the Pacific with her historical maiden voyage to Tahiti in 1976, recently completed the Mālama Honua Worldwide Voyage (MHWVV). This voyage circumnavigated the Earth and took Hōkūle'a and her crew to communities all over the world in the hope of building a global network of interest dedicated to the values and mission of Mālama Honua. The Hawaiian phrase "Mālama Honua" loosely translates to "care for earth" but more deeply translates to the idea of caring for place in ways that benefit not only people but also the Earth. This universal message provided a thread that could potentially weave the community together. If Mālama Honua was the thread, then Hōkūle'a was the weaver. Mother to the revival of

Polynesian voyaging, wayfinding, and culture, Hōkūleʻa is a living legend. Her mana (spiritual power) is palpable even to the newcomer.

The MHWWV leadership had a greater vision that such a network might be able to drive the social discourse towards notions of sustainability and a better “sail plan” for humankind. Through a blend of face-to-face experiences and computer-mediated communication across popular SNPs, the Polynesian Voyaging Society hoped to help develop this global network. Using this blended form of communication would allow the crew on each leg to both establish new connections and maintain existing ties with connections in Hawaiʻi.

I conducted an exploratory case study of the Hoōkuūleʻa Crew Facebook page to provide information about the MHWWV network, the central actors engaged on the platform, and any unique community structures that might exist among the page’s followers. Preliminary findings indicate that actors created and maintained a network of interest over the course of the MHWWV. As the crew connected with communities, organizations, and individuals around the world and shared those stories through Facebook, the number of followers and general level of engagement both grew consistently over the voyage’s duration. Engagement seemed to be correlated with specific events and locations, such as the crew’s visit to the United Nations and Washington, DC.

## 4.4 Research Methods for Collaborations with Marginalized Groups

### 4.4.1 Using Ethnography to Study Digital Activism (Hameed Chughtai)

In this presentation, I focus on qualitative methodological concerns in studies that examine marginalized people. Due to the politically sensitive context of protests and resistances, researchers have historically argued that one needs to understand marginalization from marginalized people’s perspective. To do so, researchers need to decolonize research methodologies. However, contemporary scholarship argues that they often do not (e.g., Ortner, 1995; Dove, 2006). Dominant research methods often do not take critical positions (such as indigenous and post-colonial). The failure to properly engage with the methods directly impacts the type of data available on marginalized groups, which can pose a problem because how researchers frame a social movement may influence indigenous peoples’ everyday practices. Hence, researchers may decenter key issues or push them to the margins. To address these concerns, I suggest two concepts: ethnographic refusal and methodology of the oppressed.

Ethnographic refusal refers to “a kind of bizarre refusal to know and speak and write of the lived worlds inhabited by those who resist” (Ortner, 1995, p. 190). Qualitative researchers, especially ethnographers, often refuse engagement without justifiable ethical or epistemological concern and risk becoming mere watchers of marginalization. Consequently, resistance accounts are both rare and ethnographically thin as they lack critical narratives that document the narratives of the cultural and political diversity of those groups. Further, the rise of “remote” ethnography (study from afar, virtual presence) and personal accounts (autoethnography, biography) may encourage researchers to detach themselves from a situation. However, some researchers have notably countered ethnographic refusal. Parkhurst’s (2017) ethnography of #SaveOakFlat offers powerful insights into social media data. When interpreted appropriately, a digital post (such as a tweet) represents an act of resistance since it can “amplify the voices of the oppressed” (p. 2). While taking a de-colonializing methods position, Parkhurst (2017) argues that celebrating survival on social media represents an act of resistance. Dhillon’s (2017) ethnography about the indigenous youth of Canada’s political struggles represents a more direct example. Although an outsider (non-indigenous), the researcher involved herself in the social movements and, thus, uncovered inner politics of dominated groups and highlighted their fears and struggles as they engaged in everyday resistance.

Methodology of the oppressed refers to a decolonized methodological stance that Sandoval (2000) suggests. This position asks researchers to accept that oppressed peoples often have no alternative but to wage struggles for rights. In this way, resistance represents the starting point of inquiry. Sandoval suggests an approach in which one understands differential and oppositional consciousness in politically infused practices. It constitutes an empathic strategy that builds on the critical erotics (hermeneutics) of love as a method for emancipation. In this context, a resistance movement constitutes a differential social movement—a “mobile, flexible, diasporic force that migrates between contending ideological systems” (p. 29). Here, each “technology of the methodology of the oppressed” (e.g., language, expression, movement, and so on) creates new possibilities to reinterpret the ongoing dialogue (p. 108). In the digital indigenous context, differential movements explain resistance as reappointing space and power

(transnational). In this way, resistance modes can help researchers (and participants) make sense of movements' inner politics.

#### 4.4.2 Launch a Program of Research on Digital Mobilization by Discussing Cases (Janis Gogan)

Case research is a strong method for exploring complex organizational or societal challenges (Yin, 2018). A research team may publish its findings as a case history, critique, or ethnography and/or draw on the case research to produce a discussion case for use in a management class. I argue that a field-based real discussion case can help a research team improve its theorizing about how marginalized groups use digital technologies since this research topic involves many fields and involves much complexity. A real discussion case translates scholarly work into a practitioner-friendly form. Like a case history, it results from rigorous field-based research. Unlike a case history, the real discussion case specifically focuses on supporting discussion. It tells a true but incomplete story that an individual (the protagonist) presents through their own eyes after confronting a particular situation at a moment in time in a particular organizational, industrial, and broader social context (Naumes & Naumes, 2012). Professors hope students will place themselves (metaphorically) in the shoes of the case protagonist, which gives them an opportunity to engage with the case's facts on both a rational and an emotional level. Real discussion cases:

*Can trigger useful scholarly discourse. Because case discussants can interpret real cases richly, holistically, and freely, discussions can help the researcher appreciate new perspectives on study findings, particularly if discussants vary in their backgrounds, experience, and other dimensions. New perspectives, in turn, may help the researcher identify useful new questions for further study. Thus, when real cases are critiqued through discussions among scholars and with practitioners, scholars should develop ideas that lead to stronger theories. (Gogan & Murungi, 2018)*

We can see evidence for this phenomenon in work from Sumantra Ghoshal, namesake of the London Business School's annual Sumantra Ghoshal Conference on Research Relevance and Rigour. In twenty years (1985-2004), he published more than 70 papers and 12 books. One of the most influential management scholars of the 20th century (Rugman, 2002), Ghoshal (with co-author Christopher Bartlett) conceptualized the multinational corporation (MNC) as a network that confronts the dual challenges of integration and differentiation (and, thus, built on Lawrence and Lorsch (1967)). Ghoshal's later papers included much-cited critiques of rational-actor management theories and management education. He also produced more than 35 discussion cases, which he discussed with MBA students, executives, and his co-authors. Ghoshal, his co-authors, and other colleagues contend that those case discussions served as important mechanisms and occasions for his theorizing, which, in turn, contributed to his extraordinary productivity and influence (Birkinshaw & Pirmal, 2005).

A case discussion allows one to hear multiple voices in a conversation that supports collective learning and improved theorizing. After conducting some field-based case studies about how marginalized communities use social media during critical episodes that involve them, one can find that discussion cases prove helpful. In workshops, scholars from multiple perspectives and fields can discuss the cases among themselves and with members of the studied communities. These discussions focus on stimulating theorizing about how and why marginalized groups use digital technologies. Through discussion, participants should reach a deeper understanding about the complex interplay of political, social, economic, and technical aspects of digital technology use, which sets the stage for in-depth within-case and cross-case comparison that yields stronger theory.

#### 4.4.3 Big Data Analytics Application from a Machine-learning Context to Understand Social Networking Use Preference (Rudolph Bedeley)

In recent years, we have seen people adopt and use social networking sites (SNS) at a dramatic rate. According to Kane, Majchrzak, Ives, and Brown (2010), Facebook opened to the public less than a decade ago, yet it boasts billions of users who use the service daily. Due to their ubiquity, SNS have become the most popular online destinations nowadays and, accordingly, have received heightened attention from academic researchers (Boyd & Ellison, 2007).

In the digital activism context, SNS have also played an essential role in enabling diverse actors in society to express their voices. However, despite the upsurge in SNS adoption and use, the current literature

lacks studies that explore why users prefer and spend a lot of time on particular SNS over others (Jones, Millermaier, Goya-Martinez, & Schuler, 2008). Most current investigations tend to look at users' behavior on SNS from a holistic view of usage patterns without paying detail attention to nuances in attributes and features that engage users to use a site over extended periods (Steinfeld, Ellison, & Lampe, 2008; Tong, Van Der Heide, Langwell, & Walther, 2008). I have begun to address this gap both theoretically and empirically in a study that focuses on the following research question: "How can one identify and classify users that use Facebook more versus users that use Twitter more?"

In the study, I employed machine learning (ML) to understand and classify user preferences between Facebook and Twitter based on usage patterns. Specifically, I used support vector machine (SVM), a particular ML technique, to analyze and classify Facebook and Twitter users into their respective usage preferences based on service qualities and features they enjoy from either of the two platforms. Because the research question required that I collect a sample data from a large group of the population of Facebook and Twitter users, ML served an appropriate tool for mining this large dataset.

I drew on the technology acceptance model (TAM) to extract Facebook or Twitter features that keep users engaged or attached to them. Subsequently, we classified users based on their utility preferences in using either SNS. Preliminary results show that Facebook users ranked it higher than Twitter based on perceived usefulness (relevance) and ease-of-use (usability).

## 5 Conclusion and a Call for Future Research

The research projects and viewpoints that we present in this paper highlight different ways for IS research to expand our knowledge about how marginalized groups use digital technologies to raise their voices. The workshop participants broadly agreed that marginalized groups have the potential to positively use digital technologies to advocate causes such as identity restoration and preservation, environmental conservation, and social justice. However, one should recognize that digital media may afford further marginalization through bias and misrepresentation, especially if marginalized groups fail to harness digital media's emancipatory potential and if individuals appropriate it for inappropriate micro-activism. For example, one can use social media to disseminate content that distorts a social movement's causes, which threatens both the movement's legitimacy and its affiliated actors' social standing. Further, some groups can deploy digital technologies in ways that benefit their members but harm society at large. One can use social media and other digital technologies to promote extreme views that lack the common ground necessary for people in diverse groups to collaborate and build a tolerant society (Lee, Choi, Kim, & Kim, 2014).

The workshop presentations revealed fruitful directions for future research and scholarly activity. Many questions remain regarding how and under what conditions cyberactivism produces positive outcomes. Having considered the transnationalization of some social movements, we clearly need future studies that investigate cyberactivism's risks, challenges, and benefits. How does transnational cyberactivism shape cultural identities?

As alternative channels of expression, digital technologies challenge traditional media channels. Future studies need to investigate the characteristics of social movements that gain traction on social media and how traditional media affect the diffusion of these movements. As marginalized groups adopt digital technologies to suit their needs and interests, studies also need to explore how and to what extent their use of digital technologies change intra-group dynamics.

Another potentially useful stream of research could address the policy implications from governments' using digital media to engage with and listen to marginalized groups. Further studies need to offer practical ethical guidance to digital platforms such as Wikipedia on issues that include how to protect identity, promote emancipation, and enact positive social change.

Complex problems benefit from research programs that use a variety of qualitative and quantitative methods. New data analytics and machine-learning techniques offer many opportunities for analyzing social network structure and group sentiment (Miranda, 2018, p. 22) both in studies that examine how ideas diffuse and how people promote causes and in studies that examine hate speech and extremism (Sarker, Xiao, Beaulieu, & Lee, 2018).

As scholars continue to partner with marginalized groups in research efforts, we must be vigilant to uphold high moral and ethical standards and reflect critically to ensure we do not oppress groups with which we seek to partner. Future studies might draw on the perspective of "theory of the solution" as a genre of IS

research that Majchrzak et al. (2016) propose. They suggest that scholars should explain why digital technologies should contribute to solving a particular societal problem along with the additional (non-technology) conditions necessary for the technology-mediated solution to succeed. Here, case studies can play a helpful role: one can convene diverse groups of scholars and indigenous community members in future workshops to debate and explore the meaning of relevant indigenous community practices and decisions and members' hopes and expectations about whether and how digital technologies may help or hurt.

In this paper, we discuss several examples for how marginalized groups use digital technologies to collaborate globally. The help or harm derived from these technologies depends a great deal on the social contexts in which they exist, which includes oppression tactics and participants' identities, values, and practices. We hope the findings that we summarize and perspectives we discuss will motivate researchers to conduct work that focuses on revealing how to unleash the positive potential of digital technologies to support the inclusion and human development of marginalized groups while limiting their harm.

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