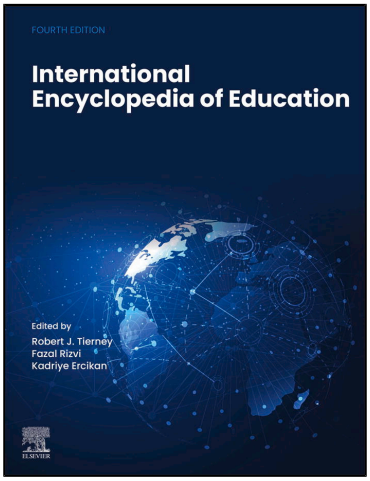

From Leander, K., Havazelet, M., 2023. In: Tierney, R.J., Rizvi, F., Erkican, K. (Eds.), International Encyclopedia of Education, vol. 10. Elsevier.
https://dx.doi.org/10.1016/B978-0-12-818630-5.07081-0.
ISBN: 9780128186305

Literacy and the spatial production of school during a pandemic

Kevin Leander and Michael Havazelet, Vanderbilt University, Nashville, TN, United States

In order to make a consideration of literacy and social space more accessible, memorable, and tangible, imagine we shift our imagination of a central image in theories and discussions of literacy. Imagine this shift involves seeing literacy and its relationship to the classroom differently. In this case, we picture the classroom not as an inert "container" of children, a teacher, and materials, but rather as a city. The classroom-as-city has of course all kinds of movements in it and across it: movements of trucks, motorcycles, bodies, animals, ambulances, natural gas, water, and sewage. Busses and commuter trains traverse the city's landscape, and endless Amazon trucks skirt from building to building, along with GrubHub cars and pizzas stacked in insulated carriers on the back of scooters. The city is in constant movement and change, and yet there are parts that seem durable over time, being made again and again. Different languages are spoken and written in different regions of the city and are often juxtaposed on digital monitors and posters throughout. Every day, people flow into the city and out—people who are classed, raced, and gendered in the experiences of their homes and perhaps differently in their interactions in the city. During the day, some of these people go to the same spots at lunch or after work—parks, bars, coffee shops. These spots become familiar and feel like places of respite. At dusk the city changes again, and yet again at night.

Over a decade ago, we critiqued the "classroom-as-container" model of conceiving of learning (and schooling) and proposed instead the constructs of "learning-in-place," "learning trajectories," and "learning networks" (Leander et al., 2010). Reimagining the classroom as a city moves us into considering places (e.g., the bar), trajectories (e.g., commuting) and networks (e.g., bus routes). Perhaps more importantly, such a transition in image and imagination helps us to consider the constant movements and energy of making and remaking social space, and also consider the intensive heterogeneity of the actors who contribute to this ongoing production of space—vehicles, humans, materials of all kinds, and of course, texts and our practices with them.

One of the challenges of relating literacy studies to theories of social space, and especially to those "post" or critical of modernity, is that, like any field, literacy theory does not float free from its own history and practices, including research methods. The ethnographic turn in literacy studies (e.g., Heath, 1983; Street, 1985) brought with it a powerful focus on the socially situated meanings and uses of literacy, which was powerfully marshalled, for instance, into the development of the New Literacy Studies with its critique of an "autonomous" view of literacy (Street, 1987). Still, nearly four decades after the ethnographic turn, the field of literacy studies is still uncertain how to formulate an anthropology of postmodernity. How do the assumptions of ethnography hold up for postmodernity and its entangled, flowing social spaces? How are assumptions about the distinctions between local and global, bounded views of particular "settings" and "communities," and the work of the lonely ethnographer, embedded in her focal "research site," constraining for an understanding of what literacy is and what it does? Can we have a literacy studies that is at once "ideological" (Street, 1987)—entirely infused with critical considerations of power in discourse—and yet also not parochial or locally mundane?

Another present challenge of more fully realizing the potentials of critical, postmodern spatial theory in literacy studies is the fascination or even fetishization of method within educational research (St. Pierre, 2011). In the case of spatial theory, the attachment to method can run two ways—either in a search to create a settled "spatial methodology" for the field, or in the tendency to not fully engage spatial theory because such a methodology is not readily evident. These prevailing modernist tendencies can envelop a more liberating engagement with the concepts and theory in their own moves to unsettle structures, codes, and singular entities. As postmodern spatial theory is relationally conceived, and as it engages the multiple and shifting relations between people,

International Encyclopedia of Education, Fourth Edition, 2023, 928–937

discourses, and things, the desires to code, fix identities, stand outside of, and create a priori boundaries as embodied methodological practices in qualitative research constrain how we might embrace the complex relationalities of social space in its reproduction and transformative becoming.

Yet another challenge for a more complete appropriation of the "spatial turn" in the social sciences and humanities (Soja, 1996) has been the centrality of a discourse-based ethos within the critical corners of literacy studies. It may seem ironic to claim that discourse—with its roots in sociolinguistics and critical social theory—could be made too central within the domain of language and literacy studies. Still, for spatial theory, a key question concerns how the material, embodied world comes into contact with discourse and is shaped by discourse, without reducing the material and embodied world to texts or sign systems. A related challenge is how we might think spatially about the material-discursive world without reducing social spaces to metaphor (another discursive framing), since the field of critical social science is already rife with spatial metaphors (e.g., center/periphery, location, place, boundary, marginalization, intersection). Studies of "third space," for instance, while drawing richly from critical and postcolonial theory (e.g., Bhabha, 1994) can sometimes tend to treat social spaces metaphorically or as entirely discursively produced, even while taking up questions of bodies, identities, and power. In contrast, Hirst (2004) offers a rich analysis of hybrid/third space, describing the power relations in a second language Australian classroom where the teacher was an Indonesian national. That material spaces, their design, and bodies participate in the production of discourse is not in question. The question concerns how bodies, the material world, and material spaces exceed our means of interpreting sign systems in their capacities to enter into socio-material relations. How is materiality not like discourse, and yet enters into relationship with it in the production of social space? For literacy scholars, how are the meanings of signs and texts, as well as their affects, entangled with material bodies of different sorts? These are pressing and important theoretical questions for spatial theory in its development within the field, some of which are being currently considered in adjacent fields such as affect theory and studies of new materialism.

Some key contributions to literacy studies of spatial theory

Despite the challenges and limitations considered thus far, as well as others, spatial theories have made important contributions to literacy research. These contributions are still changing and growing. Without offering a complete review, we would like to synthesize a few types of contributions that have influenced the field and of course our own work as part of it.

First, spatial theory has given new insights into a reconsideration of boundaries within literacy research, with importance for methodology, but also for theoretical questions such as the distributions and movements of identity and social practice. Because critical and postmodern spatial theories begin from the premise that boundaries are produced and reproduced in social-spatial life, rather than epiphenomenal to social life, then the question of boundary-making is brought to the fore. Contextual constructs such as "out of school" come into question in this modality and may shift to become considerations of how the boundaries of "school" and "out of school" are actively made, disciplined, and disrupted. In this sensibility, boundaries become perhaps more important, as the spatial shapes the social and the social shapes the spatial but are considered as actively produced rather than as a backdrop for something focal (e.g., the "literacy event"). Issues relevant to boundary (re)production, transformation, and the hybridization of overlapping boundaries within literacy research include questions about identity, about contexts for literacy, and about our broad sensibilities concerning the "virtual world" or "online world" and its relations to the "offline world" or "meat space." A starting point for social spatial theory is not to begin with what seem to be naturalized or given boundaries, but to begin with an analysis of the forces, materials, and processes that produce boundaries and/or disrupt them.

For critical literacy studies, the spatial analysis of boundary-making can offer a significant shift of thinking beyond the individual and her experience and toward entanglements with the social world, all while not resorting to macro structural analyses. Ultimately, for critical theory, such analyses may serve to produce means of opening up and transforming boundaries of identity, literacy, and learning, when these boundaries themselves are critically appropriated as more than mere metaphor. Sheehy (2004) describes the tensions that were created in a seventh-grade classroom as students engaged in political action relevant to their proposed school closure, examining how their activity traversed boundaries and created "in-between spaces." Dixon (2011), drawing on Foucault's approach to disciplining space-time, demonstrated how gaze and the organization of school space were accomplished for power/knowledge in post-Apartheid South Africa. In this case, the relations between national surveillance, oppression, and spatial enclosure and the local geography and practices of the school are accomplished with a chilling synchronicity. Finally, Nespor's (2013) incredible analysis of spatial relations in an across an urban elementary school, based on 2 years of ethnographic fieldwork, investigates, among many other issues, the school's collaboration with business enterprises toward refashioning classrooms into business enterprises, the children's efforts to make sense of the scheme. Nespor relentless opens up the boundaries of "the classroom" to examine webs of social-spatial relations involving school division, regional economics, parental concerns, popular cultures, racial politics, urban development efforts, and other forces.

Second, literacy scholars have used spatial theory broadly and theories of place more precisely to engage in research and development with liberatory, humanizing aims. This work takes seriously the qualities of different kinds of places and how places shape experiences. Sometimes inspired and informed by phenomenology, place-inspired research is also often focused on the capacities of educators and children to transform school or institutional spaces into places that matter and that offer growth. Some place-oriented research has actively engaged children in processes of textual and material place-production. For example, an ongoing project by Comber and colleagues ("Urban Renewal from the Inside Out") has engaged children with university students from the fields of architecture, communications, and literacy students to redesign an area of the school grounds in a poor suburb of

Adelaide, South Australia (Comber and Nixon, 2008). These forms of local spatial transformation are a means of creating a critical literacy pedagogy that is more fully embodied and spatially infused. Because of its engagement in the nature of experience, place-inspired research provides a natural bridge to more recent work in effect theory and literacy (Boldt, 2021; Hollett and Ehret, 2017; Niccolini, 2019), which is concerned with the different kinds of affects produced when texts and bodies of different sorts come into contact or relation with one another.

A third key contribution we wish to highlight concerns an understanding of mobilities in literacy research as conceived through spatial theory. As discussed in the opening regarding the expansion of ethnography within the postmodern, toward something like "connected ethnography" (Hine, 2000; Leander and McKim, 2003) or another formulation, mobilities studies are given to thinking about practices, texts, bodies, and technologies in their circulations. Such circulations may include a given "situation" or context, but situatedness is often considered as a temporary arrangement or assemblage. Mobilities research in literacy has drawn variously on critical spatial theories and also on social theories and philosophy taken up by spatial theorists, including Actor Network Theory (Brandt and Clinton, 2002; Leander and Lovvorn, 2006), Deleuzian rhizome theory (Eakle, 2007; Hagood, 2004; Leander and Boldt, 2013), embodied media composition (Ehret and Hollett, 2014; Vasudevan, 2010) and rhythm-analysis (Leander and Hollett, 2017). In an important contribution to mobilities research in literacy studies, for example, Brandt and Clinton (2002) provoke: "might something be lost when we ascribe to local contexts responses to pressures that originate in distant decisions …?" (p. 338). Drawing on Actor Network Theory, the researchers reconsider Besnier's (1995) study of the on the geographically isolated, subsistence-based Nukulaelae people, who would wear Western-style tee-shirts "bearing risqué slogans in English" (p. 343). The slogans did not enter into the textual/meaning-making practices of the Nukulaelae, and yet the tee-shirts did. As a result of their reconsideration, Brandt and Clinton (2002) expand a mobilities mindset, invoking a "thing like status" to literacy to consider how the material dimensions of literacy travel across time and space, integrate, and endure. In this way, the global and the local become situated in movement and practice rather than being captured in representations or static backdrops.

Reading across the key contributions described above, and considering others too numerous to discuss presently, it would be difficult to describe the many possible expansions and revisions of literacy studies in their contact with spatial theories. However, one insight that we have gleaned from this effort is that the value of spatial theories will at least in part be determined by their capacity to contribute interpretive texture, "layers," nuance and insight to the qualities that are already made present in (critical) qualitative research. Inspired by such textured, layered approaches, and in order to further illustrate an analysis of social space and schooling, we turn now to an examination of social space in the recent history of schooling during the Covid-19 pandemic.

Popular discourses of school space and Covid-19

Our approach in the following is to consider the social spaces produced in and around "schooling" during Covid as fully relational, and as produced through conceptions or intentional designs of space, perceptions or discourses of space, and lived experiences of space (Lefebvre, 1991; Soja, 1989, 1996). Within "lived experiences," we are especially interested in the affective dimensions of the experience of living in and through the period of Covid-19, and "doing school" during this period. The media we draw on in order to record and reflect on the productions of space during Covid-19 were published popular press and the social media network TikTok from March 2020 to June 2021.

We have chosen these media because they illustrate experiences of being a teachers, students, and parents during Covid-19, and also reflect discourses around remote schooling that developed at this time. From the popular press, we searched out profiles, editorials, and interviews that depicted or addressed the experiences of remote schooling. While completing this survey, we noticed that while teachers, and parents were well represented, the perspectives of students were harder to find. When the experiences of students were depicted, they were most often mediated through an adult interviewer or journalist and published for a presumably primarily-adult audience. We therefore widened our search to include TikTok where we knew many students—as well as parents and teachers—had participated in discourses on schooling during Covid-19. We coded these media and selected telling examples of expansions the boundaries of school, spatial reproduction and simulation, embodied experience and the effects of space, and critiques, resistance, and transformations of school space.

In the following, we describe three different "variations" of social space that arise out of our analysis of these media. We intend these variations as different productions of social space that are reflected in the media we have studied, as well as partially produced through them. For each variation, we consider some of the relational dimensions of social space, including how the embodied, material world, discourses, power relations, agency and affect are interconnected and co-constructed in the production of social space. We do not consider this analysis nor these data to be a "complete" rendering of social spatial relations of schooling during Covid-19. Rather, our goal is to use them to illustrate the dynamics of social space, and the uses of spatial analysis to consider how experience, space, literacy, and discourse are co-produced. We also aim to make evident how qualitatively different experiences of school (and literacy) are spatially produced—that space not only "matters" but is also co-constituted with unique, distinct qualities of experience.

In the first variation, we detail productions of school space during Covid-19. We trace how school boundaries were expanded as classrooms were physically and affectively reproduced in homes. Next, we look at how conceptions of school, power relations, teacher decisions, and technology design interacted to simulate hyperreal classroom spaces online. We then analyze discourse around cameras to uncover ways student presence in these spaces was produced, measured, and disciplined.

The second variation traces the affective shortfalls of school space in remote learning. We examine accounts of mismatches between the hyperreal simulations of school online and embodied experiences being students, teachers, and parents during remote schooling. We consider affective impact these mismatches had on people subjected to them. We then turn to TikTok posts in this variation to illustrate experiences of remote schooling and its shortfalls, and also to trace how discourse on the platform helped shape collective understandings.

In the final variation, we focus on manifestations of student agency. We look to TikTok for collectively authored critiques of school space during Covid-19. We also examine subversions of school boundaries and collective acts of resistance on the platform. Finally, we detail accounts of students and teachers forming empathetic relations and collaboratively reshaping their remote school, and consider if these episodes point to possibility for the production of more humane school space.

Variation 1: physical, affective, and hyperreal productions of school space during Covid-19

The physical and affective reproduction of school space at home

In media we surveyed, teachers sought to replicate elements of their classroom by gathering school materials and rearranging furniture (Hadden, 2020; Hackman, 2020; Dominus, 2021). These redesigns of teacher's homes seem to have functioned not just as physical, but affective reproductions of school space. A chronicle of a day in the life of Matthew Bordello, a second-grade teacher working remotely illustrated this process (Hadden, 2020). Bordello's conception of his class had been deeply tied to physical space. "Our community as a classroom is very much on being together and being able to share things with each other and build off together in a group" he argued. The transition to remote learning could have devastated this community and Bordello's self-efficacy as a teacher. However, by rearranging his bedroom he recreated some of the routines and feelings of this in-person community. He made space for art supplies, books, and hand drawn copies of the "classroom agreement posters" that hung on the classroom walls. While he his workspace/bedroom "might seem chaotic to others" it was the "ideal environment for keeping his class focused" which let him "recreate a sense of organized chaos in his virtual classroom." For Bordello, and he believed, his class, feelings of order were restored.

Students and families reproduced school spaces at home as well. One P-12 private school, displayed this work in a series of interviews with remote students of different ages (In their own words, 2020). The interviews were punctuated with photographs (see Fig. 1) of the subjects sitting at large desks in bright bedrooms with stacks of books, notepads, and a laptop or tablet around them. While taken in different houses, they share striking physical and qualitative uniformity, seemingly curated by the same schooled expectations. The consistency of the images parallels the interviews themselves. Each student expressed some melancholy about isolation, but they mostly described their—quite similar—homeschool routines and conveyed of self-confidence and comfort. These accounts imply that through intentional redesign of home space and activity physically and affectively expanded the boundaries of school space into the home.

Hyperreal school space on videoconference platforms

The social space of schooling was not simply relocated during Covid-19. Rather, we argue, the displacement and re-placement of school qualitatively changed its space. In the media we reviewed, we can trace how simulations of school—or perhaps more accurately, of conceptions of school—produced hyperreal school spaces. Baudrillard (1994) describes the hyperreal as "the simulation of something which never really existed." It is the representation or reenactment of something which had previously existed only as an abstraction. Baudrillard points to the depiction of medieval Europe in Disney World, as an example–it doesn't simulate any place that existed in history, but a preexisting, essentialized conception. Similarly, remote schooling arguably simulated conceptions of school rather than actual school spaces. Certain "school-like" qualities, such as teacher-control and focus on attention and evaluation were more intense than they had—or ever could have—been in physical classrooms. Across the media we surveyed, conceptions of school, teacher actions, and the design of videoconferencing platforms could be see coproducing these hyperreal school spaces.

Fig. 1 Screenshots of photos in a school online publication of students working from home. Photos taken from a school publication of a twelfth and fifth grade student of working from their homes.

Bordello turned to various Zoom features to simulate his second-grade classroom (Hadden, 2020). He used breakout rooms for different ends, including sequestering students "when their distractions affect[ed] others"—a move reminiscent of timeouts. The hallway or corner where students Bordello had sent students for timeouts was thus simulated on Zoom. In some ways however, these breakout rooms were more "timeout-like" spaces than could have existed in a school. They were more isolated. A child could hear and see her classmates while sitting in a corner, but she would have no access to the Zoom meeting while in a breakout room. Teacher control was also heightened. In person, a student could resist timeout and still affect the rest of the class by making a ruckus or walking back to the group, while on Zoom, she had no recourse. The timeouts enacted in breakout rooms were in these ways hyperreal.

Breakout rooms seem to have been made into hyperreal instructional spaces as well. English professor Nguyen (2021a) argued this feature not only allowed the replication of classroom discussions, but helped make them "better than those of the in-person era." When teaching in person, he prompted students mid-lecture to gather in small group for discussions. Teaching remotely, he put them into breakout rooms. He saw the latter structure as better suited to his goals because it was "simple to arrange and lack[ed] the cacophony" of live discussion. As with the virtual timeout, distractions that could accompany proximity were stripped away. Students no longer had to move or look around to form groups—transitions were streamlined to pushes of buttons. While buzz and bustle of other groups had been present in the classroom, on Zoom students could only see and hear their groupmates. In some ways, these breakout rooms were therefore distilled for focus on instructional activity beyond any classroom.

In a few of the cases we reviewed, teachers' changes to videoconference settings helped produce essentialized school space. In a newspaper profile (Hackman, 2020), a sixth grade teacher described remote teaching as "all the same stuff I [did] in class … I just needed time to figure out how to translate those skills virtually." One way she did this was by "eliminat[ing] the class chat function, allowing to only send messages to her." This choice constrained student discourse in a "school-like" manner, which bore striking resemblance to the Initiate-Respond-Evaluate (IRE) model that has long dominated US schools (Nystrand, 1997; Wilkinson et al., 2015). Following an IRE model, student utterances are directed, heard, and evaluated by a teacher. No matter how rigidly their classroom followed this structure though, students could circumvent expectations and surreptitiously communicate without the teacher's notice by passing notes or sharing whispers. In this virtual classroom however, all communication was witnessed by the teacher and subject to evaluation. The videoconference was not a replication of an in-person class, but a hyperreal "school-like" simulation.

Discourse on cameras and student presence in hyperreal school space

Perhaps the most widely written about videoconference feature during the pandemic was the camera. Arguments for and against mandating students to keep their cameras came up repeatedly in our survey popular press (Hackman, 2020; Nguyen, 2021b). This discourse revealed contested understandings of what it meant to be "present" in a remote lesson. By examining this discourse, we can uncover ways in which student presence was produced and disciplined in the hyperreal school space of remote learning by technology, school policy, and student and teacher actions.

Mandates around cameras seem to have been widespread during Covid-19. In a survey of American K-12 educators, 77% stated their students "must" keep their cameras on (Will, 2020). Many of the arguments for these requirements centered on accountability and attendance. Some teachers maintained live video helped them keep the class engaged because they could hold students accountable (Hackman, 2020; Burney, 2020; Will, 2020). One assistant superintendent bemoaned that before her district's camera mandate, students logged into class to be counted as "present," right before "turning off the camera and walking away" (Burney, 2020). After the mandate, she claimed her district achieved "95% participation." What she meant by "participation" was not clear, but a teacher from her district revealed in the same article that she gave participation grades based on who kept their cameras on "just like when I [took] attendance each period at school." According to her school's measures of accountability, grades, this teacher's students participated in her lessons simply by visibly attending them.

The understandings of student presence in these arguments were notably thin. Discussion, collaboration, creation, and reflection were all absent. Many students undoubtedly did all of these activities in remote lessons, with or without their cameras on, but they could only be counted—or held accountable—as present if their teachers could see them. Presence was thus passive and arguably deadened. This dynamic echoed critiques forwarded by Freire (1972), Davies and Bansel (2007), Nespor (2013) and others that schooling in capitalist and neoliberal societies understand students as objects to be acted upon. In classrooms, students were often not expected to act but to receive instruction and present themselves for accountability. In remote lessons, this dynamic intensified. Physical attendance in which students had sat in classroom and regulated their bodies was simulated by videos of their faces—ignoring their embodied and affective experiences. Student subjectivity, long overlooked in school spaces, seems all but irrelevant to student presence in these hyperreal classroom simulations.

Variation 2: affective shortfalls of hyperreal school spaces and remote learning

Anxiety and the mismatch between the presentation and experience of remote school

Attempts to simulate school space during remote learning appear to have taken affective tolls on some teachers, students, and parents. Many accounts of remote learning detailed disconnect between how teachers experienced teaching during Covid and how they presented—or hoped to present—themselves. Some teachers felt anxiety and a loss self-efficacy when navigating this mismatch. In a longform article tracking the year of an AP World History class, the teacher, Ms. Everett-Kennedy, described school building was a "community-ordained safe space" and her classroom a "locus of control" that was a "near sacred space in which she

excelled" (Dominus, 2021). Extracted from these spaces, she felt these senses of order, community, and self-efficacy disappear. She attempted to regain them in part simulation. She tried to appear energetic on Zoom, as she had been in person, and to keep clutter hidden from the camera so she could project an image of order and control. But struggles over the course of the pandemic prevented her from maintaining this image. As one student described her, Everett-Kennedy often came to zoom with her "hair in that messy ponytail, tired eyes, that bottle of Diet Coke always beside her." While this student found the presentation relatable, it fell short of Everett-Kennedy's self-expectations. Frustrated by her inability to support and connect with students as she had in previous years, and regain control over her life and image Everett-Kennedy went through bouts of anxiety and disappointment, saying she expended "more and more energy to fight off her sense of failure."

Like their teachers, some students felt anxious about presenting themselves in videoconferences. They carefully considered what was displayed. Three of Everett-Kennedy's students were described angling their laptops to hide messes in their rooms (Dominus, 2021). Anxiety about self-presentation was particularly pronounced in one student, Charles. According to the profile, Charles was a straight-A student who was "used to entertaining his classmates but also impressing his teachers." As a high-achieving Black teenager he had felt pressure to live up to the high expectations of his mother while confronting a racist society and "proving these stereotypes wrong," but he felt he was on track to live up to these goals. However, when the schoolhouse closed for the pandemic, Charles began struggling with mental health and fell behind on school work. He was determined to hide these challenges. Always a "skilled performer," he became not only an actor, but a set-designer to simulate the role he had filled before the pandemic. He set up "his personal stage [in] his bedroom, where he'd hung LED lights and a tapestry with a design that evoked some graphic novel's envisioning of another planet." The journalist notes that "from that room, Charles projected the image of young man wildly amused and amusing." This projection was hyperreal, however—it showed not who Charles actual identity or experience, but how he believed he should be. The pressure to uphold this image was a drain on him. As his affect and experience worsened, this anxiety grew more intense, as did his evasions from support. He was ensnared in a devastating cycle. By the winter of 2020, Charles was convinced "failure was his destiny."

Missing connections and affective depletion in remote school

Students and teachers in the media we surveyed repeatedly described videoconferences as not-quite approximating classes in person. They often foregrounded what was missing—physical proximity to others and associated feelings of energy. This sense that remote learning, as a simulation of school space, was missing key elements it *should* have imbued accounts with effects of disconnection, longing, and depletion.

Teacher-student conversations over videoconference were often characterized as strange or awkward (Dominus, 2021; Blum, 2020; Nguyen, 2021b; Osman, 2020; Hackman, 2020). Forming relationships became more challenging. Teachers lamented talking to "a sea of black squares" (Nguyen, 2021b). Students were more reluctant to be vulnerable—"it's hard to believe someone you only met through a screen" one high schooler explained (Dominus, 2021). Physical distance weakened the affective connection between student and teacher. Both teachers and students described shifts in group affects as well. Class discussion was subdued (Nguyen, 2021b; Blum, 2020) and students had felt energized by in-person gatherings, felt drained after videoconference lessons (In their own words, 2020; Dominus, 2021).

Many of these accounts related feelings of depletion with strained connections between classmates and teachers and students and their lack of physical proximity. Anthropology professor Blum (2020) theorized this dynamic in more detail. When considering why she felt exhausted after teaching on Zoom, she concluded "it is because videoconferencing is *nearly* a replication of face-to-face interaction but not quite [that] it depletes our energy." While Zoom allowed her class to see one another's faces and hear their voices, Blum argued it did not enable "harmonized posture," "coordinated breath" or eye gazes that "communicate information." Humans, she claimed, were "delicately attuned to each other's complete presence" and so they read these nonverbal cues to support conversation in person. In many ways, videoconference made presence thinner—for example, one could not tell where another was gazing. While these changes were subtle, they were also meaningful. They left conversations halting and labored which Blum argued, which led to feelings of frustration, depletion, and a longing for more free-flowing human connection.

Techno-social discourses of student affect and mental health during Covid-19

By surveying TikTok clips with hashtags related to remote learning, we traced lines of student discourse around remote learning, affect, and mental health. Thousands of posters, including many middle school, high school, and college students uploaded clips documenting their experiences during the pandemic. The design of TikTok, where users could easily edit and repurpose audio and video from existing posts, enabled the emergence of multiple lines of discourse where thousands of students watched, commented and posted response videos to one another's clips. Though physically isolated, students were able to collaboratively publish and interact with techno-social discourses around remote learning and its effects on them.

One particularly striking motif that was seen across many TikTok pound we found was panic attacks. One TikTok which was liked over two million times showed an adolescent girl crying and breathing hard while her parents look at a laptop. Text came up over the video that read "the chem final my sister has been taking for 3 h didn't save" while pre-existing audio played of a woman repeating "just breathe." Even with her family in person, trying to help address the issue, inadequate technology and the demands of remote schooling overwhelmed this student. Many viewers could relate—the most-liked reply read "the crying and pacing while parents attempt to fix it resonates with me."

Increasing lists of assignments and problems come up in many videos. One popular post, pictured below, was representative. The camera faced an adolescent laying **their** head on a desk. Audio taken from another TikTok played where a robotic voice rapidly

listed assignments, tasks like "clean your room" and "take a shower," invectives such as "work until it hurts" and questions such as "does he still love you?" and "what happened to you?" Words such as "due at 11:59" and "missing assignments: 35" flashed on screen. Not quite obscured, the **adolescent's** head slowly sank, as though pushed down by the words above **them** (see Fig. 2). Clips such as these evocatively illustrated their feelings of depletion, and at times, depression. Like the **teen** shown in this TikTok, many adolescents appeared to fall further into hopelessness and isolation as the demands of remote learning cascaded upon them.

Notably though, the students who posted and viewed these TikToks were not entirely isolated. While physically distanced, the views, likes, replies and response videos demonstrate they saw and heard one another. Their techno-social discourse allowed remote students to share in, and, to an extent, shape their affective experience during the pandemic.

Variation 3: critiquing, resisting, and transforming school space

TikTok critiques of the production and boundaries hyper-school

From what we surveyed, TikTok posters didn't only aim to document remote schooling, but to spoof it. Many popular videos drew humor from unbridgeable gaps between the experiences of remote schooling and the images the uploaders had hoped to present. While some of this comedy was self-deprecating, it was often pointed toward the absurdity of remote schooling and the demands it put upon them without regard to their conditions and experiences in reality. These clips may therefore shed insight not just into how students, teachers, and parents experienced the emergence of hyperreal school space of remote learning, but how they critiqued it.

A recurring theme was sights and sounds accidently recorded during virtual lessons. In one clip, a woman sat on a rug and explained "I'm sitting on the floor, next to my children's desks ready to mute and unmute their Zoom class," out of view from their Chromebook cameras. She said with a wide smile that while her children knew how to unmute themselves, they often "do it at the wrong times and everyone can hear me screaming in the background." She thus subverted and mocked the expanded boundaries of school space into the home. Remote schooling compelled her to simulate scenes of home-school life that, implicit in her telling, can only be created through extreme and surreptitious measures. What's more, even if she succeeded in curating a scene for Zoom school, her family's *actual* home-school would fall short of the presumed standards. If everything was going well, after all, why would she be screaming? She could not meet the expectations she assumes the teacher and/or other families have for remote learning, so she had to hide, crouching on the floor for entire lessons. The demands of simulating homeschool appeared harmful and absurd.

Many TikToks posted by students documented their struggles with staying, or appearing to stay, present during virtual lessons. One widely-viewed post panned in on a square in a grid on a Zoom screen where a cat sat alone staring at the camera while a man lectured monotonously in the background. The caption read, "I forgot to turn my camera off when I went for a walk and my friend sent me this she was there for like 15 min #catsoftiktok #zoomschool #fyp." This text implied embarrassment not for walking away from the lesson, but for leaving the camera on to capture this humorous tableau. The poster seems to have taken it for granted that the expectation that to sit still at her computer for the entire lecture was unreasonable, or at least unimportant, but *showing* she left was a breach of social norms. Several comments, where users shared fears that this could happen to them, pointed to the same conclusion. It was impossible to meet the implied expectations of this new school space, so they instead hoped to conceal themselves. The possibility of revealing their activity and movement appears to have filled many students with anxiety and fear. By

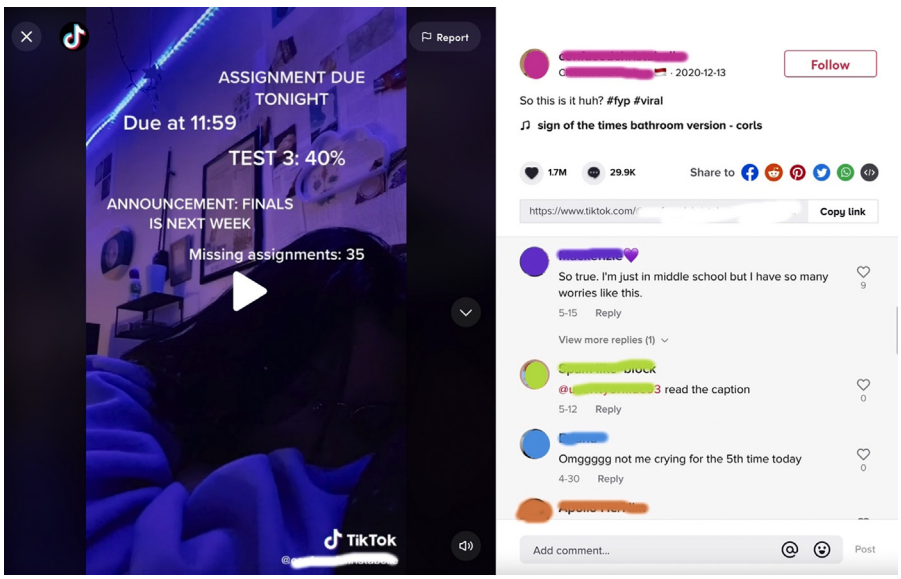

Fig. 2 Screenshot of a remote student's TikTok post and user's comments.

sharing these experiences and affects, these TikToks implicitly critiqued remote learning. Could such empty simulations really be worth this stress?

Resistance through play: student challenges to school space on TikTok

TikTok posts not only revealed critiques of the social space of remote school, they propagated challenges to it. Students posted hundreds of clips that documented pranks and hacks that altered remote learning spaces. Many clips appeared explicitly designed to instruct others how to replicate these tricks. They were often saturated with referential humor that evoked aspects of youth internet culture and seemed to invite viewers to respond. The techno-social discourse of remote student TikTok thus seems to have cultivated acts of resistance to remote learning that were collectively-designed by students spread across the world and physically isolated.

Some of the most-liked clips we found of this genre were pranks where students subverted expectations of their remote lesson space by collaborating and manipulating the technology. For instance, one clip, captioned, "April Fools on our professor #aprilfools #fyp #zoomschool," showed a young woman recording and laughing at a zoom screen where a professor mumbled "what's going on …" as over a dozen users logged into the meeting with the same default photo of his face and name. The students disrupted their remote class by wielding the technology and their professor's own name and image against him. Other pranks were less reliant on videoconference features. Several clips showed teachers interrupted as their class suddenly breaking into synchronized dance routines across the grid squares on the screen. These pranks were likely shocking not just because they were unexpected, but because they clearly implied the class communicated and coordinated without the teacher's knowledge. While students were highly surveyed in many remote lessons, these pranks demonstrated they could still surreptitiously collaborate, plan, and play outside of them. Posts tagged with #schoolhacks or #collegehacks, or #studhacks were. Some of these videos offered advice on study habits and using remote learning technology. Others demonstrated ways to surreptitiously circumvent teacher's rules and expectations. At the time of our survey, the two most liked TikToks with the tag #onlineschool showed how to use software that hacked google-form quizzes, auto-filling all of the correct answers. Similar videos demonstrated the steps to photoshop pictures of homework to send to teachers, trick mouse-tracking programs, and set looped videos as their Zoom default picture to make it appear cameras were on.

These TikTok clips revealed heteroglossic and highly participatory discourses. Comments shared stories similar to the videos. Clips referenced one another by incorporating each other's audio or video. They often referred to other elements of online youth culture by layering sound from viral social media clips, and working in humorous images from memes (video of a bald man vigorously eating a sandwich shows up in many of these TikToks without explanation, for instance). Through this discourse, it appears that students were able to remotely form social spaces apart from remote school, where they could then—to an extent—collaborate to circumvent and resist the boundaries and expectations of school space.

Techno-social transformation of school space

While much of the accounts of remote learning focused on struggle, there were also glimpses of how school spaces might be made more humanizing and collaboratively-designed. In some instances, teachers and students appear to have developed understanding and empathy for one another as video conferences bridged their home environments and lives. One student-teacher likened this dynamic to "a throwback to a time when teachers made home visits" (Arthur, 2021). Some teachers considered equity in a new light, realizing that some of their students homelives made schoolwork more challenging—both when school was remote and in person (Osman, 2020; Will, 2020). Students too were described as reconsidering their teachers' perspectives after seeing and hearing their struggles over zoom (Dominus, 2021; Nguyen, 2021b). These accounts suggest that as remote schooling expanded the borders of school space into the home, it also offered at least some teachers and students more insight into one another's lives.

On TikTok, audiences seemed fairly segregated between students, teachers, and parents. Most comments on student videos appeared to made by other students and parallel patterns held with teacher and parent posts. There was, however, also discourse between these groups. Some popular teacher posts were duets with student posts. At the time of our survey, one such duet, pictured below (see **Fig. 3**), was most-liked post tagged with #remoteteaching. On the right, a student's TikTok played, illustrating the overwhelming demands of remote learning. On the left, a teacher sat silently, appearing to empathetically react to the video. This post and ones like it showed meeting of space and experience. By apposing these self-authored, affectively-imbued videos the poster not only joined the environments of her and the student, but couples their perspectives. This TikTok thus showed a space co-written by a student and teacher and reflective not just of their respective roles, but their human experiences.

In the popular press there were a few examples of elements of remote school space being similarly collaboratively and humanely produced. One middle school teacher (Osman, 2020), how her student's use of chat helped shape the discourse and content of her zoom lessons. Chat enabled multilinear conversation, as students could simultaneously talk over speaker, type to the class in the chat, and send private messages. It allowed multimodal discourse, as students used words, acronyms, emojis, and pasted images and video-links. The teachers admitted, "I am still learning this particular language they speak in, but [my students] are quite happy to translate." Sometimes the messages were connected to curricular content, sometimes they weren't. The teacher explained she followed deviations from her lesson plans more than she would have in person because she sensed her students longed for the human connection it provided. A few pieces described classes collaboratively establishing norms around cameras in remote lessons. Several teachers reported telling their students to turn their cameras off or on whenever they felt needed (Will, 2020; Burney, 2020; Nguyen, 2021b; Osman, 2020; Dominus, 2021). One professor (Nguyen, 2021b) detailed she opened up to her students about her struggles with teaching to blank screen, and the class then discussed balancing their needs for privacy with their classmates and teachers desire for connection as factors to consider choosing when to turn of their cameras.

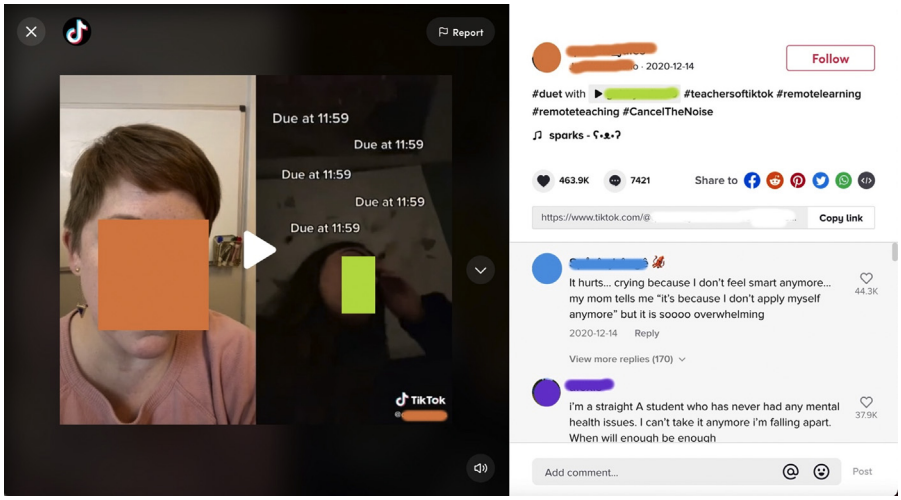

Fig. 3 A screen shot of a teacher's duet on TikTok with a student's post.

In these examples, teachers, students, and technology co-produced school spaces that were in some ways more responsive and humane than many in-person classrooms. Chat enabled new modes of communication to come into school space, many of which were more familiar to students than teachers, and closer connected to their out-of-school lives. When choosing to turn on or off their cameras, students could determine how to be present, seen, and available for in a manner unreplaceable in person. School space during Covid-19 was therefore not only reproduced, resisted, and made hyperreal. It was also transformed into spaces that could, at times, allow for collaborative and human connection.

Final thoughts

Although spatial theory to re-see approaches otherwise more familiar in qualitative literacy research, such as textual coding, observation, or discourse analysis, ultimately the values of the theory will largely depend on how it is used to bring to life the particular meanings and effects of literacy practices, texts, and discourses in their emergent relations to bodies and the material world. From the broader push of the earlier work on social space—that space matters, and that social spaces are everywhere produced—one important shift involves asking how to understand and feel the particular qualities of different types of spaces and places involving literacy and literacy learning. Our analysis of variations of social space during Covid-19 is an attempt to bring to life these qualities and affective dimensions of spatialized experience.

Among Doreen Massey's far-reaching contributions to spatial theory, she proposed three maxims for understanding space: first, as a product of interrelations, themselves constituted through interaction; secondly, as a dynamic of multiplicity in which distinct trajectories and heterogeneity co-exist; and thirdly, as always in the process of being made (Massey, 2005). Massey was fond of claiming that social space was the accumulation of "stories told so far," or an "open and ongoing production." Social space is not outside of our making of it, outside of our discourses on it, of our bodies moving through it. The openness of social space is, in the end, also much of its significant potential for social theory and for literacy studies more specifically. Spatial approaches are not merely a more robust or geographical method to "map" existing power structures; rather they open up for us how the movements of power—including those more liberating—shift and may be re-storied over time.

References

Arthur, K., 2021. Zooming In: What It's Like to Student Teach During a Pandemic. Illinois State News. Retrieved from. www.news.illinoisstate.edu/2021/01/zooming-in- what-its-like-to-student-teach-during-a-pandemic/. (Accessed 14 April 2021).
Baudrillard, J., 1994. In: Glaser, S. (Ed.), Simulacra and Simulation. University of Michigan Press.
Besnier, N., 1995. Literacy, Emotion, and Authority: Reading and Writing on a Polynesian Atoll. Cambridge University Press, New York.
Bhabha, H., 1994. The Location of Culture. Routledge, London.
Blum, S.D., 2020. A Professor Explores Why Zoom Classes Deplete Her Energy (Opinion), Inside Higher ed.
Boldt, G., 2021. Theorizing vitality in the literacy classroom. Read. Res. Q. 56 (2), 207–221.
Brandt, D., Clinton, K., 2002. Limits of the local: expanding perspectives on literacy as a social practice. J. Lit. Res. 34 (3), 337–356.
Burney, M., 2020. Attending Virtual School: Should Cameras Be On or Off for Remote Learners? The Philadelphia Inquirer. https://www.inquirer.com/news/nj-education-remote-learning-cameras-virtual-classes-coronavirus-20201210.html. (Accessed 7 July 2021).
Comber, B., Nixon, H., 2008. Spatial literacies, design texts, and emergent pedagogies in purposeful literacy curriculum. Pedagogies 3 (4), 221–240.
Davies, B., Bansel, P., 2007. Neoliberalism and education. Int. J. Qual. Stud. Educ. 20 (3), 247–259.
Dixon, K., 2011. Literacy, Power, and the Schooled Body: Learning in Time and Space. Routledge, New York and London.

Dominus, S., 2021. "I feel like I'm just drowning": surviving sophomore year in 2020. N. Y. Times. https://www.nytimes.com/2021/05/13/magazine/high-school-students-coronavirus-pandemic.html.
Eakle, J., 2007. Literacy spaces of a Christian faith-based school. Read. Res. Q. 42, 472–510.
Ehret, C., Hollett, T., 2014. Embodied composition in real virtualities: adolescents' literacy practices and felt experiences moving with digital, mobile devices in school. Res. Teach. Engl. 428–452.
Freire, P., 1972. Pedagogy of the Oppressed. Herder and Herder, New York.
Hackman, M., 2020. What it's like to teach sixth-grade science over zoom. Wall St. J. https://www.wsj.com/articles/what-its-like-to-teach-sixth-grade-science-over-zoom-11586774461. (Accessed 14 April 2021).
Hadden, J., 2020. An Elementary School Teacher in San Francisco Gives an Inside Look Into Life Inside His Virtual Classroom Amid the Coronavirus Pandemic. Business Insider. https://www.businessinsider.com/what-its-like-to-teach-elementary-students-remotely-amid-pandemic-2020-5. (Accessed 14 April 2021).
Hagood, M., 2004. A rhizomatic cartography of adolescents, popular culture, and constructions of self. In: Leander, K., Sheehy, M. (Eds.), Spatializing Literacy Research and Practice. Peter Lang Publishing, New York, pp. 143–160.
Heath, S.B., 1983. Ways With Words: Language, Life, and Work in Communities and Classrooms. Cambridge University Press, Cambridge, England.
Hine, C., 2000. Virtual Ethnography. Sage, London.
Hirst, E., 2004. Diverse social contexts of a second-language classroom. In: Leander, K., Sheehy, M. (Eds.), Spatializing Literacy Research and Practice. Peter Lang Publishing, New York, pp. 39–66.
Hollett, T., Ehret, C., 2017. Civic rhythms in an informal, media-rich learning program. Learn. Media Technol. 42 (4), 483–499.
In Their Own Words: What Students Say About Zoom school. 2020. Retrieved from news.coloradoacademy.org/in-their-owns-words-what-students-say-about-zoom-school.
Leander, K., Boldt, G., 2013. Rereading "A pedagogy of multiliteracies" bodies, texts, and emergence. J. Lit. Res. 45 (1), 22–46.
Leander, K.M., Hollett, T., 2017. The embodied rhythms of learning: from learning across settings to learners crossing settings. Int. J. Educ. Res. 84, 100–110.
Leander, K.M., Lovvorn, J.F., 2006. Literacy networks: following the circulation of texts, bodies, and objects in the schooling and online gaming of one youth. Cognit. Instr. 24, 291–340.
Leander, K., McKim, K., 2003. Tracing the everyday "sitings" of adolescents on the Internet: a strategic adaptation of ethnography across online and offline spaces. Educ. Commun. Inf. 3 (2), 211–240.
Leander, K.M., Phillips, N.C., Taylor, K.H., 2010. The changing social spaces of learning: mapping new mobilities. Rev. Res. Educ. 34 (1), 329–394.
Lefebvre, H., 1991. The Production of Space. Blackwell, Oxford.
Massey, D., 2005. For Space. Sage, London.
Nespor, J., 2013. Tangled Up in School: Politics, Space, Bodies, and Signs in the Educational Process. Routledge.
Nguyen, B.T., 2021a. I actually like teaching on Zoom. N. Y. Times 14–15.
Nguyen, C.T., 2021b. Zoom classes felt like teaching into a void—until I told my students why. Wash. Post. https://www.washingtonpost.com/outlook/zoom-classes-felt-like-teaching-into-a-void–until-i-told-my-students-why/2021/03/11/024afb2c-81e5-11eb-81db-b02f0398f49a_story.html.
Niccolini, A., 2019. "It's something that requires passion": after-echoes of the ethnic studies ban. In: Leander, K.M., Ehret, C. (Eds.), Affect in Literacy Teaching and Learning: Pedagogies, Politics, and Coming to Know. Routledge, pp. 109–123.
Nystrand, M., 1997. The big picture: language and learning in hundreds of English lessons. In: Nystrand, M. (Ed.), Opening Dialogue: Understanding the Dynamics of Language and Learning in the English Classroom. Teachers College Press, New York, pp. 30–74.
Osman, S.M., 2020. What It's Like Teaching on Zoom to Students I've Never Met, and Often Never Seen or Heard. Huffpost.com. Retrieved from. huffpost.com/entry/what- its-like-teaching-onzoom_n_5fd7a2d9c5b689a6230cd60d. (Accessed 14 April 2021).
Rimer, S., 2021. BU Students: Zoom vs. in-Person Classes? It's Complicated. BU Today. Retrieved from. www.bu.edu/articles/2020/students-learn-from-anywhere/.
Sheehy, M., 2004. Between a thick and a thin place: changing literacy practices. In: Spatializing Literacy Research and Practice, vol. 15. Peter Lang, New York, pp. 91–114.
Soja, E.W., 1989. Postmodern geographies: The reassertion of space in critical social theory. Verso, London.
Soja, E.W., 1996. Thirdspace: Journeys to Los Angeles and Other Real-and-Imagined Places. Blackwell, Oxford, England.
St Pierre, E.A., 2011. Post qualitative research: the critique and the coming after. In: Denzin, N.K., Lincoln, Y.S. (Eds.), Handbook of Qualitative Research, vol. 4. Sage, Thousand Oaks, CA, pp. 611–625.
Street, B.V., 1985. Literacy in Theory and Practice. In: Burke, P., Finnegan, R. (Eds.), Cambridge Studies in Oral and Literate Culture. Cambridge University Press, Cambridge.
Street, B.V., 1987. Comparative Perspectives on Literacy Research.
Vasudevan, L., 2010. Literacies in a participatory, multimodal world: the arts and aesthetics of Web 2.0. Lang. Arts 88 (1), 43.
Wilkinson, I.A.G., Murphy, P.K., Binici, S., 2015. Dialogue-intensive pedagogies for promoting reading comprehension: what we know, what we need to know. In: Socializing Intelligence Through Academic Talk and Dialogue. American Educational Research Association, pp. 37–50.
Will, M., 2020. Most Educators Require Kids to Turn Camera on in Virtual Class, Despite Equity Concerns. Education Week. https://www.edweek.org/teaching-learning/most-educators-require-kids-to-turn-cameras-on-in-virtual-class-despite-equity-concerns/2020/10. (Accessed 10 July 2021).