Attending to Gender and Sexuality in Learning: Lessons From Scholarship By, For, and With LGBTQ+ People

Suraj Uttamchandani (co-chair), Indiana University, suttamch@indiana.edu
Addie Shrodes (co-chair), Northwestern University, ashrodes@u.northwestern.edu
José Ramón Lizárraga, University of Colorado, Boulder, jose.lizarraga@colorado.edu
Arturo Cortez, University of Colorado, Boulder, arturo.cortez@colorado.edu
Dylan Paré, University of Calgary, dylan.pare@ucalgary.ca
Marie-Claire Shanahan, University of Calgary, mcshanah@ucalgary.ca
Pratim Sengupta, University of Calgary, pratim.sengupta@ucalgary.ca
Megan Bang (discussant), Northwestern University, megan.bang@northwestern.edu
Chris Hoadley (discussant), New York University, tophe@nyu.edu

Abstract: While interdisciplinary scholars have explored LGBTQ+ people's educational experiences, and despite the learning sciences' increasing attunement to issues of ethics, politics, and identity, the field has yet to deeply engage the salience of gender and sexuality for learning. In this symposium we center emerging scholarship in the field by, for, and with LGBTQ+ people to explore three questions: How has learning sciences research engaged LGBTQ+ communities? How does attending to gender and sexuality expand how we understand learning? And how can the field be mobilized to design affirming learning environments for LGBTQ+-identifying people? Across the papers, we explore gender and sexuality's relevance for learning in contexts as wide-ranging as video channels on YouTube, an LGBTQ+ youth social group, Twitter networks of drag queen activists, and a public computing participatory simulation. Taken together, these papers will deepen the field's attention to gender and sexuality in learning sciences theories, methods, and designs.

Introduction

In recent years, the learning sciences has begun to consider the salience of gender and sexuality to learning, with an emerging focus on the research and design of learning environments that affirm and support learners who identify as lesbian, gay, bisexual, transgender, queer, questioning, intersex, asexual, and two-spirit (LGBTQIA2S+ or LGBTQ+) (McWilliams, 2016; McWilliams & Penuel, 2017; Esmonde & Booker, 2016). The developing area of research often draws on approaches in the learning sciences that attend to the social, cultural, political, and ethical dimensions of learning (Politics of Learning Writing Collective, 2017; Bang & Vossoughi, 2016; McKinney de Royston & Sengupta-Irving, 2019). It also often extends interdisciplinary scholarship, including literacy studies (e.g. Blackburn, 2005), queer theory (e.g., Butler, 1990), and queer of color critique (e.g., Muñoz, 1999) to study learning in LGBTQ+ communities. This symposium will explore the potential of this growing body of scholarship to expand our theories of learning, design of learning environments, and methods for learning sciences research. We approach gender and sexuality as identities that are self-determined, multiple, relational, fluid, and subject to change over time. We believe that studies with LGBTQ+ people must also be attuned to intersections of identity with race and class (Cruz, 2013; Brockenbrough, 2015). In convening this symposium, we aim to share lessons from scholarship by, for, and with LGBTQ+ people to deepen the field's attention to gender and sexuality and develop paths forward in research and design that expand possibilities for learning.

Learning environments such as schools and colleges often reproduce hegemonic, normative discourses that perpetuate discrimination, victimization, and erasure for LGBTQ+ youth and lead to increased rates of school drop-out (Kosciw et al., 2018; Johnson, 2017; Nicolazzo, 2017). These discourses include *heteronormativity* (Warner, 1991) and the *heterosexual matrix* (Butler, 1990) that render LGBTQ+ identities deviant or illegible, as well as the *gender binary discourse* and *compulsory heterogenderism* (Nicolazzo, 2017) that regulate transgender, non-binary, and gender non-conforming gender identities and expressions. These discourses enforce discriminatory policy and practice. In a 2017 survey (N = 23,001) of mostly LGBTQ+ students in the United States released by GLSEN (Kosciw et al., 2018), 62.2% of respondents experienced LGBTQ+-related discriminatory policies and practices at school. While these normative discourses marginalize LGBTQ+ learners in particular, they control and constrain possibilities for all learners.

Educational scholarship that takes up gender and sexuality suggests that design, curriculum, and instruction in and out of school can support LGBTQ+ learners as they navigate and transform normative discourses. Literacy studies scholarship argues that affirming LGBTQ+ and racial identities in learning

environments can support youth as they develop and enact multiple identities (Blackburn, 2005; Johnson, 2017; Wargo, 2018). Scholars have also found that learning environments can be sites in which LGBTQ+ learners identify, contest, and transform normative discourses (Cruz, 2013; Brockenbrough, 2015). This work points to the potential of educational research to engage in advocacy to support LGBTQ+ well-being and transform discourses around gender and sexuality. Despite educational scholarship in other areas and emerging learning sciences scholarship that attends to gender and sexuality, the learning sciences field has yet to deeply engage with gender and sexuality or LGBTQ+ identities.

Engaging gender and sexuality in these expansive ways offers important promise for the learning sciences. In terms of theory, employing these lenses makes visible particular aspects of sociocultural and sociopolitical learning processes that might otherwise be obscured, such as the gendered nature of participation in communities of practice (Curnow, 2013) or the risks of assuming linear approaches to learning and development without sufficiently attending to the failures, setbacks, and contradictions in learning that a queer theoretic approach makes visible (McWilliams, 2016). In terms of design, these expansive approaches can disrupt normative binary discourses and instead support all learners' fundamental dignity (Sengupta-Irving & Vossoughi, 2019). For example, this attunement can minimize gender stereotyping and help reframe designs that are meant to offer "gender parity" instead as attempting to design for gender expansiveness, which is to say, to offer equitable disciplinary identification (Bell, van Horne, & Cheng, 2017) for people of all genders.

The papers in this symposium use a range of methods and theoretical orientations with implications to expand how we study, theorize, and design for learning with attention to gender and sexuality. We explore three orienting questions: What is the state of the field around LGBTQ+ communities in the learning sciences? How does attending to gender and sexuality expand how we understand learning? When gender and sexuality are thought of expansively, how can the learning sciences be mobilized to design affirming learning environments for LGBTQ+-identifying people? Although the papers in this symposium draw on queer theory and queer of color critique to expansively attend to gender and sexuality in learning, they also have purchase to demonstrate how methods and theories from the learning sciences can contribute to gender and sexuality studies. This 90-minute symposium will include a five-minute introduction, four 12-minute presentations, and 10 minutes each for the discussants to synthesize across papers. The remaining 15 minutes will be used for audience questions.

Paper 1: Towards political feeling: Structures of feeling and consequential writing in LGBTQ+ reaction video channels

Addie Shrodes

In this paper, I examine LGBTQ+ youth digital culture on YouTube to explore how structures of feeling in LGBTQ+ reaction videos become collectively held and mediate consequential writing in the comments section. In the LGBTQ+ reaction video channels I follow, video creators and commenters watch and react to discriminatory media clips that are undergirded by dominant ideologies such as *heteronormativity* (Warner, 1991). I find that these videos structure collective feelings that can mediate consequential digital writing.

An emerging area of learning sciences scholarship frames *consequential learning* as learning that matters to marginalized communities in pursuit of justice and liberation. This sociocultural scholarship traces how consequential learning arises in justice-oriented activities that dismantle systems of oppression and prefigure non-dominant futures (Zavala, 2016; Jurow & Shea, 2015; Bang & Vossoughi, 2016). Literacy scholar Sakeena Everett has drawn on learning sciences research (Gutiérrez & Jurow, 2016) to develop the framework of *consequential writing* (Everett, 2018). In Everett's framework, consequential writing 1) "generates creativity," 2) "anchors intellectual rigor," 3) "raises critical consciousness," 4) "honors humanity," and 5) "leads to action against inequity" (2018, p. 44). In this paper, I contribute to these emerging conversations by examining consequential writing in LGBTQ+ reaction video channels.

To frame this paper, I draw on sociocultural theories that hold learning takes place in purpose-driven activities mediated by social relationships and cultural artifacts (Vygotsky, 1978; Wertsch, 1991; Cole, 1998). I also develop and draw on the construct of *political feelings* with queer affect theory (e.g. Gould, 2009; Cvetkovich, 2003) to attend to the ways collective emotions are cultural productions that mediate activity. While affect theory taken up in educational research often focuses on bodily intensities (e.g. Ehret & Hollett, 2016), queer affect theory attends to affect's capacity to be a structuring force in queer and trans cultural practice and political life (Gould, 2009; Cavalcante, 2018). *Political affect* frames collective emotions as cultural artifacts that mediate how a community comes to feel about injustice and act toward social change.

I explore how structures of feeling in LGBTQ+ YouTube videos become collectively held and mediate consequential writing. The study takes up three research questions: (1) How do the reaction videos structure and

circulate affective responses to media underpinned by dominant ideology? (2) If and how does the commentary interactionally take up and construct collective feelings toward the media source and dominant ideology? (3) If and how do these collective feelings mediate consequential writing?

This paper is situated in a larger virtual ethnography (Lammers, 2013; Black, 2009; Kim, 2016; Raun, 2016) of LGBTQ+ reaction video channels on YouTube. Data sources include video data and commentary from five reaction videos from LGBTQ+ content creators on YouTube selected via eight rigorous selection criteria (Raun, 2016). To select commentary, I sampled the first 125 popular comment threads (comments with more than 2 replies and 'likes' that total at least 0.10% of the total comments) on each video, totaling 625 comment threads.

I first analytically logged the five videos and commentary threads with an iterative inductive and deductive approach to surface key events and patterns across the data (Jewitt, 2012). Deductively, I logged the data with attention to Everett's (2018) five characteristics of consequential writing. Based on analytic logging, I selected one key event in each video and up to 30 comment threads that respond to this event to analyze further. I then conducted Critical Discourse Analysis (van Leeuwen, 2008) of the five clusters of video events and commentary threads with attention to how the comments respond to the video and other comments.

The analysis of five clusters of video events and commentary threads finds that the reaction videos structure and circulate collective feelings such as hilarity, scorn, frustration, anger, and optimism that commenters interactionally construct as collective feelings. These feelings mediate consequential writing by shaping focuses on 1) humorous disruption of dominant ideology, 2) critique of structures of power, privilege, and oppression, and 3) articulating possibilities for transformation and collective agency in the face of structures of power.

This paper aims to nurture humanizing attention to LGBTQ+ digital culture with possibilities to transform how researchers and educators affirm LGBTQ+ youth. In order to support LGBTQ+ students, we need to understand the role of digital media in everyday learning and foster consequential writing that arises as LGBTQ+ youth negotiate and transform normative discourses. By building on queer theory, this project has also purchase to expand the conversation around the political dimensions of learning to account for the role of digital media and structures of feeling in the learning that takes place as members of marginalized communities organize toward transformative justice.

Paper 2: Collaborative learning in an LGBTQ+ youth group: Politicizing the learning sciences' theories of collaboration

Suraj Uttamchandani

While learning scientists agree that collaboration is an important part of the learning process, there are theoretical tensions in how to conceptualize collaboration in cognitive versus sociocultural ways (e.g., Palincsar, 1998), with some arguing that it is sometimes necessary to move across these paradigms (e.g., Danish & Gresalfi, 2018). Simultaneously, LS has become increasingly interested in political, power-laden, and ethical dimensions of learning processes (e.g., Politics of Learning Writing Collective, 2017). Several LS studies have examined how race, ethnicity, and political alignment impacted in-school collaborative learning where there is significant heterogeneity and disciplinary learning is the goal (e.g., Kolikant & Pollack, 2015; Walsh & Tsurusaki, 2018). Relatively few studies have employed LS theories to understand collaboration in out-of-school contexts where social advocacy (rather than disciplinary learning) is the explicit goal (cf. Kirshner, 2008) and where learners have a shared political orientation.

In the present study, then, I bring LS theories of collaborative learning to bear on the naturalistic study of such an informal learning environment—an LGBTQ+ youth group—to examine collaboration. I engage in microethnographic research based on a larger ethnographic research project with Chroma (pseudonym), an LGBTQ+ youth group in the Midwestern USA (see Dennis, Uttamchandani, Biery, & Blauvelt, 2019, for a full discussion). Chroma has a Teaching Committee (TC) that consists of Chroma youth who create and deliver presentations to teachers and other youth-serving professionals about how to work with LGBTQ+ youth. As is common in LS, I understand discourse as a primary mediator of collaboration and even an object of change in collaborative learning (Palincsar, 1998). I deploy interaction analysis (IA) (Jordan & Henderson, 1995) to make sense of collaborative practices in audio-recordings of 26 hours of TC committee meetings, six trainings, and four extended worktime sessions that took place from June 2018 to June 2019. My guiding question is: When and how do existing theories of collaborative learning apply to the openly political learning happening in the Chroma TC?

Preliminary findings indicate that several key notions in collaborative learning apply to the kinds of collaborative practices that take place in Chroma. I share here one representative extract, which takes place while youth are preparing to give a presentation to new teachers. In this presentation, youth have only 20 minutes to give a presentation that usually takes one hour, so they are deciding what to cut from their previous presentation:

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1    Fox:    I think we should take out all the specifics and then
2            just do a concept overview and then direct people as
3            before to packet for [spe]cific definitions
4    Art:                         [so]                        do you
5            think this would be worse if it's here
6    Fox:    I mean (1.7)
7    Art:    cus we like can't talk about them really=
8    Fox:    =yeah=
9    Art:    =well I don't=
10   Fox:    =I think it would just confuse people
11   Art:    I think that we- I think that it would be really weird
12           if we came in and they knew nothing about trans people
13           and we didn't even define the word "transgender."
14   Ovni:   Wait, what?=
15   Fox:    =Well I think that we CAN define the word transgender,
16           I just think that like having a bunch of terms and
17           notexplaining the differences, yeah, you know what i
             mean?=
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In this extract, the youth are debating whether they have time to go into specific definitions of multiple gender identities and sexual orientations (e.g., pansexual). Across this extract, there has been disagreement that even necessitated an explicit request for repair by Ovni (line 14). However, youth were able to resolve the conflict through the strategies of empathizing with potential audience members and through compromises. This discussion is similar to the "iterative cycle of displaying, confirming, and repairing situated actions" (Roschelle, 1992, p. 237) that support convergent conceptual change; Art and Fox each offer their perspective, consider the other person's, take up aspects of what the other person has said, and offer explicit repair when confusion arises. Across the data, we also see connections to productive disciplinary engagement (Engle & Conant, 2002) and collaborative argumentation (e.g., Berland, 2011). Although a single extract from the dataset, this microanalysis suggests promising intersections between existing theories of collaborative learning and the advancement of sociopolitical knowledge around LGBTQ+ issues.

While the preliminary findings demonstrate that learning in Chroma is to a degree aligned to existing learning sciences theories of collaboration and that the space has organized itself to support effective collaborative learning. Novel, however, are the content (explicitly identity-oriented) and ends (social justice) of this learning. The study therefore offers potential to politicize these theories by pointing to where and how they do or do not offer explanatory lenses for learning in sociopolitical contexts.

Paper 3: "Dragtivism": Cyborg Drag queens, public pedagogy, and multisited learning through queerness

José Ramón Lizárraga and Arturo Cortez

This paper examines how digital social networks facilitate a public pedagogy, or the learning that occurs in public spaces, popular culture, and political movements (Reid 2010; Savage 2010). In this regard, we extend previous work in the learning sciences which has sought to decouple learning and schooling in order to attend to the ways that learning travels across everyday (formal and informal) sites of practice (Engeström, 1991; Vossoughi & Gutiérrez, 2014) and guides the development of sociocritical and sociopolitical literacies (Gutiérrez et al., 2019; Gutiérrez, 2008; Jurow & Shea, 2015). We extend our previous work (Lizárraga & Cortez, 2019) that explores how digital queer gestures, based upon Rodriguez's (2014) notion of queer gestures, travel across digital and analog stages to stimulate collective resistance practices against the deep entrenchment and advancement of homonormative (Duggan, 2002) projects. In doing so, this project makes visible the collective imaginings percolating across the Twitter network of drag queens who have gained an activist presence–those who have gained popularity through the reality television show RuPaul's Drag Race and other local queens. We further examine how queerness is taken up, hybridized, and remixed to expand a collective understanding (indeed, the learning) that occurs from a racialized, sexualized, and classed perspective.

This paper is informed by sociocultural perspectives which examine learning as it unfolds in activity within and across sites of practice (Cole, 1996; Engeström, 2001). We are further informed by actor-network

theory (Latour, 1996) and theories of digital connectivity and cultural memory (DeKosnik, 2016) which help us understand the nature of human interaction in an increasingly digitized and interconnected world. Queer theory also animates this work by providing an analytical lens for surfacing the queer gestures (Rodriguez, 2014) and queer ephemera (Muñoz, 1996) that manifest across both face-to-face and digital terrains.

This study used web-scraping tools, textual analyses of tweets, and ethnographic analyses of interviews with four queer and trans artists and activists of color, their youthful followers, and expanded communities. Two of the participants are well-known drag performers who have gained popularity after appearing on the Emmy Award-winning RuPaul's Drag Race. The data sources were triangulated using two main processes: (1) a social network analysis of tweets related to activism and politics of queer people of color, and (2) the generation of open-ended and focused thematic codings (Bogdan & Biklen, 2007; Dyson & Genishi, 2005) of observational field notes, writing, and interviews.

Our analyses of interviews with drag performers, educators, and activists reveals that communities engage in transmedia practices (Jenkins, 2016) for the purposes of authoring new possible futures for queer people of color. Our study also revealed clear tensions between the radical and intersectional political enactments (gestures) of queer, trans, and undocumented individuals, and those that form part of the prevailing "gay agenda." Despite these tensions, digital queer gestures show promise as cultural artifacts that mediate new understandings of the pluralistic nature of today's society and visions of the not-yet-here (Muñoz, 1999). This work has implications for how digital social media and entertainment media can be leveraged for learning. We believe digital tools can be leveraged to interrogate power in order to dismantle systems of oppression, and can be especially generative for the teachers, cultural workers, and mediators who desire, hunger, and yearn for equity.

Paper 4: Modeling marginalization and queering complexity

Dylan Paré, Marie-Claire Shanahan, and Pratim Sengupta

In this paper, we illustrate how critical issues in gender and sexuality can be framed using complex systems theory, and how paying attention to these issues can further deepen our understanding of computational modeling of complex phenomena. In complex systems, interactions between smaller or individual components of the system give rise to collective, system-level behaviours that are often difficult, counter-intuitive or even impossible to predict simply by thinking about the behavior of each individual component (Holland, 1998; Mitchell, 2009). We propose that queer and trans theories (Ahmed, 2006; Butler, 1990; Lane, 2009) are an important site for developing understanding of complexity because it can help us not only to address the harms experienced by gender and sexually diverse people, but also to support complex systems thinking that better reflects the nature of natural and social phenomena. Specifically, we ask two research questions:

-   RQ1: How can we design computational simulations that illustrate emergent experiences of queer marginalization and resilience?
-   RQ2: How do critical gender scholars and queer people explain emergent forms of marginalization through interacting with the simulation?

In order to answer RQ1, we draw upon Ahmed's notion of *queer orientations (*Ahmed, 2006) in our design frame: "If orientation is a matter of how we reside in space, then sexual orientation might also be a matter of residence; of how we inhabit spaces as well as "who" or "what" we inhabit spaces with" (2006, p. 1). To this end, we present Flocking QT Stories, a multiagent-based simulation that illustrates how structural (macro-level) inequalities such as cisheteronormativity - the assumed naturalness of cisgender and heterosexual norms and identities - can manifest through individual-level interactions between computational agents. In our simulation, there are three types of computational agents: *boids* or bird-droids (Reynolds, 1987), and two types of *institutions:* normative and non-normative (see Figure 1). Proximity to normative boids and institutions "drains" energy from the non-normative boids, and proximity to other non-normative boids and institutions increases their energy. Each non-normative boid "carries" an audio story—a first person account of gender and/or sexuality-based marginalization and resilience. All of the boids move according to Reynolds' (1987) flocking algorithm, until a non-normative boid's story is activated and the parameters of the flocking algorithm change to make the non-normative boids flock according to a frequency analysis of the audio story: high-frequency sounds bring them closer together, low-frequency sounds move them apart, and medium-frequency sounds align their directions with neighboring boids. Some interesting emergent patterns include non-normative boids escaping normative institutions as they find a sufficient number of flock mates, and getting trapped (low energy state) due to proximity with normative boids and institutions when separated from the flock.

To answer RQ2, as part of an ongoing co-design study with members of our local LGBTQ+ communities, we interviewed two groups (dyads) of participants as they interacted with the simulation. The setting of our study

is DigiPlay (Sengupta & Shanahan, 2017), a public walkway located in a Canadian university where visitors can interact with simulations of complex systems using 80-inch touchscreens. One dyad of participants, Chuli and Safa, are gender scholars and professors, and the second dyad, Sophia and Chuck, are queer, undergraduate students, one majoring in Social Work and the other in Fine Arts. Participants' interactions were facilitated by the first author (who is also the lead designer of the simulation), audio and video recorded, then transcribed and analyzed using the constant comparative method (Glaser, 1965).
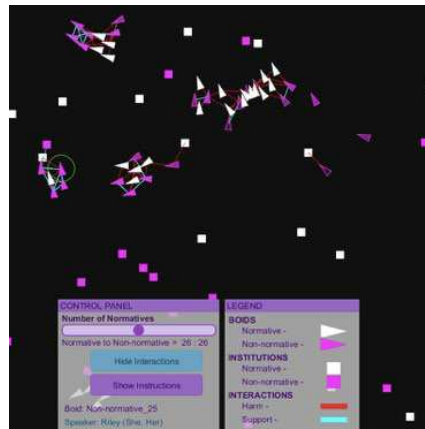

Figure 1. Screenshot of the Flocking QT Stories multi-agent simulation.

We found that both dyads of participants used multi-level reasoning (Wilensky & Resnick, 1999) during their interactions with the simulation, i.e., they were able to identify individual level actions and interactions, as well as how these interactions led to emergent patterns in the simulation. For example, Sophia and Chuck positioned harm as an emergent phenomenon that arose from interactions between different kinds of agents in the simulation and reasoned about minimizing harm for the non-normative agents in the simulation. We also found that their interactions *queered* embodied and perspectival learning through orienting their attention towards, and reasoning *with*—i.e., *turning towards* (Ahmed, 2006)—non-normative boids who had become "stuck" or immobile in the simulation due to being isolated from their flockmates. Further, they used a queer individual's story from a single boid to reason about the simulation's emergent behaviours. Chuli and Safa also engaged with the emergent behaviours of the simulation by proposing additional layers of complexity. They proposed adding a new kind of agent - ideologies - to reason about how individuals, institutions, and ideologies interact to produce emergent behaviours of institutional change.

Overall, our work offers insights into how multi-agent simulations can be *oriented* toward queerness and gender and sexuality based marginalizations by integrating algorithmic representations of emergence with narratives of marginalization. Furthermore, our analysis shows how embodied and perspectival thinking become *queered* as the participants *turn towards* (Ahmed, 2006) non-normative experiences of gender and sexuality.

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