

Learning Analytics and the Abolitionist Imagination

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Abstract

This article advances an abolitionist reframing of learning analytics (LA) that explores the benefits of productive disorientation, considers potential harms and care made possible by LA, and suggests the abolitionist imagination as an important educational practice. By applying abolitionist concepts to LA, we propose it may be feasible to open new critiques and social futures that build toward equity-oriented LA design and implementation. We introduce speculative methods to advance three vignettes imagining how LA could be weaponized against students or transformed into a justice-directed learning tool. Our speculative methods aim to destabilize where power in LA has been routinely located and contested, thereby opening new lines of inquiry about more equitable educational prospects. Our concluding discussion addresses how speculative design and fiction are complementary methods to the abolitionist imagination and can be pragmatic tools to help build a world with fairer, more equitable, and responsible LA technologies.

Notes for Practice

- The academic LA community should contest prominent tool-based and data-centric conceptions of LA that frequently render this technology as a neutral object delimiting ethical implementations, critiques, and potential harms such as surveillance and discrimination.
- Abolitionist concepts applied to LA offer a theoretically rich opportunity for researchers and designers to centre social justice, learners' educational autonomy, and the desire to reimagine LA as a tool for both learning and liberation.
- Speculative methods complement the abolitionist imagination and are a critical and experimental means of considering how LA may become fairer, free of bias, and more equitable.
- Three speculative vignettes demonstrate the value of disrupting predictable LA uses, surfacing tensions of design and context, and sketching complexities of agency to imagine more equitable educational futures.

Keywords

Learning analytics, abolition, justice, speculative futures, power

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1. Introduction

“Let’s begin our abolitionist journey not with the question ‘What do we have now, and how can we make it better?’ Instead, let’s ask, ‘What can we imagine for ourselves and the world?’ If we do that, then boundless possibilities of a more just world await us.”

—Kaba et al., 2021, p. 3

“If the idea of social justice is to be taken seriously, then it is crucial that we begin to reassess how Learning Analytics is encountered by those groups who tend to experience education as a form of oppression and being controlled.”

—Selwyn, 2020, p. 4

In 2019, this journal published a dialogue and scholarly reflection about a necessary and unresolved question: “What’s the problem with learning analytics?” (Buckingham Shum, 2019). The JLA dialogue featured learning analytics (LA) scholars

who commented on Selwyn's (2019) keynote address to the 2018 International Conference on Learning Analytics & Knowledge in which he asked a series of critical questions, including these: "What are the 'ideologies' and 'politics' of learning analytics technologies? In other words, what are the dominant ideas, agendas, and values that have come to define 'learning analytics' over the past decade or so, and what problems might lie therein?" (p. 12). Selwyn's criticisms about data and labour, learner agency, and techno-solutionism were usefully paired with "speculative suggestions for change" (p. 16) concerning the possible design, governance, and public utility of LA. The dialogue remains timely, the collective analysis incisive, and the sociotechnical tensions unsettled.

Responding to Selwyn (2019), four commentaries about "the problem with LA" echoed general concern for consent, power, and ethics across individual and institutional scales, and how these and related issues may manifest among academic communities. Ferguson's (2019) contribution identified six ethical LA challenges pertinent to learners' academic success, data literacy, and agency, as well as broader efforts to "work towards increased equality and justice, expanding awareness of ways in which analytics have the potential to increase or decrease these" (p. 28). Essa (2019) and Rose (2019) addressed, respectively, the epistemological limitations of quantification and statistical reasoning, with both authors suggesting there may be equity-oriented approaches to the implementation of LA despite challenges of commercialization and the nuances of context. And Prinsloo (2019) provided additional clarity about "asymmetrical" power relationships prevalent in institutional LA arrangements, reiterating Selwyn's assertion that ethics in LA must be understood in terms of power, not just on the basis of protection.

Since that dialogue was published, myriad social, political, and technological changes have occurred including the COVID-19 pandemic, uprisings for racial justice, the acceleration of our planet's climate crisis, the surveillance of civil society, and calcifying disparities in wealth, social mobility, and economic opportunity. All these issues permeate the relevance of LA amidst ongoing disruptions to formal education. Consequently, the current special issue about fairness, equity, and responsibility is a welcome continuation of this journal's prior dialogue. And our contribution seeks to advance a distinctive provocation: We consider LA through abolitionist perspectives, and we offer speculative vignettes about the potential uses of LA for justice-directed learning futures.

Our embrace of abolitionist perspectives is unconventional within the academic LA literature and yet it represents a deliberately conceptual and critical stance. Why this theoretical orientation? We are cognizant that few scholarly descriptions of LA are expressly philosophical (Viberg et al., 2018) and, more generally, the field has lacked clarity about prominent conceptual influences and learning theories that define LA scholarship. In a recent scoping review of the LA literature, Khalil, Prinsloo, and Slade (2022) noted the presence of "theoretical pluralism" in the field. Yet among reviewed papers that explicitly mentioned learning theory, the authors reported the "dominance" of self-regulated learning within academic LA research amidst a general predominance of "theories arising from the broader family of Cognitivism" (p. 11). Social, cultural, and critical theories about learning less frequently inform the study of LA. There are few theoretically rich discussions of LA that centre social justice, learners' educational autonomy, and the desire to reimagine LA as a tool for both learning and liberation (exceptions include Uttamchandani & Quick, 2022; Wise et al., 2021).

In this article, we contest prominent tool-based, data-centric conceptions of LA that frequently render this technology as a neutral object delimiting ethical implementations, critiques, and potential harms (Pargman & McGrath, 2021). Furthermore, we recognize how behaviorist and cognitivist conceptions of analytics and learning may invariably influence pragmatic concerns about the role of LA in perpetuating surveillance (Gilliard, 2017), breaching student privacy and consent (Jones et al., 2020a), and amplifying discrimination (Swauger, 2021). By embracing abolitionist perspectives, we are capable of both warranted criticism and welcome imagination in current LA discourses. Or stated differently, and to echo Selwyn (2020): "What would a re-imagined form of Learning Analytics look like if it were to genuinely enable an individual's autonomous control of data, enable plural ways of being, and be built around preserving context?" (p. 5). Our arguments in this article are rooted in our resistance to harmful LA use, while our speculative counter-narratives are animated by new LA possibilities responsive to the sociopolitical moment.

Lest our approach be misinterpreted, we presume that academic communities committed to designing, employing, and assessing LA in higher education are sincerely trying to improve teaching and learning practices using available and innovative tools. There is a role for LA in helping to meet institutional needs and support student success. In our assessment, however, many conventional understandings of LA in higher education contexts persist in implicitly perpetuating several assumptions about the role — and supposed beneficence — of technology in schooling and society. For instance, processes enabled by LA may be easily co-opted by neoliberal logics as applied to education (Hallman, 2019), providing an overabundance of data that reifies education as a private good made possible through a series of individually correct choices within a meritocratic system (Taylor, 2017). Furthermore, the prominence of LA in higher education strongly reflects broader trends in the quantification of learning (Virvou et al., 2019), a theoretical bias toward behaviorism and cognitivism in LA research (e.g., Sedrakyan et al., 2020), and the belief that learner behaviours can be easily predicted, tracked, and evaluated by technology (Watters, 2021). It

may be challenging, if not almost impossible, to avoid embedding logics of neoliberalism and quantification into a given technological genre, like LA, when tools are created within a social context that normalizes particular ideologies to the point of invisibility. Nonetheless, the academic LA community has a social responsibility to approach our work as a moral practice (Slade & Prinsloo, 2013) grounded by ethical goals like equity and justice (Ferguson, 2019).

Our aim in this article is to advance an abolitionist reframing of LA that explores the benefits of productive disorientation, considers potential harms and care made possible by LA, and suggests the abolitionist imagination as an important educational practice. By applying abolitionist concepts to an understanding of LA — and by advancing a critical perspective situated amongst dynamic ecosystems of people, technologies, and institutions — we suggest it may be feasible to open new critiques and social futures that build toward equity-oriented LA design and implementation. In the following section, we summarize key perspectives on abolition including abolitionist pedagogy (Love, 2019) and abolitionist imagination (Benjamin, 2019b; Kaba et al., 2021) as theoretical and analytical stances that illuminate how educational and political systems target students. We also describe how commitments to abolition offer a roadmap to an alternative imagined world based on care and mutual aid, and why such commitments are germane to the design and use of LA in higher education. Following a summary of our theoretical commitments, we introduce speculative methods to share three vignettes intended to provoke and elicit critical reflection about the role of LA in higher education. Our discussion addresses the use of speculative counter-narratives to challenge presumptions about the intended, expected, and controlled use of LA in higher education contexts.

2. Applying Abolition to Learning Analytics

With multiple approaches and histories, abolition has been broadly defined as “a positive project that focuses, in part, on building a society where it is possible to address harm without relying on structural forms of oppression or the violent systems that increase it” (Kaba et al., 2021, p. 3). Abolition often involves removing institutions like prisons and police from society and replacing these systems with investments in community resources such as housing and healthcare (Davis, 2003; Mohapatra et al., 2020). We propose applying three main features of abolition to LA discourses, designs, and uses. As we do so, two caveats. First, a comprehensive review of abolition is much broader than we can discuss in this article, and we do not attempt a definitive distillation; rather, we are identifying prominent stars from a compelling constellation that academic LA advocates should study. Second, we are both white men with significant privileges writing about abolition, a movement largely developed and advanced by Black women. Our intent is not to appropriate scholarship but to celebrate, amplify, and connect abolitionist ideas to the academic LA community since we believe there are many benefits associated with this theoretical anchor. In exploring these issues, we describe first how abolition is inherently disorienting, moving the centre of conversation on safety and justice, inverting dominant perspectives, rejecting commonly accepted premises, and always asking new questions. Second, abolition is attuned to harm and care, acknowledging erased forms of violence — especially against the most vulnerable of people — and offering new forms of community and restorative justice. And third, we explain how abolition is imaginative, a force of world-building rejecting oppressive systems while actively creating better, more humane alternatives. These three features of abolition — disorientation, attunement to harm and care, and imagination — are useful complements to the academic LA literature concerning questions of ethics and value, fairness and (in)justice, and how LA perpetuates either discrimination or learner agency (e.g., Uttamchandani & Quick, 2022).

2.1. Abolition as Disorientation

Disorientation as a feature of abolition often starts with reframing definitions. Let us first consider Myhre’s (2018) relevant analogy: white supremacy is not a shark in the ocean, it is the water. This may be a difficult rhetorical shift to internalize, for Myhre is illustrating that white supremacy is not a single dangerous aspect of larger sociopolitical contexts, but is the larger sociopolitical context. As an example of this embrace of disorientation, abolitionists have framed the issue of carcerality as a given feature of context; or, like in Myhre’s analogy, carcerality is the water. French and colleagues (2019) observe that “the carceral state encompasses the formal institutions and operations and economies of the criminal justice system proper, but it also encompasses logics, ideologies, practices, and structures, that invest in tangible and sometimes intangible ways in punitive orientations to difference, to poverty, to struggles for social justice and to the crossers of constructed borders of all kinds” (p. 1). From this perspective, policing can be understood as a manifestation of carcerality, yet abolishing the police is not a singular end goal. Abolition, rather, argues for the rejection of all forms of carcerality, including racial capitalism, sexism, homophobia, transphobia, and ableism, among related oppressions (e.g., Gilmore, 2021). Further, the form that oppression takes is less important than identifying the harm it inflicts. This aspect of abolition may lead toward uneasy conclusions about the scale of changes needed to a myriad of social systems; yet, as Gilmore (2021) asserts, “Abolition requires that we change one thing: Everything” (p. 21).

Formal education is a key example of a social system rife with power, carcerality, and the need for productive disorientation (Bristol & Mentor, 2018). When carcerality is present in schooling and instructional practice, it has been described as carceral

pedagogy (Swauger, 2021). In response, abolitionist pedagogy uses the theoretical and practical approaches of abolition in educational contexts. Love (2019), who coined the term, is a foremost scholar in abolitionist pedagogy and offers examples of what it can look like in practice:

Teachers working with community groups in solidarity to address issues impacting their students and their students' communities. Reimagining and rewriting curriculums with local and national activists to provide students with not only examples of resistance but also strategies of resistance. Protecting and standing in solidarity with immigrant children and their families. Joining pro-immigrant community organizations in the fight for rights for all. Knowing that freedom is impossible without women and queer leaders being the thinkers and doers of abolitionist movements. Engaging in civics education that teaches direct action and civil disobedience. (p. 11)

Abolitionist pedagogy can identify and reveal with nuance why police officers in American schools discipline Black girls six times more frequently than their white peers (Nix, 2017), why students of colour are more likely than white peers to have criminal offenses originating from school discipline (Crenshaw et al., 2015), and why an LA technology might classify being Black and a woman as high-risk variables when calculating university advising and admissions decisions (Swauger, 2021). Abolitionist pedagogy proposes expansive definition and implication, with the intent of questioning — and transforming — traditional roles of teacher, learner, and school. This is part of a broader disorientation process and is essential for envisioning alternative learning futures. Similarly, approaching LA discourses through disorientation and abolitionist pedagogy can reorient how the use of analytics may be expanded, inverted, critiqued, and given new possibilities. Abolitionist pedagogy may be useful in providing learner-affirming analysis of educational technologies and “heightened awareness of the limitations of what can be represented through data, as well as the oppressive and discriminatory affordances of any system designed to monitor behavior” (Selwyn, 2020, p. 5).

2.2. Attunement to Harm and Care

A second quality of abolition is attunement to harm and care. Abolitionists have developed, often through direct experience, a proverbial encyclopedia of violence that names abuse, neglect, erasure, and harm as occurring throughout societies and beyond the realm of criminal justice systems (Acheson, 2022; García Peña, 2022; Garza, 2016). Violence not only includes interpersonal assault but also macro-level social failures such as hunger, poverty, and crumbling infrastructure. Furthermore, abolitionists define care not merely by the absence of violence, but by the presence of liberation, autonomy, community, interdependence, anti-colonial praxis, queer and trans celebration, abundance, restorative justice, and access to quality food, education, jobs, and health care (Cullors, 2018). Abolitionist perspectives provide a fuller account of the human experience, acknowledging both the innumerable ways people experience pain and joy. Attunement to harm and care allows abolitionists to diagnose the limitations and effects of systems more accurately, whether within medical care, criminal justice, or education (e.g., Alexander, 2011, 2020; Vitale, 2021). Here, we identify two LA-adjacent concerns that may be acutely analyzed given an abolitionist attunement to harm and care: Technological surveillance and automating oppression.

In an era of “pervasive surveillance” and student vulnerability (Prinsloo & Slade, 2016), surveillance has often been employed in the service of quantification and the measurement of student learning and achievement. Analytics software generates massive amounts of data about students, and one efficient way to collect and make use of data is by implementing mandatory surveillance systems (Pargman & McGrath, 2021). For instance, students may have little choice about informed consent when using technologies that collect and track their behaviour in online and in-person educational systems (Gilliard, 2017). In higher education contexts, learning management systems are often a main source of data generation and extraction, though predictive models and analytics may also be associated with student demographics, academic performance, building access logs, and the history of student service interactions with a library or wellness centre (Jones et al., 2020b). In LA development and procurement, surveillance can be framed as a service to students, and even as a demonstration of institutional care (e.g., Colorado State University, 2017). Abolitionist perspectives contest the logic that technological surveillance is construed as care and reject the notion that surveillance-based systems are essential to providing students with meaningful education.

Another example of attunement to harm and care may be found in scholarship that documents and critiques the automation of oppression. Institutions of higher education have a problematic history of excluding and discriminating against students who have demanded entrance and equal treatment amidst obstacles that make it difficult for people to fully participate in education (Roth & Ritter, 2021). This includes students who are women, Black, Indigenous, Asian, Latinx, disabled, neurodivergent, LGBTQI, first-generation, English language-learning, mentally ill, addicted, incarcerated, justice-involved, immigrant, undocumented, poor, homeless, or othered through institutional policies and practices. As Johnson (2017) has discussed, LA can be utilized as an efficient way to operationalize exclusion without being explicit or garnering public attention; moreover,

the use of LA in higher education may reinforce social bias and structural oppression amidst the multifaceted challenge of developing greater fairness in algorithmic decision-making (Uttamchandani & Quick, 2022). More generally, software can automate oppression while hiding more explicit manifestations from public view (Benjamin, 2019a; Eubanks, 2018; Noble, 2018), with some automated systems of oppression not requiring intentionality to function in such harmful ways (e.g., O’Neil, 2016). Abolitionist-oriented concern for harm and care can raise awareness about how LA may continue to reinforce automated forms of oppression because analytics systems use data generated within a society steeped in oppressive realities. Alternatively, and from an abolitionist perspective with specific attention to harm and care, we ask this: How might new LA technologies effectively identify automated processes that have delimited a student’s academic and interest-driven pursuits?

2.3. Abolitionist Imagination

A third and essential quality of abolition is imagination. Given the sociopolitical realities and oppressions previously discussed, it can be difficult to envision alternatives to carcerality, systemic injustice, and racial discrimination as these forces are pervasive and normalized. Nonetheless, this is why abolitionist imagination is an essential skill for furthering care and justice. Benjamin (2019b) calls the imagination “a contested field of action, not an ephemeral afterthought that we have the luxury to dismiss or romanticize, but a resource, a battleground, an input and output of technology and social order.” In her work, Benjamin has described Afrofuturism as one imaginative tool through which to strategize and manifest abolitionist goals, including abolitionist pedagogy. Modelling another approach, Love (2019) has also implored educators to use dreaming and imagination in their work: “Abolitionist teaching starts with freedom dreaming, dreams grounded in a critique of injustice. These dreams are not whimsical, unattainable daydreams, they are critical and imaginative dreams of collective resistance... Arguably, abolitionists’ greatest tools against injustice were their imaginations” (p. 101). The academic LA community, as with other educational communities, can benefit from developing shared imaginations about social change, first by learning how to use imagination as part of a critical practice in justice-oriented work.

Imagining a future where education regularly employs an abolitionist stance toward LA involves much work. Greater fairness, equity, and responsibility in LA will require radical counterweights and counter-narratives. These alternative possibilities are much needed given the scale of structural oppression that higher education institutions can expose learners to through laws, policies, and practices. Our argument in this article combines abolitionist imagination with insights from emerging approaches like “subversive analytics” (Wise et al., 2021) in that we aim to examine, destabilize, and redistribute power in educational technology systems while generating new questions and possibilities from this destabilization. As Wise and colleagues (2021) suggest, it is prudent to explore possibilities of subversion and imagination, and to generate alternative educational futures using “speculative design examples of potential novel artifacts (tools, processes, experiences) ... [These] are first attempts, meant to shift perspective, displace, invert and question, by means of estrangement and humor, offered as ‘objects to think with’ to spur critical discussion” (p. 4). Speculative design and fiction, as methods that we introduce in the next section, are both complementary to the abolitionist imagination and pragmatic tools that can help build a world with fairer, more equitable, more responsible LA technologies. In what follows, we combine our commitments to abolitionist imagination with speculative fiction to explain the genesis of our three vignettes that imagine justice-directed LA futures.

3. Speculative Methods

Having established our theoretical stance, we further introduce speculative methods to advance vignettes about the ways in which LA might materialize among justice-directed learning futures. Briefly, speculative methods have emerged over the past few decades as a broad approach to qualitative inquiry, technology design, and imaginative possibility in critical scholarship (Dunne & Raby, 2013; Harrington & Dillahunt, 2021; Toliver, 2021). As our methods may be unfamiliar to academic LA communities, we are eager to introduce and model this “critical methodological intervention” (Wong & Khovanskaya, 2018) as an approach that is both relevant to discussions of alternative technology futures (e.g., Galloway & Caudwell, 2018) and resonant with our stated commitment to abolition. As Lury and Wakeford (2012) summarize in the influential volume *Inventive Methods: The Happening of the Social*, speculative methods “enable research to follow forked directions, to trace processes that are in disequilibrium or uncertain, to acknowledge and refract complex combinations of human and non-human agencies, supporting an investigation of what matters and how in ways that are open” (p. 4). Although there is no singular, rigid blueprint for this approach, characteristics of speculative methods have included critical reflection about ontology and epistemology in a given field, designed products and scholarship that engage with the complexities of the social world, an orientation to specific and unresolved problems, and the generative capacity for tangible change. Speculative methods, we suggest, are an appropriate means of picturing how LA may become fairer, free of bias, and more equitable to approach what Uttamchandani and Quick (2022) observed as a “great promise for how equity, politics, culture, and cultural responsiveness can be meaningfully taken up at the intersection of these perspectives and existing learning analytics traditions” (p. 208).

Our speculative methods aim to destabilize where power in LA has been routinely located and contested, thereby opening new lines of inquiry about more equitable educational prospects. In a pertinent example about learning technology, Ross (2017) has argued that speculative “not-yet-ness” in digital education should “produce findings and conclusions which are generative enough to serve as invitations for further work, and indeed to offer insights for educational practice” (p. 227). Additionally, we are motivated by Toliver (2021) who has provided an innovative methodological template for “reconfiguring traditional conceptions of technology and scientific knowledge through an analysis of [Black girls’] everyday stories... in which they imagined responses to their problems, provided ways to escape oppression, and reclaimed control of their futures and imaginations” (p. xxxii). As one additional and experimental effort aligned with these prior efforts, we make use of speculative methods to disrupt predictable LA uses, surface tensions of design and context, and sketch some complexities of “human and non-human agencies” (Lury & Wakeford, 2012) within an abolitionist orientation to analytics.

We would be remiss not to further acknowledge Selwyn’s (2019) useful “speculative suggestions” about the design, economics, and governance of LA. His proposed “re-imagining and re-engineering” of LA values and ideologies was intended to develop broad-minded public “conversations that recognize the power imbalances inherent in learning analytics, and practical ways of addressing these issues” (p. 18). In our reading, that prior speculation closely aligned with policy recommendations, design workflows, and research agendas. As such, we believe there remains room for additional illustrative accounts of what LA may look like and feel like as learners seek to accomplish analytics-oriented goals on their own terms. In this respect, we turn to Galloway and Caudwell (2018) who have described the value of design fiction as one approach to envisioning “works of design that imagine, speculate on, and represent alternate visions of design and the worlds it inhabits” (p. 86). One compelling and germane example of design fiction can be found in the scholarship of Skirpan and Yeh (2017) who share fictive scenarios about computer vision technologies to explore potential risk scenarios and analyze discriminatory harms associated with cybersecurity. The authors detail the methodological benefit of speculative fiction given the need to “consider negative aspects often glossed over when reporting new research” (pp. 66–67). We are not surprised to note that one algorithmic, racist scenario described by the authors as fiction has been subsequently documented as fact, both in the United States (Ryan-Mosley, 2021) and elsewhere around the world (e.g., Mackinnon, 2021). By speculating about the design of LA fictions through abolitionist perspectives, we aim to provide clarity about the stakes of LA uses while simultaneously inviting participation in world-building oriented towards care and liberation.

A final note about this speculative approach concerns our positionality as authors. The vignettes featured in the next section reflect our limits of personal experience and imagination. As Wise and colleagues (2021) recommend, it is generative for justice-oriented LA designers and researchers to ask questions like, “What are our positionalities? What are the identities and positionalities of the players at the table?” (p. 4). Accordingly, we humbly offer what follows considering our privilege as well-educated, economically secure white cis men. Our identities inevitably inform the stories we can imagine and represent only a small fragment of human experience. We understand speculative vignettes and abolitionist imagination will only reach fullest expression when people of multifaceted identities and experiences dream together. Perhaps what follows will make it just a bit easier for other scholars, educators, and designers who do not share our privileges to productively disorient LA technologies and build toward futures of care and justice.

4. Vignettes for Speculative Learning Futures

Utilizing speculative methods inspired by design fiction, we now share three vignettes that push the accepted boundaries of what LA is and how it could be used to increase the prospects of creating fairer, more equitable, more desirable educational worlds for learners and their livelihoods (D2L, 2022). The first vignette explores a possible future of subversive LA use predicated on current sociopolitical trends continuing amidst student resistance to surveillance and data-driven decision-making in higher education. The second vignette explores a possible future of LA design whereby student agency and accountability transform what is measured into a supportive and inclusive learning environment. This vignette also illustrates how LA could be used to expose systematic discrimination within higher education institutions. The third and final vignette explores what a decentralized analytics tool that foregrounds consent, connection, and tangible steps toward care and solidarity through direct political action could look like.

4.1. Student Mutual Aid Group

It can be hard to understand where you fit in during the first year of college. Students are usually just trying to figure out who we are, manage how peers see us, and how those two things often don’t align. And it gets more confusing trying to manage how Gaze Higher, our university tracking system, sees us too. The welcome materials admin gave me explained that Gaze Higher is how our institution can best anticipate my needs, offer me support, and increase academic success — though whose success and what that meant wasn’t ever clear. Welcome Week put on orientation sessions about Gaze Higher, but we’ve

moved underground. It's become customary for more experienced students, like me, to give incoming students a "second orientation" about how to survive, how to game, and how to operate unseen by Gaze Higher.

"Okay everyone, listen up," I said. Scattered conversation around our stuffy dorm suite quiets down and a dozen faces turn towards me.

"Each of you will be set up with a personalized — and unauthorized — Gaze bot that logs into the learning management system regularly with your university credentials. Students in our computer science department a few years back wrote the first bots and we've been iterating on them ever since. As you probably suspect, Gaze Higher is prescriptive about the frequency of your LMS use, and the duration of your activity in that system. These bots provide you with some breathing room to use the LMS for class when it suits you, all without incurring Admin Alerts or paternalistic academic wellness checks. Believe me, you'll want to avoid those."

A few of the upper-class students laughed and nodded their heads as I explained why we game the metrics. "Good system stats mean avoiding the Student Conduct Office. And sometimes you can even get extensions on assignments because your Gaze Score was higher compared to other people in class."

"Next," I continued, "you'll be assigned a burner phone that's linked to your Gaze Higher account, but that's not for keeping." I held up a nondescript mobile phone and panned it across the room for people to see. A few dozen identical phones sat in a box on the floor by my feet.

I explained, "Burner phones are given to Runners who carry a backpack full of them around campus for a week. Runners visit all your usual campus services, like the libraries, wellness centres, tutoring services, the student union, and a few student clubs. Each visit causes all your burner phones to ping Wi-Fi networks around these areas and log your ghost presence. You're there, but not really. Burner backpacks never go anywhere that wouldn't be considered academic or traditionally wholesome. At the end of the week, new Runners are rotated in, backpacks are emptied, and your phones redistributed into different groupings to randomize location patterns." I pointed toward one of my friends. "Yasmeen has a list for you to sign up and to get you into the rotation."

Yasmeen held up her hand and added, "But you must do a 'ride along' with a more experienced Runner first."

"Very important," I replied. "Honestly, no one loves being a Runner. The bags aren't heavy, but they can be awkward. And it's stressful making sure it never gets lost. But the Runner system works. It means you can worry a bit less about going to a gay bar, or your therapist, or a dispensary, and whether your actual location data will be used against you in academic or criminal proceedings. Last semester, four students who brought their phones to a Pride Parade lost their financial aid for violating student honour codes. And the year before, one student was expelled when her phone's location data showed her visiting an abortion clinic. She was later arrested after the university gave her data to the police. Listen, we only have a few minutes left before the next orientation group. Remember, everyone — see Yasmeen to get on the Runner list, and talk to Gabriel to get your burner phone set up. Oh, and come see me if you have any coding skills and want to work on any of the tools I mentioned."

"Do not leave here with your burner phone!" I said loudly, while students formed a line and organized their survival tools for the semester.

4.2. LA as a Student-Centred Tool for Accountability

As admission decision season kicks off this year, questions about which universities and colleges students were accepted to bounce around high schools throughout the United States. For many, though, getting a rejection letter comes with a new stinging question: *Was I rejected because of my race?* "That's the first thing that went through my head," said Maria Ortiz, a former student at Boston University. "It also made me question how inclusive some of these colleges I got into were for students like me. Like, how welcoming would they be to a Latina from Texas?"

After the U.S. Supreme Court ruled that it was unconstitutional to use a student's race in college admissions, universities around the country responded with a range of strategies for messaging potential students. Some institutions have celebrated the ruling and prominently communicated that they will adjust their admissions processes accordingly. Other institutions have expressed dismay, claiming that ending affirmative action was a blow to civil rights advancements. A prominent university admissions administrator, who spoke on the condition of anonymity, shared that "the court's decision will allow schools to significantly under-admit students of colour, and this impacts the overall climate of every campus." This leaves some students apprehensive about where to attend.

After she graduated, Ortiz founded Sunlight Analytics, an educational software company, to help students of colour determine if some colleges would be more supportive of them than others. Like some companies, Sunlight Analytics provides data about colleges for people deciding on which one to attend, but the platform is not only tracking traditional metrics such as student selectivity or alumni donor rates. Sunlight Analytics is a reinvention of learning analytics software, and it incorporates information that indicates how dedicated universities are to supporting diversity and inclusion.

Ortiz said the idea came to her a few weeks after the Supreme Court's decision was announced. "I wanted to know for myself which schools changed their admissions practices because of this. Like, if a school started admitting significantly fewer people of colour, then it probably means that it's a place I wouldn't have wanted to go to anyway," Ortiz noted. She started scraping data from public websites maintained by institutions who had to report student admission rates by race. Over time, she started adding more information like if a school had a dedicated Chief Diversity Officer or if they had clubs to support students from historically underrepresented groups. "I started off with an online spreadsheet just for myself, but then my friends asked if I could share it with them. It got circulated to other schools within a week and it kind of took on a life of its own after that," said Ortiz.

While Ortiz tried to maintain the spreadsheet during her coursework, she said it was much harder given the time commitment and the number of requests she received to add more institutions. After she graduated, Ortiz founded her own company with the mission to counter the information asymmetry between students and schools. "As a prospective or current student, I should be able to know if a school has a racist, sexist, or transphobic environment before I step on campus. I want to know if I'm safe there before I decide to attend," said Ortiz. Sunlight Analytics now functions as a decentralized model whereby current students take ownership of data on university-specific platforms and capture information about housing, food insecurity, mental health, and disability services at the campus level. Students can even anonymously share stories about microaggressions they have experienced at the school, which are then aggregated to describe measures of an inclusive climate.

"Privacy and consent are incredibly important, and we're constantly improving methods to better collect and use student data ethically and responsibly. Students are very interested in knowing if their school is addressing these issues, because they can affect learning more than almost anything else," Ortiz stated. When asked to describe the main difference between traditional academic analytics and Sunlight Analytics, Ortiz stated, "Metrics, like learning analytics, are generated — often extracted — by schools that think learning is determined by using technology. Sunlight Analytics is made for students, and from data they chose to share, because they know learning is about inclusion and wellbeing."

4.3. LA that Centres Agency and Liberation

The first thing you need to know about Atlas is that you don't ever have to use it. The second thing you need to know is that you probably should.

Last week, Atlas was how student union members organized a protest to raise wages for graduate students and adjunct faculty, and then Atlas helped students bring uneaten food from the catered Visiting Scholar Lecture to the quad to feed any student who was hungry. But first, a little context might be helpful to understand this tech, and why it matters.

Atlas is an open-source, decentralized system that can do or be many things based on how you customize it. Want something that will help you remember all those bones and ligaments for your anatomy class? Great! Atlas can tailor your digital notes, even proprietary class materials, and tutoring plugins are available to help you study based on what works for you and what doesn't. That's how Atlas got started, but it morphed into something else after a while.

Hundreds of students started meeting after they found each other on Atlas because of mutual interests like activism, student unions, and organizing. They used Atlas to solicit ideas about what students wanted to see improved at the university, created a timed voting function, and then generated a list of priorities for the local chapter. Current events often spur new ideas, so the priority list is very dynamic. Food delivery is now a built-in feature that ensures extra food from university-catered events gets delivered to pop-up food pantries and other locations that meet students' basic needs. This feature started as a forked version by a student years ago, but it was so frequently requested that the university made it standard. Yes, technically Atlas is provided by the university because they pay to support it, but they don't have a lot of control over it. Atlas can help students connect with each other, or not. It can help students learn, or not. It can be used playfully or seriously, for activism or for finding a couch to sleep on. The point is that we, the students, control it and we get to decide what it's for.

Even faculty can use Atlas if they want. One faculty member created a meeting-cost calculator because of frustration with our school's administrative culture. They pulled public university salary data and integrated it with an online meeting app, which calculated the combined salary of meeting participants per minute. When used, a changing dollar amount is shown for anyone who has added the app to their phone. A second faculty member forked the meeting-cost calculator to make a credit hour-calculator to show salary differences among courses taught by tenure-track faculty, adjuncts, and graduate students. When that feature is used, each course in the university catalog is shown with corresponding cost and profit information. This data was used as part of last week's campaign to increase graduate and adjunct instructor pay.

The most recent Atlas fork built by students helps to track the university's carbon footprint. What started as a food waste tracker across campus dining halls got the attention of a climate justice student club who then forked it to follow energy consumption among campus buildings. Just a few weeks ago, our student government identified reducing the university's carbon footprint as a governance priority and is looking for new ways to use Atlas and influence university systems that align with a climate justice agenda.

5. Discussion and Conclusion

We have shared this contribution to JLA's special issue about fairness, equity, and responsibility to further generate needed debate within the academic LA community about assumptions that undergird the ethical uses of analytics technology in higher education and the thriving of students within institutions that maintain asymmetrical relations of power. In this discussion, we comment on our use of speculative counter-narratives to productively trouble presumptions about the intended, expected, and controlled use of analytics technologies in higher education contexts. We do so by recalling, importantly, that our vignettes were informed by the application of abolitionist perspectives to LA technologies, with specific concern for disorientation, harm and care, and imagination. Our decision to do so is a humble and theoretically robust attempt to introduce new concepts and commitments to LA designers and researchers, and to then ground the implications of these ideas in possible future-focused scenarios. As Selwyn (2020) has suggested, the feasibility of "new directions" in LA may be predicated on "developing new practices and methods that orient Learning Analytics around a mission of social justice" (p. 3). We are hopeful that our approach in this article — from our conceptual abolitionist commitments to our speculative narratives — provide further motivation to examine new justice-oriented directions.

First, our three speculative vignettes illustrate that LA technologies can be used by students in ways not intended by designers or not expected given institutional norms. In the first vignette, the Mutual Aid Group's bot helped students to game metrics associated with required course activities, scramble location tracking services, and even create fake online content to alter invasive analysis techniques. The second vignette featuring Sunlight Analytics showed how LA-adjacent systems can be reappropriated by students to share hyper-local information, contest institutional narratives about diversity and inclusion, and potentially inform enrollment decisions. And the third vignette about Atlas revealed how an institution can cede control of an analytics technology to be used by stakeholders for alternative, and more just, purposes — such as the redistribution of material resources like food and instructor pay. Collectively, these vignettes suggest LA technologies are not static entities when implemented in contested contexts, and that these systems may be (re)appropriated by learners for their divergent and interest-driven needs. Current LA research indicates that there is great value in co-designing technologies with diverse stakeholders, like students and educators, so as to better ensure that shared values are manifest in practice (e.g., Dollinger et al., 2019). Nonetheless, our vignettes suggest that it may not be surprising to see learners contesting what is expected of their technology use while also reconsidering what they expect from their technologies.

Second, our vignettes are explicit in highlighting learner resistance as a tenet of abolitionist perspectives applied to LA. Advocates of student wellbeing and academic success should be prepared to honour learner resistance as an expression of agency. In this respect, each vignette sought to describe different forms of resistance. Students resisted the required use of conventional course software, the institutional metrics and marketing regarding admissions and campus climate, and the initial constraints of a study aid, transforming it for solidarity and institutional change. We also modelled acts of resistance as occurring at different social scales (e.g., course, campus, platform serving multiple institutions) and among different types of social networks, from an underground mutual aid collective to formal administrative and governance groups. Given our concern for resistance, it is helpful to recall that higher education students may be unaware of invisible and discriminatory technologies — perhaps including LA — that surveil their behaviour both inside and outside of the classroom, with long-term consequences for their academic and professional accomplishments. As Elouazizi (2014) asked regarding data governance challenges for LA, "Who designs and interprets the ethical guidelines for gathering, using, and purging such data?" (p. 218). It may be the case that without including learners in the establishment of such guidelines, student acts of technology resistance will alter how LA data is meaningfully collected and utilized. Approaches to LA design, data ownership, and governance that do not anticipate student resistance, and that do not invest in greater transparency and informed consent efforts, may be perceived as unhelpful or even discriminatory. As our vignettes make clear, students may not initially perceive LA technologies as a valuable addition to their educational pursuits, and their own justice-directed efforts may include resisting and reimagining interactions with analytics technologies.

Third, our vignettes aim to provide stakeholders in the academic LA community with a provocative point of reference to further longstanding discussions and debate about what may be problematic and possible in the field. Speculative narratives and designs are shared in order to shift perspectives and elicit critical reflection (e.g., Wise et al., 2021). Collectively, our three speculative vignettes help to raise several timely questions about power, ethics, and agency. How might a new LA system either contribute to or help mitigate power asymmetries in a local context? In what ways can collaborative design processes help to produce anti-oppressive tools that are more likely to support learners' equity-oriented academic outcomes? And can a given LA technology be appropriated by collectives of learners, including both students and instructors, for justice-making activities without institutional retribution? These questions are consonant with Pargman and McGrath's (2021) call for additional "studies investigating how ethical principles, guidelines, or codes of practices in LA are put into practice... [to] gain a more grounded understanding of how these instruments work in everyday higher education and which ethical issues or moral

dilemmas are not covered by them” (p. 135). It is our hope that the perspectives, methods, and vignettes featured in this article help broaden an understanding of intersecting sociopolitical, cultural, and economic contexts within which LA technologies operate.

In this article, we have sought to advance two related objectives about fairness, equity, and responsibility in LA when considering — from a critical perspective — how LA technologies are conceived, designed, and deployed. First, we introduced abolition as a productive theoretical contribution to LA literature through concern for disorientation, harm and care, and imagination. Second, we illustrated through speculative counter-narratives three future possibilities regarding how learners might interact with, resist, reimagine, and make sense of LA systems in everyday learning environments. Our argument is resonant with sociocritical and ethically oriented approaches to LA that foreground the complexities of power, surveillance, and the agency of individuals and collectives within political and institutional contexts (e.g., Slade & Prinsloo, 2013; Uttamchandani & Quick, 2022). We have presented a speculative approach using abolitionist imagination as a valuable method for considering justice-oriented learning futures, and we have suggested that this approach can contribute to future studies of LA as designers and scholars establish more ethical and equitable commitments. We anticipate that the academic LA community may struggle to enact much-needed moral practices and justice-directed analytics possibilities if the field cannot productively address the tensions made explicit by abolitionist perspectives and possibilities imagined in our vignettes about agency, resistance, and social change.

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