

Learning to Unlearn the Teaching and Assessment of Academic Writing

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Article abstract

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Article

Learning to Unlearn the Teaching and Assessment of Academic Writing

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Abstract

The last two years have raised important questions about how we can make the teaching of academic writing more equitable. In fact, the current moment invites us to “learn to unlearn” ways of teaching academic writing that perpetuate inequity. In this reflective article, I draw on decolonial theory and antiracist theory to unwind the ways coloniality has shaped the way that I have taught scientific writing for two decades. This work begins with a discussion of the idea of learning to unlearn from decolonial theory. I then examine how that perspective can change the way we teach scientific communication—for example, in contextualizing the development of scientific knowledge as a series of epistemological developments and exchanges, rather than from a zero point of Western thought. Spiraling outward from the classroom, I reflect on how scientific writing is part of a larger matrix of institutional structures that unwittingly compound colonial legacies inequities. In the end, if we are to address inequity in the teaching and assessment of academic writing in new ways, then we need to acknowledge and challenge the legacies of coloniality in the teaching and assessment of academic writing.

Introduction

According to the World Health Organization, “as of 5:49pm CEST, 16 June 2022, there have been 535,248,141 confirmed cases of COVID-19, including 6,313,229 deaths” (World Health Organization, 2022). The pandemic has struck every country, crippling the global economy, overwhelming health care systems, and exacerbating existing inequities. The economic downturn was most deeply felt in the poorest countries, an effect that will continue to shape the post-COVID recovery (Yeyati,& Filippini, 2021). Dovetailing with the COVID-19 pandemic, have been the Black Lives Matter and

climate justice movements. The Black Lives Matter movement began in 2013 as a social media movement in the U.S. following the murder of Trayvon Martin and gained renewed strength in 2020 following the murder of George Floyd. The Black Lives Matter movement has become an international presence, leading to protests in countries such as Australia, New Zealand, France, and the United Kingdom (Carnegie, 2021). The international effects of Black Lives Matter have also been felt beyond the West, in movements such as #KashmiriLivesMatter. Taken together, the last two years have brought enormous global upheaval. The once heady days about the promise of globalization have given way to more pessimistic views as the pandemic continues to churn, closing borders, clogging global supply chains, and further compounding social inequities.

When it comes to education, we will never see inequity in schools the same way. When the COVID-19 pandemic started in early 2020, it upended classroom teaching, forcing students from preschool to college age into online learning contexts. That rapid shift to online learning demonstrated that universal online or hybrid learning was possible almost overnight. It also demonstrated that online learning was not more democratic for many students (World Bank, 2020). In fact, for many students, online learning from home left them isolated, vulnerable, and without access to mental health resources (Lee, 2020). For many English language learners and students needing language support, the world of pandemic online learning has left them unable to access support services needed for academic success (U.S. Department of Education, 2021).

Assessment data on student learning that has been collected since the start of the pandemic has shown increased equity gaps. For example, in one study by U.S.-based Curriculum Associates (2021), researchers found that results from their diagnostic tests showed math performance was below pre-pandemic levels for all students in elementary and middle school while “in reading, the percentage of students who are on grade level in the upper-elementary and middle school grades is close to pre-pandemic levels, whereas in the early grades the percentage of students who are on grade level is lower than before the pandemic” (p. 4). These differences were most notable in schools serving mostly Black and Latino students and under-resourced schools.

Finally, higher education experienced a number of challenges in the pandemic, ranging from student and employee mental health crises, enrollment declines, and research disruptions (National Student Clearinghouse Research Center, 2021). The disruption in admissions testing led many colleges and universities to pivot to test optional. A February 2021 ACT survey of four-year colleges found that 80% of U.S. colleges ended up being test-optional for the previous year and between 60 and 70 percent said they would likely remain test-optional or test blind post-COVID (2021).

Furthermore, numerous colleges pivoted during the pandemic from standardized testing instruments such as ACCUPLACER to directed self-placement and multiple measures assessment (Nastal, Poe, & Toth, forthcoming). While many of these changes were in-progress before 2020, the pandemic accelerated their adoption.

Beyond the upheavals to educational assessment and student support, the pandemic and recent social movements like Blacks Lives Matter and Stop Anti-Asian Hate (Government of Canada, 2021; Pew, 2021) have brought a reckoning about epistemological and pedagogical frameworks used in higher education. Academic writing, influenced by calls for linguistic justice and equity-based assessment, is certainly implicated in these shifts.

I begin with this historical context because the last 24 months have raised important questions about structures of academic writing—what we teach, how we teach and assess, what are the ends of academic writing, and what is the very language we should use to describe the teaching of academic writing and students. The discussions surrounding the reform of teaching and assessing academic writing are compelling and overwhelming. It's tempting to take a "quick fix" approach—join a book group, add Black writers to the syllabus, change a grading practice, and suspend a testing policy. This approach to addressing inequity in the teaching and assessment of academic writing does not address the epistemological and structural contexts in which academic writing is taught and assessed—i.e., assumptions about foundational theories, unexamined processes, and institutional structures and policies. Inequity in academic writing is not something that just happens, and it is not going to be addressed through superficial responses. Inequity in the teaching and assessment of academic writing, like health care and other social institutions, is avoidable, systematic, measurable, and unjust (American Medical Association and Association of American Medical Colleges, 2021, p. 6). But how do we make the teaching and assessment of writing more equitable?

When I proposed an idea for this introductory article, I initially planned to identify sites of inequity in the teaching and assessment of academic writing—for example, classrooms, programs, writing centers, bridge programs, and institutions. As I began writing this article, however, I found myself resisting the idea that I would "explain" how to address inequity through sweeping analyses. It is precisely such a move that many decolonial scholars would point to as an act of colonialism—the need to explain "from above."

Today, I am finding myself wanting to unlearn. As such, my project in this article is not a decolonial reading of academic writing writ large. My goal is more modest. Drawing on decolonial theory and antiracist theory, my goal is to unwind the layers of inequity that shape the way I have taught

academic writing, in particular scientific writing. I am not a decolonial scholar by training, but I am a scholar trained in justice-oriented approaches to teaching and researching writing. Decolonial theory is a compelling way for researchers like me to better understand the complexity of inequity and act on that understanding. I do this work while learning from decolonial scholars in my field such as Ruiz (2022) as well as Baca and Garcia (2019).

This article starts with a discussion of the idea of learning to unlearn from decolonial theory. I then use that decolonial “option, standpoint, analytic, project, practice, praxis” to unwind my teaching of scientific writing (Mignolo & Walsh, 2018, p. 5; See also Mignolo, 2011). Spiraling outward from the classroom, I reflect on how academic writing is part of a larger matrix of institutional structures that unwittingly compound inequities. A decolonial option might also allow us to unwind the logics of these larger institutional practices and structures to see how classroom inequities are connected to institutional inequities.

Before I continue, however, I want to do some definitional work to provide some common ground for readers. First, I use the term *inequity* rather than *inequality*. The word inequality suggests an imagined level playing field. Such a project could only be accomplished by erasing the long history of oppression that marginalized students and their communities have encountered over generations. Instead, I use the term *inequity*. Inequity is “want of equity or justice; the fact or quality of being unfair; unfairness, partiality” (Oxford English Dictionary, 2022). According to the Oxford English Dictionary, the term inequity dates to 1556. The term inequity is often used today interchangeably with *injustice* (A term that dates to 1390). Both English language terms—*inequity* and *injustice*—thus date from a period following colonization within today’s United Kingdom, the importation of the first African slaves into the Americas, the Reformation, the Scientific Revolution, and the reshaping of global power through the Spanish and Ottoman Empire conquests. The 14th century was a period that also saw pandemic waves from the Black Death—from 1347 to 1352 and then again in 1361 and 1374. Inequity and injustice have been a part of the English lexicon, thus, for almost 600 and 800 years, respectively. They are terms that predate the Enlightenment, including Linnaeus’s taxonomy of human classification (The term *race* enters the English language in the 16th century. *Decolonize* enters the English language in the 18th century. *Racism* and *racist* enter the English language in the early 20th century.). My point here is that the words we use have origins.

The terms *inequity* and *injustice* are also terms that invite us to think systemically. Systemic inequity and injustice, however, is difficult to see in our everyday lives. As Young (2011) explains in *Responsibility for Justice*:

Part of the difficulty of seeing structures. . . is that we do not experience particular institutions, particular material facts, or particular rules as themselves the source of constraint; the constraint occurs through the joint action of individuals within institutions and given physical conditions as they affect our possibilities. . . Social-structural processes create “channels” for the actions of individuals, guiding and constraining them in certain directions, but not disabling their flow (p. 52)

Young goes on to explain how social-structural processes create seemingly objective constraints that are “the accumulated effects of past actions and decisions [that] have left their mark on the physical world, opening some possibilities for present and future action and foreclosing others, or at least making them difficult” (p. 53). In other words, we take certain constraints for granted as this work is also diffused over a network of actors. Young argues that people work in social-structural systems in predictable ways that result in the ongoing effects of injustice: “the accumulated outcomes of the actions of the masses of individuals enacting their own projects, often uncoordinated with many others. The combination of actions affects the conditions of the actions of others, often producing outcomes not intended by any of the participating agents” (p. 62-63). An example might be helpful here: it is assumed in the U.S. that someone must have a law degree to be a lawyer. Historically, this was not the case. In fact, today in four states in the U.S., someone can become a lawyer through a four-year apprenticeship in the office of a judge or practicing attorney’s office. Such individuals must also pass bar exams and other requirements. The “objective constraint” of a JD degree is not an inevitability. It is the result of past actions of the American Bar Association to regulate legal education in conjunction with law schools, state legislatures, and law firms. The result of these past actions is a high cost graduate education for most law students—law students who, to be fair, pass bar exams at much higher rates than apprenticeship students.

As the law school example demonstrates, there are many stakeholders in maintaining inequity. As a result, for Young, responsibility for justice means that everyone in the system should have a stake—“not from living under a common constitution but rather from participating in the diverse institutional processes that produce structural injustice” (p. 105). A responsibility for justice approach to learning asks what stake everyone in the room has for “participating in the diverse institutional processes that produce structural injustice” (p. 105).

Learning to Unlearn

Decolonial scholars use the phrase “learning to unlearn” to describe the process of epistemologically delinking from the enterprise of modernity or as explained by Tlostanova and Mignolo (2012) to “forget what we have been taught, to break free from the thinking programs imposed on us by education, culture, and social environment, always marked by the Western imperial reason” (p. 7)¹. Tlostanova and Mignolo do not want us to actually forget, rather reexamine and disrupt or change, what Young might call, normalized social-structural processes. For decolonial scholars, those well-worn “channels” of thinking, acting, and living are rooted in the legacies of modernity.

Decolonial theory intentionally moves the clock back on colonialism from the 19th century to the 15th century. As Garcia and Baca (2019) explain:

The Modern/Colonial group (i.e., the M/C Group), scholars such as Aníbal Quijano, Walter Mignolo, and María Lugones have highlighted how postcolonialism maintained Europe and European history as the point of reference for understanding the ‘globe.’ These scholars argue that a focus on the fifteenth- and sixteenth-century Americas, rather than postcolonialism’s focus on later British and other European colonialisms, offers a way to understand that ‘coloniality’ was a precursor to colonialism: the emergence of Western civilization in the Americas during this time laid out a colonial matrix of power that would connect forms of Western imperial and colonial expansion (p. 2)

As Maldonado-Torres (2007) has explained, the shift from the term “colonial,” which describes expansion of political and physical boundaries, to “coloniality” is significant:

Coloniality is different from colonialism. Colonialism denotes a political and economic relation in which the sovereignty of a nation or a people rests on the power of another nation, which makes such nation an empire. Coloniality, instead, refers to long-standing patterns of power that emerged as a result of colonialism, but that define culture, labor, intersubjective relations, and knowledge production well beyond the strict limits of colonial administrations. Thus, coloniality survives colonialism. It is maintained alive in books, in the criteria for academic performance, in cultural patterns, in common sense, in the self-image of peoples, in aspirations of self, and so many other aspects of our modern experience. In a way, as modern subjects we breath coloniality all the time and everyday. (p. 243)

In other words, as Mignolo (2017) explains Aníbal Quijano’s theory of coloniality indicates “the underlying logic of all Western (From Spain to England to the US) modern/colonial imperialisms . . .

there is no modernity without coloniality, thus, modernity/coloniality are two sides of the same coin . . . Coloniality, in other words, is the darker side of Western modernity” (para. 5). What remains of the global colonial empires of the last 500 years is the colonial matrix—the interlocking “control of economy (land appropriation, exploitation of labor, control of natural resources); control of authority (institution, army); control of gender and sexuality (family, education); and control of subjectivity and knowledge (epistemology, education and formation of subjectivity)” (Mignolo & Escobar, 2010, p. 3). As a result, decolonial scholars are interested in understanding the legacies of coloniality in the management, control, and circulation of knowledge (Garcia & Baca, 2019). Specifically, de Sousa Santos refers to the extinction of Indigenous knowledge systems as epistemicide, “the destruction of an immense variety of ways of knowing that prevail mainly on the side of abyssal line—in the colonial societies and socialabilities” (2018, p. 8).

As demonstrated by these explanations, decolonial theorists share with critical theorists, such as Foucault, Marx, and Bourdieu, the impetus to historicize and critique the interlocking logics of cultural and economic control. In the case of decolonialism, that critique is fundamentally the rejection of “pretended universality of a particular ethnicity (body politics), located in a specific part of the planet (geo-politics), that is, Europe where capitalism accumulated as a consequence of colonialism” (Mignolo, 2007, p. 453).

What comes next for decolonial scholars is a bit tricky. To simply replace coloniality with decoloniality would just replicate many of the same problems that decolonial scholars wish to change and, ultimately, replicate inequity and injustice. As a result, decolonial scholars make a two-step move: first, they acknowledge that “there is no outside position from which the colonial matrix can be observed and described; “Many of us have been ‘trapped’ in the colonial matrix but do not ‘belong’ to it” (Tlostanova & Mignolo, 2012, p. 7). In other words, there is no other world to which we can escape. Because we cannot escape coloniality, decolonial scholars use a method known as “border thinking” where they can look at “seemingly familiar historical events from the position of border thinking and border consciousness, sensitive to the colonial and imperial difference, and to do so necessarily in the context of the rhetoric of modernity based on the logic of global coloniality in its various manifestations (Western capitalism and liberalism. Socialism, the discourse of subaltern empires, etc.) (Tlostanova & Mignolo, 2012, p. 6). Personally, I like this move in decolonial theory because it eschews a romantic notion of a utopian other or dystopian demise.

Second, because decolonial scholars resist grand alternatives to coloniality, they argue for “options, rather than alternatives” in order to “pluriversalize rhetorics without universalizing or

authenticating another alternative approach to rhetoric (Cushman et al., 2019; For a critique of scholars who seek to authorize a singular alternative approach rather than options, see Cushman, Baca, & García, 2021). In other words, a decolonial perspective invites a multiplicity (or pluriverse) of epistemological frameworks, ways of communicating, and identity positions. And as Cushman once explained to me, pluriversality invites us to imagine options that we do not know exist yet. For Cushman et al. (2019), the work of offering options is inclusive: “the effort to move toward this change must necessarily involve everyone who is situated within the colonial matrix of power” (p. 2). I appreciate this sensibility because it aligns with Young’s notion of responsibility for justice. Cushman (2013) has elaborated on this point:

you don’t have to be a person of difference to dwell in borders, to think of ways in which social equity and pluriversal understandings can be achieved in everyday knowledge work . . . The important thing is to actively seeking out pluriversal (rather than universal) understandings, multiple and varied (rather than singular and narrow) ways of expression, integrated (rather than siloed) exercises . . . whole and active (rather than atomized and static) language uses in an effort to name and respect a range of ontological, axiological, and epistemological perspectives. (Cushman, “3.0 A Decolonial Option,” para. 5)

Decolonial scholars invite us to “build a world in which many worlds could coexist” (Garcia & Baca, 2019, p. 23).

Decolonial theory, like all theory, is not without its challenges (For a useful critique, see Citrón, Corcoran & Bleeden, 2021). For example, while decolonial theory moves us beyond a geographic and political focus to an epistemological one, it is limited by marking the Enlightenment as a starting point. Ideas of the Enlightenment were not suddenly invented at that moment but were born out of historical forces that preceded them. Moreover, while the Enlightenment became the dominant force of modernity, it was not the only socio-political-economic theory at work. Finally, as Sean Zwagerman has pointed out, it is important to “recognize what is doctrinaire and conventional in the positionalities that imagine themselves as transgressive.” If decolonial theory is simply used as a metaphor for replacing colonial epistemology, then it simply becomes a new conventional way of thinking.

Despite its limitations, I find decolonial theory powerful, especially the idea of learning to unlearn. Moreover, if I was to unlearn things, could I learn new things to make education more meaningful for other people? So, if I were to unlearn some things, what would I unlearn? What would I learn differently? Could unlearning provide new paths, rather than endlessly traveling the same paths?

So, while I do not think it is possible to decolonize all of higher education, I do think it is powerful to unlearn in order to learn anew. In my own case, learning to unlearn allows me to reexamine notions like validity as well as common terms such as “rigor” and “clarity.” These ideas are central to the teaching and assessment of writing, so why unlearn then? Let me offer a discussion of what reexamining the notion of validity offers. In measurement, validity is a key concept. Definitions of validity have changed over time, with Kane’s (2013) unified model of validity being the dominant approach in measurement today. In Kane’s interpretive use argument, validity is not something “in” a test or a series of separate traits, rather an argument which is made through an examination of evidence. As such, we do not validate a test, rather we make validity arguments. According to the *Standards for Educational and Psychological Testing* (AERA/APA/NCME, 2014), there are five sources of validity evidence: test content, response processes, internal structure of test items, relationships to other variables beyond the test, and consequences.

I have been a good student of validity research but long frustrated by its ignorance to the socio-cultural world that surrounds and permeates testing. Simply put, test designers like to forget those messy worlds that students live in. Then, in a special issue of the *Journal of Writing Assessment* (2016), Cushman challenged:

Validity indicates the social and epistemic hierarchies of knowledge created as part of the colonial difference. What is deemed to be valid in arguments and therefore reliably consistent in its measures (Slomp and Fuite 2005, pp. 191-193) needs the necessary other of the invalid and unreliable to legitimize themselves. . . . The concept of validity created the colonial difference as a tool, which was used to identify and exclude (thereby instrumentally manage) all forms of evidence that it itself had not identified as sufficiently indicative of the claim it wanted to make about knowledge, land, governance rights, morality, and health. (“1.0 Legacies”)

This direct challenge to validity was powerful because it suggested that Kane’s interpretive use argument model was insufficient to advance justice. In response, I began to think about decolonial options for assessment. For example, in work on justice-oriented approaches to validity (JAV), my colleagues and I do not throw away validity entirely. Rather, we address the ways that validity has been used to invalidate Black students’ academic performance. We argue that a JAV approach can (a) acknowledge the role and impact of race/racism in our assessment processes (from construct articulation to score reporting); (b) require considerations of how relationships to/with power and privilege are enacted in our methodological choices; and (c) seek to disrupt white supremacist approaches and interpretations (Randall, Slomp, Poe, & Olivieri, 2022). In thinking through how we

would operationalize JAV, it became clear that we need to embrace a wider repertoire of evidence to make decisions about the use of assessment—for example, including student perspectives as validity evidence and developing new ways of understanding consequence—as well as re-examine what we mean by “use”. Decolonial thinking exposed how validity traditionally difference and results in erasure. Decolonial border thinking did not mean that I forgot validity, but it provided a vantage point to open up new possibilities for thinking about what validity is, what actions it could do, and what else we might do in lieu of traditional conceptions of validity.

Beyond research, I find learning to unlearn allows me to question the logics that guide my everyday practice of teaching and assessing writing. Let me offer an example of this shift. The editors of *Discourse and Writing/Rédactologie*, wrote in their call for articles for the special issue on “Rethinking structures of academic writing in times of exacerbated inequity”:

Our call for papers solicits submissions which explore from critical perspectives how issues of inequity can be addressed in the instruction and practice of academic writing and discourse. Access to, and success in, academic discourse is often a challenge for students who enter higher education from positions of academic, social, or economic disadvantage. Often designated as “remedial,” “at risk,” or “non-traditional,” such students may be learning English as an additional language, may be first-in-family university students, and/or may be marginalized by identities of race, gender, class, and age. We seek submissions that critically examine, and aim to reform, issues of inequity in academic writing pedagogies, academic writing discourses, literacy practices, grading practices, or writing-related institutional policies, at the undergraduate or graduate level. This call is important. It provides dedicated journal space to the most pressing issues in higher education today. It demonstrates an editorial commitment to institutional change. But like my initial impulse to explain inequity, the call suggests certain assumptions. The editors are clearly aware of deficit discourses about students and signal as such in their use of quotation marks around the terms “remedial,” “at risk,” and “non-traditional.” Yet, there is also a silence about what happens to students “from positions of academic, social, or economic disadvantage” once they do enter higher education. In her critique of the *Standards for Educational and Psychological Testing*, Randall (2021) explains how discourses about “opportunity to learn” draw attention to resource allocation without asking “opportunity to learn what?”: [Opportunity to learn] assumes that the current content being assessed is critical (read: superior) and that some students (typically BIPOC students) do not have access to the content because they attend poor schools, etc. Such deficit thinking is dehumanizing. In contrast,

A justice-oriented framing—one that places the deficit at the feet of the empowered and not at the feet of the oppressed—is that the content (because it centers Whiteness and devalues all else) does not engage BIPOC students, and BIPOC students are not performing what they know about the content, because the content assumes their inferiority and serves to erase their values and ways of knowing/understanding. (p. 5).

To be fair, Randall is not saying that there are not differential resources in wealthier and resource-deprived schools but that the quick labeling of schools or students limits what questions are asked, whose knowledges and perspectives are valued, and how power is distributed. As she argues, “issues of inequity and injustice are not to be resolved in assessment simply by increasing ‘access’ to whiteness (i.e., opportunity to learn) to marginalized students” (p. 5).

So where does this leave us? I believe it is absolutely the ethical imperative of academics to connect the classroom to the program to the institution to the community and environment and vice versa. We can never break free of coloniality, but higher education exists for learning. *What* we learn and *how* we learn can—and should—be expansive. In the next section, I take up the idea of learning to unlearn through classroom structures and institutional structures.

Learning to Unlearn in the Teaching and Assessment of Writing

To learn to unlearn the teaching of scientific writing, I work to enact Kishimoto’s (2018) call that “begins with the faculty’s awareness and self-reflection of their social position and leads to the application of this analysis not just in their teaching, but also in their discipline, research, and departmental, university, and community work.” (p. 540). In what follows, my story of learning to unlearn scientific communication begins with the classroom and then spirals out to institutional structures. Beyond this article, I continue this spiraling out, reflecting on how this unlearning intersects with changes that are happening in the sciences.

Classroom Structures

For decades I have taught scientific communication with course descriptions such as the following:

English 3307, Advanced Writing in the Sciences, examines the ways that knowledge is created and communicated in the sciences. In particular, we will explore the idea that science is more than an accumulation of successful experiments but is instead a human activity that involves persuasion/argumentation, the selection of methods and evidence to satisfy a claim, attention

to audience needs and expectations, and multiple means of communication (written, oral, and visual) via a variety of technologies (analog and digital). The course will also enact the kind of peer review that characterizes writing in the sciences and that shapes most science conducted today.

Over the course of the semester, you will move from exploring what characterizes writing/communication in your respective fields, to a focused mini-review of a topic of interest to you, to a brief scientific article in the form of a “letter,” to a more public presentation of a scientific topic you have explored in previous assignments in the form of a scientific poster, and finally to a reflective portfolio. Along the way, I and your classmates will help you improve your writing and speaking about scientific knowledge and equip you for the many diverse opportunities you will have in the future to communicate science.

English 3307, Advanced Writing in the Sciences is a required writing course at Northeastern University. It is one of several “flavors” of professional writing courses offered through the university writing program for upper-level students in order to fulfill a general education requirement for writing (Students also have a first-year writing requirement and a writing intensive requirement in their major.) Students come to Advanced Writing in the Sciences in their third or fourth year of college, typically having already gone on a co-op and when they are deeply identified with their disciplinary fields.

My approach to teaching scientific writing has shifted over the years depending on institutional context, my own knowledge development, and curricular situatedness of the course (for example, depending if it is a first-year elective or upper-level requirement). In the current iteration of scientific communication that I teach in Advanced Writing in the Sciences, I teach students about the ways scientific writing and knowledge-making are interconnected, the importance of responsible conduct in research, and ways to confront sexism in the production of scientific knowledge through stories such as about Rosalind Franklin. I have also had students wrestle with racist narratives about plagiarism and read case studies such as *The Immortal Life of Henrietta Lacks*. Most of the textual forms that I teach are scientific articles, grants, posters, letters, systematic reviews.

The approach that I use in teaching scientific writing is drawn from the numerous scientific writing textbooks (Harmon & Gross, 2010; Hoffman, 2019; Penrose & Katz, 2005). Such texts focus on typified forms of scientific communication and situate those genres broadly within the social context of scientific practice. I do not find these approaches to teaching scientific communication in-and-of-themselves unhelpful. In fact, I have co-edited an Oxford University Press series on writing in

the disciplines. But what I have come to question is how historical colonial legacies remain unexamined in these texts, how whiteness is normative, and how the lack of scaffolding around these texts contributes to inequity.

First, I cannot teach scientific communication today without teaching the history of scientific genres as a Western construct. That history puts me face-to-face with the legacies of the Enlightenment. Here, a decolonial perspective is valuable to contextualize the development of scientific knowledge not from a zero point of Western thought, but rather as a series of epistemological developments and exchanges. Much of the research on the development of scientific communication takes a rhetorical and even critical stance toward the development of scientific communication but much of this research retains its uncritical stance toward a Western viewpoint. For example, in "Reporting the experiment: The changing account of scientific doings in the *Philosophical Transactions of the Royal Society*, 1665-1800, Bazerman (1988) argues that "the experimental report, as any other literary genre, was invented in response to a literary situation and evolved through the needs, conceptions, and creativity of the many authors who took it up" (p.59). By tracing the changing accounts of scientific experimentation and generic features in the *Proceedings*, the first scientific journal in English, over 135 years Bazerman shows how the experiment report emerged as "a way to harness stories of the smaller world of the laboratory to general claims about the regularities of the larger world of nature" (p. 79). Bazerman's work resonates with other historical accounts of scientific communication that all work from a Western, specifically European, standpoint (Fyfe, McDougall-Waters, & Moxham, 2015); Gross, Harmon & Reidy, 2002; Meadows, 1981). Moreover, the genre moves described in seminal texts by Swales (1990) on the research article ("Creating a Research Space") and Hyland (2004) on hedging and boosting as well as the studies of scientific practice, such as Latour and Woolgar's (1979) study of the Saalk Lab and even the rhetoric of science (Ceccarelli, 2013; Gross, 1990) all follow from that history. All of this work is valuable, and I have spent much of my career teaching this work (For example, I appreciate Hamel's [2007] study of the rise of English language dominance in scientific communication.) Yet, I have come to desire a more critical stance toward the development of Western scientific communication. To be clear, I am not saying that we should not be teaching students how to write scientific research articles. What I am saying is that research articles, grants, and proposals are not the only textual practices used in science and that other textual practices can support the learning of scientific communication. The research article and other canonical genres do not represent all of the social actions of scientific work that are possible. A decolonial option invites a

study of scientific communication that includes a range of textual practices, including codexes, textiles, and manifestos, that extend beyond the development of scientific textual practices rooted in modernity. This larger universe of genres with expansive notions of social action and audiences highlights the rhetorical segregation embedded in much of scientific writing, where the “public” is too often assumed to be middle-class, white audiences. It also opens a conversation about non-Western contributions to science as well as forgotten contributions to Western science by marginalized researchers. Scientific communication is not an inevitable or singular way of documenting science.

Second, opening the history of scientific communication to such interrogation cannot be additive. In the past, when I have taught about Henrietta Lacks, for example, such histories of race and racism have never been central in the teaching of scientific communication. But, as Jones and Poe (2021) point out, the concept of race was constructed by science. One cannot teach about Henrietta Lacks simply by teaching about the misconduct related to the use of her genetic material. The construction of Lacks as a Black woman was itself a scientific construction. To see Lacks as a woman created as a Black woman by science, we can then begin to understand how race and racism permeate scientific discourse. By teaching this history in the teaching of scientific communication, we expose the often-subtle ways that scientific communication conflates race and biology in what Jones and Barco Medina (2021) call “bio-racial rhetoric.” In “Teaching Racial Literacy through Language, Health, and the Body: Introducing Bio-racial Rhetorics in the Writing Classroom,” Jones and Barco Medina (2021) define bio-racial rhetorics as

the conflation of race and biology that inevitably forwards the idea that race is somehow biological. . . This race-ancestry fusion, or what we call a bio-racial rhetorical move, forwards the idea that human beings are biologically different from one another based on phenotype or the amount of melanin one has in their skin. (p. 58, 66).

In a corpus analysis of NIH grant project abstracts and full-length journal articles equaling approximately 95,000 words, Jones and Barco Medina split the corpora in two categories: “conflated” and “non-conflated” to “observe what race is doing in the context of bio-racial rhetorics (via the conflated corpus) and the context of social construction (via the non-conflated corpus)” (p. 63). Their analysis illustrates the logics of bio-racial rhetorics in the conflated examples and demonstrates that although scientists often state that race is a social construction, the bio-racial construction of race in science remains prevalent. Jones and Barco Medina (2021) exhort teachers of scientific writing to

“approach medical writing genres as actors—genres that act rhetorically” so that “we may consider how certain colonial agendas and pervasive ways of thinking seep into application” (p. 70-71).

In an effort to address such conflations of race and biology, the American Medical Association is adding a subsection on race and ethnicity to a chapter on inclusive language in the *AMA Manual of Style: A Guide for Authors and Editors*. In this updated guidance, the AMA defines terms such as “race” and “ancestry,” explains concerns related to their use in health care research, provides guidance for reporting race and ethnicity in research articles, and offers guidance for journals and publishers that collect data on editors, authors, and peer reviewers. Clearly, the advice offered by these new guidelines is meant to address the mistaken logics of bio-racial rhetorics—for instance, the guidelines suggest:

Oversimplification of racial dichotomies can be harmful, such as in calculating kidney function, especially with racial inequities in kidney care. In this context, health inequities among populations should be addressed rather than focusing solely on differences in racial categories (eg, Black vs White adults with kidney disease). (Flanigan, Frey, & Christiansen, 2021, “Concerns”)

The AMA’s advice for using inclusive language in writing about race and ethnicity opens possibilities for teaching students about how we talk about people, inequity, and the world around us in scientific research. I find this possibility compelling because it shows that the long-held dogma about objective distance in writing about people-as-data is not scientific communicative practice today; if we are going to write about people, then we need to acknowledge historical legacies that result in unjust outcomes. Or to put it another way: the data does not speak for itself...and neither does history. We need history to speak about data.

Third, the content of scientific communication courses itself cannot fulfill the promise of addressing inequity if the delivery of that content results in silencing and further de-humanization. Through the assignments, classrooms activities, and assessment practices, scientific communication classes such as Advanced Scientific Writing can resist the “ideological induction into dominant norms and values of society, thus helping to maintain the social/racial status quo” (Brandt, 1986, p. 132). Here, decolonial work intersects with antiracist pedagogy. Natasha Jones (2022) captures the imperative of employing antiracist approaches in teaching scientific communication:

It is also important for me to acknowledge the difficulty of “valuing” the utterance of the words “white supremacy.” Most likely those words conjure an immediate and visceral reactions from folks reading this text. Whether this reaction is recoiling in defensiveness, righteous anger, fear or solemn acknowledgment, I assume that it is partially due to those emotionally tethered, reactive

responses that scholars in science communication (and related fields) often refrain from saying these words out loud in academic spaces. Yet the more I research issues of social justice and oppression in scientific and technical communication, the more I am convinced that, without a direct engagement with white supremacist ideals and their impact, we are poorly equipped to do the type of work that we claim to want to do as scholars . . . (p. 61)

Acknowledging white supremacy in conventional assignments, classrooms activities, and assessment practices is not always immediately obvious. Allowing students to draw on their own funds of knowledge (Gonzalez, Moll, & Amanti, 2005) moves the notion of research and audiences for scientific research beyond the walls of academia to the community and opens science and scientific communication to a range of community-based and citizen science possibilities (Ali, Harris, & LaLonde, 2020; Reid, 2019). As decolonial scholar de Sousa Santos (2008) writes, “postabyssal scientific knowledge is always cknowledge emerging from processes of knowing with rather than knowing about” (p. 147). Such prospects offer the possibility of asking, who embodies scientific practice? What is scientific research? To whom are we speaking? and How might we reexamine the impact of scientific research? (Falconer, 2019; Hoang, 2021).

In addition to expanding the genres and audiences for scientific writing assignments in courses like Advanced Scientific Writing, projects like citational analysis can include opportunities for critique. Let me offer one example from a current collaboration with a researcher from Emory University (Gwendolynne Reid) and a researcher from Northeastern University (Cherice Escobar Jones): in this project we traced the citational paths between the *Journal of the American Medical Association (JAMA)* and the *Journal of the National Medical Association (JNMA)*. *JNMA* is a publication of the National Medical Association which was established in 1895 following the long-standing exclusion of Black medical professionals from the American Medical Association. It was not until 2008 that the American Medical Association apologized to members of the National Medical Association for a century of exclusion. Despite that apology and a 2021 publication entitled *Advancing Health Equity: Guide to Language, Narrative and Concepts*² from the American Medical Association and the Association of American Medical Colleges Center for Health Justice, exclusion continues. Our analysis shows that *JAMA* authors rarely cite publications from *JNMA*, even when writing about issues of racial injustice in healthcare (Reid, Jones, & Poe, 2022). As a result, entire areas of research on intersections of healthcare and police brutality, for example, are cut out of the one of the highest impact publications in the health profession. Such citational research projects highlight the ways inequity functions in citational practice. Such projects also demonstrate that scientific knowledge-

making through “normal science” is not neutral, but rather an ongoing process of historical exclusion (Kuhn, 1962).

This work of unlearning what and how to teach scientific communication extends to linguistics. Courses like Advanced Scientific Writing must make multilingualism the norm in learning scientific communication. Most speakers of English in the world are not native speakers of English and most practicing scientists are not native English speaker either. Most of the lab groups that I worked with for years at MIT were global enterprises with researchers who grew up speaking multiple languages. They drew on what Gumperz (1964) called their “verbal repertoires” to conduct science (p. 137)—i.e., a range of linguistic resources that allowed them to *do* science. Today, sociolinguistics such as Canagarajah (2009) and Pennycook (2010) take the notion of linguistic resources one step further through mobility. Researchers like the ones who I worked with at MIT are highly mobile. There is no language A in context A and language B in context B. Instead, scientists mix and mesh linguistic practices with multimodal representations to do research. As a result, they employ a number of communicative interactional strategies and co-construct inter-subjective norms for communication (Canagarajah, 2009).

While centering multilingualism and employing translingual pedagogies does not displace the imperative for scientists to publish in English (Curry & Lillis, 2004, 2007) through colonial legacies, it shifts the conversation away from deficit discourses surrounding fluency or appropriacy (Hanauer & Englander, 2013; Hanauer, Sheridan & Englander, 2019; Zhang-Wu, 2021). Instead of teaching students about verb endings (something that a simple grammar check algorithm can address) and counting grammatical errors, I’d rather teach them about communicative strategies for working in diverse lab settings, how to make arguments with data, and coherence. Likewise, I am not interested in making divisions between “appropriate” ways of writing at work versus at home. Appropriacy arguments, as Lippi-Green (1997) writes, “rationalize the process by which languages of peripheralized or stigmatized groups are simultaneously acknowledged and rejected” (p. 107). There is no reason why scientific practice cannot be conducted in any dialect.

Conversations about linguistic justice are not just about expanding linguistic repertoires of publishing but also about acknowledging the psychological toll of publishing in English for multilingual scientists. Research, for instance, by Hanauer, Sheridan, and Englander (2019) has shown that “multilingual scientists perceived English science writing as 24% more difficult, generating 21% more anxiety and 11% less satisfaction than science writing using their L1 (p. 138).

Likewise, as Corcoran (2019) points out, it is critical to acknowledge the legacies of linguistic bias in concerns about the peer review process:

Frequently described as “bias” against scholars visible via their names, institutional affiliation, and/or “nonstandard” English(es), such claims often emanate from plurilingual EAL scientists working in disciplines such as the health and life sciences, where peer review is single rather than double blind, exposing the identity and university affiliation of the author or authors to the editor(s) and/or reviewer(s). (p. 541)

Corcoran (2019) goes on to argue that “there is an ethical imperative for science writing gatekeepers (e.g., journal editors), literacy brokers (e.g., disciplinary experts, writing instructors, editors, etc.), and university policy makers to actively address plurilingual EAL scientists’ perceptions of inequity” (p. 539). By inviting students into these discussions, they will not need to unlearn ideologies of fluency when they are reviewers, editors, and lab directors.

My learning to unlearn in the teaching of scientific writing does not conclude with curricular changes; it must also include the textual artifacts of the classroom. Classroom ecologies are spaces in which genres and bodies circulate. Graphenreed (2021) provides a compelling explanation of how genres operate in classroom ecologies:

In *Genre and the Invention of the Writer* (2003), Anis Bawarshi theorizes the course syllabus as a “master genre” that constructs and constitutes the classroom space, because it “locates teacher and students within a set of desires, commitments, relations, and subject positions . . . [and] manages the set of genres that will enable its users to enact these desires, relations, and subjectivities” (117-118). Based on Bawarshi’s definition, we might conceive of all classroom behaviors and materials as power-laden, contractual and able to either infringe upon / enhance the agency of individuals in the space. Simply, classroom genres/instructor practices are coercive, or operative, genres—that is, they organize, construct, and discipline classroom behavior. If leveraged toward anti-racist or non-violent ends, the syllabus and other classroom genres are useful textual agents by which we can begin to enact change.

There has been a lot written lately on how to make syllabi more accessible and on the use of community agreements. Graphenreed also advocates for what she calls “commitment statements”—i.e., statements on a class syllabus that explicitly state a teacher’s position about the value of multilingualism, antiracism, and other topics that students might be afraid to explicitly ask about.

For the purposes of this article, I want to end this section with a discussion about processes and social actions of evaluation. So much of the literature in Writing Studies on evaluation attempts to

identify types of evaluation (e.g., placement testing, feedback on papers, etc.), sites of evaluation (e.g., classroom versus program assessment), or audiences of evaluation (e.g., students, teachers, accreditors). In my experience, very little of this work engages with the social action of evaluation. Yes, assessment genres suggest certain identities and actions to be performed from assessment uptakes. I have long been interested in the misfires and resistances that happen in those uptakes, for instance, when students assume racialized subject positions of raters (Poe, 2005) and, currently, when students work across a series of assessment uptakes across time. Seeing assessment as a form of social action—not as a set of best practices—helps me unlearn what I have been taught about evaluating student performances.

In many ways, learning to unlearn grading practices is easy. Everyone hates to grade student writing, so it is easy to surrender to alternative grading methods, such as contract grading (See the 2020 *Journal of Writing Assessment* special issue), spec grading (Nilson, 2015), and ungrading (Blum, 2020). But as Craig (2021) points out, the mere adoption of grading contracts or spec grading or any other type of assessment practice alone does not solve inequity. Carillo (2021) argues that labor-based grading contracts “enforce a White, middle-class, and most important . . . normative, ableist, and neurotypical conception of labor” (p. 11). As the director of multiple writing programs, I have witnessed the myriad reasons why faculty fail students with traditional grading and contract grading. Lack of attendance and failure to submit a final portfolio on time—two features that are found on many grading contracts—are common reasons to fail students. Ultimately, I am not opposed to contract grading, but I am opposed to those who argue that it is the only alternative to traditional grading and thus *the* way to grade students. Instead, we can rely on border thinking to reexamine the social actions of evaluation to suggest new options for grading and responding to student writing.

In teaching scientific communication, I have used a variety of approaches to grading over the years. Mainly, I am interested in giving students options to get the grade they want in a class. Articulating a construct, such as “what is a poster presentation,” is important because writing just is not about labor. There are things to learn, discuss, resist, and alter in designing poster presentations because the genre itself is not stable. Posters tend to have similar social actions for scientific audiences, but posters can look a lot of different ways. Additionally, scientific audiences are not the only audiences for scientific information, and posters can have different social actions for different audiences (To be clear, I do not merely suggest “converting” a poster from a “technical” audience to a “general” audience.) In my current practice, I am exploring how to open up this range of audiences and actions, so that students and I can talk about the construct of posters and weave that discussion

through peer review, self-assessment, teacher assessment, and even community assessment. Giving options moves the conversation away from one pathway to demonstrate understanding of a construct and moves students to see how we invent genres and are invented by them.

To those ends, I have learned to unlearn traditional rubrics with pre-defined processes where the student is presented the rubric at the beginning of an assignment and then assessed against the rubric when an assignment is submitted. Instead, I like to work with students through assignment tasks, provide options for fulfilling the task, and then develop ways that we want feedback on the task—for example, do we want to use professional peer review guidelines, develop some traits for use within the class, try a dimension-based rubric in which traits are posed as questions and readers “explain in context their own habitus, the divergent assumptions they make as they make them in judgments” (Inoue, 2019, p. 392), or try another option? Through this process, we talk about how we will act toward each other in doing that work. Activities such as community agreements work well to clarify classroom relationships as well as our responsibilities to upholding those relationships.

In the end, evaluation whether it be attendance policies, response to student writing, or grading is signaled through the myriad genres that circulate in the classroom. Those genres organize, construct, and discipline classroom behavior and the notion of performance. It is simply not enough to invite students into grading processes or offer alternatives to existing grading practices if the very assumptions about standards informing those expectations are not also open for critique.

Institutional Structures

In the critical pedagogy model of late 1990s teaching, I was taught to awaken students to the inequities of dominant social structures. My first-year writing courses used readers that included selected texts from writers delineating the axes of inequity. Writers such as Michel Foucault, June Jordan, Gloria Anzaldua, and Adrienne Rich were canonical. While critical pedagogy (and later, culturally-responsive pedagogy) invited a greater range of author representation, genre production, learning methods, and range of critique, it did not do anything about processes such as placement testing or general education requirements. Those processes can also be unlearned.

In this final section, I want to move the discussion about learning to unlearn from the classroom to the program and university levels, for as much as I would like to limit my thinking of decolonial options to the classroom, courses like ENGL 3307 Advanced Scientific Writing do not work in isolation. Advanced Scientific Writing is part of a network of courses that have been developed and delivered to meet a general education requirement based on the perceived need to teach college-

level literacy through writing and writing-intensive courses. Such networks of courses are laden with historical legacies that shape “where classes are held, course caps, when courses are offered, how much money will be budgeted toward ongoing teaching/training initiatives, whether or not there is a university-wide interest in supporting anti-racist or decolonizing pedagogies, how textbook selection or open access materials are or are not supported, and the list goes on” (Carter, Matzke, & Vidrine-Isbell, forthcoming). A decolonial perspective on these institutional structures does not “remove the colonial legacy completely but, instead, acknowledge[s] and challenge[s] its effects” (Ruiz & Arellano, 2019, p. 147).

My colleagues and I have written at length about the inequities of placement testing for first-year writing (Inoue & Poe, 2012; Poe, Elliot, Cogan, & Nurudeen, 2014). Because courses like Advanced Scientific Writing are required for all students, including transfer students, the issues of placement testing would seem to be avoided. Yet there are other structural inequities. While there are potentially many, I discuss five inequities of Advanced Scientific Writing through institutional processes.

First, while departments outside of English rarely “own” advanced writing courses, they do dictate which versions of advanced writing students in their college may enroll in. Some departments in the College of Science, for example, require students to take Advanced Scientific Writing while other departments require students to take Advanced Technical Communication. Students must file a petition if they wish to take a non-sanctioned “flavor” of advanced writing. The petitioning process is meant to control the movement of students into pre-determined advanced writing courses, rather than giving students the option to learn about other disciplinary ways of writing. Here, the temporal imperative to “funnel” students into disciplinary norms later in their academic careers is clear. What might students learn by being offered other options? For a student who wants to be an OB/GYN, I wonder if Advanced Scientific Writing is the most useful course for her. Would she be better served by Advanced Writing in the Health Sciences or perhaps Advanced Business Writing where she could write about the business of providing health care to Black women? All these options could lead to compelling learning outcomes for this student, especially if she is asked to articulate a rationale for a particular option in relation to her academic and professional goals.

Second, the fluctuations of admissions enrollments lead to other inequities in “hurdle” courses—i.e., courses that students are required to take in order to graduate but can only take after a specific number of credits—like advanced writing. Because of enrollment bulges over the last several years, advanced writing courses are always over-enrolled. Because so many students are shut out of the

course every year, there is now an enrollment backlog, meaning that many students do not take Advanced Scientific Writing until their final year of college or even the summer after they have officially graduated (final courses may be taken in the first half of the summer after graduation). Because of the enrollment backlog, students now expect to take Advanced Scientific Writing late in their academic careers, and academic advisors now advise students accordingly. No one asks about other options for Advanced Scientific Writing, such as why the class cannot be offered sooner in students' careers or how the curriculum might be offered in other ways so that students are not paying for a summer course after they graduate.

Third, the university now advertises that students can graduate in four years, even with taking a co-op semester. Such a feat is impossible unless students enter with advanced placement credit and take online courses while also completing a co-op. For students who come to college with lots of advanced credit, they can focus on their co-op experience. For other students, it means balancing full-time work and taking online classes at night. In fact, some departments now expect students to take Advanced Scientific Writing online while they are on co-op because the writing program regularly offers advanced writing courses online. That means that students who have low-paid co-ops do not have the flexibility to take on additional work during their co-op semester if they are also expected to take classes. Any model where students are expected to work full-time and take classes is bound to be stressful and most disadvantage students who need to work additional hours. Why can't a student get a waiver for Advanced Scientific Writing if she is also working in a community health center where she is learning about the textual practices of community healthcare?

Fourth, because Advanced Scientific Writing is a general education course, students must pass the course with a grade of C or higher. That policy was decided through a Faculty Senate resolution almost 20 years ago: "Completion of Freshman Writing and Middler Year Writing will require a C or better. Middler Year Writing should be taken after completing 56 semester hours (80 QH)" (Northeastern Faculty Senate, 2002). That resolution was not uncontested, but the motion ultimately passed and remains a permanent part of administrative documents. Under normal circumstances, a Faculty Senate resolution from 20 years ago for a required minimum grade in a required course would gather little attention. However, during the pandemic, the university turned to pass/fail grading, and the issue of "lowest satisfactory grade" came into question. A "pass" in a pass/fail grading system is a grade of D or higher. The new grading scheme, then, created a crisis about the C or better policy. Thus, the pandemic exposed the historical construction—and arbitrariness—of minimum grading standards.

Finally, according to the university's general education requirements, advanced writing courses like Advanced Scientific Writing fulfill the following learning goals:

By the end of the course, students should be able to

- Adapt writing for multiple academic, professional, and public occasions and audiences.
- Display familiarity with the writing conventions of genres in an academic field or profession.
- Identify credible, relevant sources and engage and cite them appropriately in their written work.
- Draft, revise, and edit their writing using feedback from readers (Northeastern University, "Requirements," 2021)

While I can certainly teach a decolonial option for Advanced Scientific Writing with the stated university learning goals, the naming of that work sends an important message about the university's commitment to addressing inequity (think Natasha Jones's critique that I cited earlier in this article.) Too often, however, university requirements to assess learning goals forestalls this potential. The favored language of institutional assessment offices that assessment is meant to "improve teaching and learning" is never meant to expose colonial tendencies. Instead, it is a signal to accreditors that the university is documenting "core" (read; sanctioned) learning is happening. More to the point, such assessment of learning never demonstrates where border learning—i.e., where options to "core" learning are happening—and whose knowledges are missing. Program assessment is never meant to expose; it is meant to confirm.

An Option for Academic Writing

Through counterstory Ruiz and Arellano (2019) capture how colonialism lurks in conventional approaches to teaching scientific writing.

Local setting: A writing program faculty meeting on promoting diversity in the classroom held at a Hispanic Serving Institution in California

Global setting: The United States of America where Latinxs are the largest minority.

Discursive exchange:

Science Writing Professor: "I don't teach content, so I don't have to worry about diversity in my classroom."

Latina Composition Professor: "Wait, you don't teach content? If you don't teach content, what do you teach?"

Science Writing Professor: "I teach students how to write strong, stylistically sound science writing."

Latina Composition Professor: "Well, where did those concepts come from? Who defines them?"

Everyone in the room. Awkward silence.... (p. 141)

One might argue that few teachers of scientific writing are as naïve as the Science Writing Professor in this counterstory. Nonetheless, this counterstory highlights how colonial epistemological foundations remain submerged beneath discourses about academic writing. The last two years have demonstrated that those colonial legacies are not as inevitable or sacrosanct as we would have perceived them prior to the pandemic. What we teach, how we teach and assess, and how academic writing courses work within institutional structures are all open for questioning today. If we are to address inequity in the teaching and assessment of academic writing in new ways, then we need options to acknowledge and challenge the effects of coloniality in the teaching and assessment of academic writing (Ruiz & Arellano, 2019, p. 147). Learning to unlearn colonial legacies is a process, an unwinding of everyday logics in the teaching, assessment, and administration of writing courses like Advanced Scientific Writing. It is a pluriversality that I embrace.

Endnotes

1. Thank you to editors Sean Zwagerman and Kimberley Mitchell for encouraging me to think more about the question of memory and forgetting. There are various forms of forgetting—accidental forgetting and intentional forgetting—as well as forgetting brought on by injury and disease. In every case, forgetting is not complete. My father, even in advanced stages of Alzheimer's still remembered my voice, even if he did not recognize me visually anymore. And like other patients with dementia, he created new memories—memories of events that did not actually occur or what might be called "newmembering" (not hallucinating). When my husband had a stroke, he temporarily forgot how to write, although he could still text me emojis from his hospital bed. When he did learn to write again, he remembered genre conventions long before he could tackle concepts like coherence. It is such examples of forgetting and memory that expose how we take for granted well-worn channels of everyday thinking.

2. In *Advancing Health Equity: Guide to Language, Narrative and Concepts* (2021), the authors write: Health equity work requires an acknowledgment and reconsideration of previously taken for granted beliefs about health (and how it is produced), the health care and public health systems (and how they work), and society (and how it is set up to advantage some and disadvantage

others). Central to this work is a consideration of our language, and the narratives that shape our thinking. As we explore in this guide, dominant narratives (also called malignant narratives), particularly those about “race,” individualism and meritocracy, as well as narratives surrounding medicine itself, limit our understanding of the root causes of health inequities. Dominant narratives create harm, undermining public health and the advancement of health equity; they must be named, disrupted and corrected. (p. 5)

Even in healthcare work, there is possibility in learning to unlearn.

References

- ACT. (2021). Summary findings: Survey of higher education enrollment and admissions officers. https://pages2.act.org/rs/035-EZR-959/images/210212_HEDSurveySummaryFindings_EXTERNALUSE.pdf
- Ali, Z. M., Harris, V. H., & LaLonde, R. L. (2020). Beyond green chemistry: Teaching social justice in organic chemistry. *Journal of Chemical Education*, 97(11), 3984–3991. <https://doi.org/10.1021/acs.jchemed.9b00715>
- American Medical Association and Association of American Medical Colleges. (2021). Advancing health equity: Guide on language, narrative and concepts. ama-assn.org/equity-guide.
- Baca, D. & García, R. eds. (2019). *Rhetorics Elsewhere and Otherwise: Contested Modernities, Decolonial Visions*. CCCC Studies in Writing and Rhetoric.
- Baker-Bell, A. (2020). *Linguistic justice: Black language, literacy, identity, and pedagogy*. NCTE.
- Bazerman, C. (1988). *Shaping written knowledge: The genre and activity of the experimental article in science*. University of Wisconsin Press.
- Blum, S. (Ed.) *Ungrading: Why rating students undermines learning (and what to do instead)*. West Virginia University Press.
- Brandt, G. L. (1986). *The realization of anti-racist teaching*. Routledge.
- Carnegie (2021). Global protest tracker. Carnegie Endowment for International Peace. https://carnegieendowment.org/publications/interactive/protest-tracker?gclid=CjwKCAiAp8iMBhAqEiwAJb94zyK2LRLESV93YResklzoSxsiD6B1t2XZLFfK4LbXbsidaZIEf5ye1RoCFpwQAvD_BwE
- Carillo, E. (2021). *The hidden inequities in labor-based contract grading*. Utah State University Press.
- Carter, S. (2021). Your grading contract ain't it. *WPA: Writing Program Administration*, 44(3), 145-146, http://wpacouncil.org/aws/CWPA/asset_manager/get_file/604397?ver=1.

- Carter, G., Matzke, A., & Vidrine-Isbell, B. (forthcoming). *Network theories, social justice, and supersystems in writing program administration*.
- Canagarajah, S. (2009). Multilingual strategies of negotiating English: From conversation to writing. *JAC*, 29(1/2), 17-48.
- Ceccarelli, L. (2013). *On the frontier of science: An American rhetoric of exploration and exploitation*. Michigan State University Press.
- Cintrón, R., Corcoran, C., & Bleeden, D. (2021). Thinking with/not with theories of decolonization. *College English*, 84(1), 138-158.
- Corcoran, J. (2019). Addressing the “bias gap”: A research-driven argument for critical support of plurilingual scientists’ research Writing. *Written Communication*, 36(4), 538-577.
<https://doi.org/10.1177/0741088319861648>
- Curriculum Associates. (2021). Understanding Student Learning Insights from Fall 2021.
<https://www.curriculumassociates.com/-/media/mainsite/files/i-ready/iready-understanding-student-learning-paper-fall-results-2021.pdf>
- Curry, M. J., & Lillis, T. (2004). Multilingual scholars and the imperative to publish in English: Negotiating interests, demands, and rewards. *TESOL Quarterly*, 38, 663-688.
- Curry, M. J., & Lillis, T. (2007). The dominance of English in global scholarly publishing. *International Higher Education*, 46, 6-7.
- Cushman, E., Jackson, R., Nichols, A., Rivard, C., Moulder, A., Murdock, D., Grant, D. M., & Adams, H. B. (2019). Decolonizing projects: Creating pluriversal possibilities in rhetoric. *Rhetoric Review*, 38(1), 1-22.
- Cushman, E., Baca, D., & García, R. (2021). Delinking: Toward pluriversal rhetorics. *College English*, 84(1), 7-32.
- de Sousa Santos, B. (2018). *The end of the cognitive empire*. Duke University Press.
- Else, H. (2020) ‘How a torrent of COVID science changed research publishing – in seven charts’, *Nature*, www.nature.com/articles/d41586-020-03564-y (Accessed 15 February 2021)
- Falconer, H. M. (2019). “I think when I speak, I don’t sound like that”: The influence of social positioning on rhetorical skill development in science. *Written Communication*, 36(1), 9-37.
<https://doi.org/10.1177/0741088318804819>
- Flanagin A., Frey T., Christiansen S.L. (2021). *AMA Manual of Style Committee*. Updated Guidance on the Reporting of Race and Ethnicity in Medical and Science Journals. *JAMA*, 326(7), 621-627.
[doi:10.1001/jama.2021.13304](https://doi.org/10.1001/jama.2021.13304)

- Fyfe, A., McDougall-Waters, J., & Moxham, N. (2015). 350 years of scientific periodicals. *Notes Rec.* 69, 227–239. <http://doi.org/10.1098/rsnr.2015.0036>
- García, R. & Baca, D. (Eds.) (2019). *Rhetorics elsewhere and otherwise: Contested modernities, decolonial visions*. Conference on College Composition and Communication, National Council of Teachers of English.
- Gonzalez, N., Moll, L.C., & Amanti, C. (2005). *Funds of knowledge: Theorizing practices in households, communities, and classrooms*. Routledge.
- Government of Canada (2021). Addressing anti-Asian racism. <https://www.canada.ca/en/canadian-heritage/campaigns/asian-heritage-month/anti-asian-racism.html>
- Graphenreed, T. (2021, April 7-10). Toward language diversity and antiracist course design. [presentation]. Conference on College Composition and Communication. CCCC Virtual Annual Convention.
- Gross, A. (1990). *Rhetoric of science*. Harvard University Press.
- Gross, A. G., Harmon, J., & Reidy, M. (2002). *Communicating science: The scientific article from the 17th century to the present*. Oxford University Press.
- Gumperz, J. J. (1964). Linguistic and social interaction in two communities. *American Anthropologist*, 66(6), 137–153. <http://www.jstor.org/stable/668168>
- Hamel, R. E. (2007). The dominance of English in the international scientific periodical literature and the future of language use in science. *AILA Review*, 20, 53–71. <https://doi.org/10.1075/aila.20.06ham>
- Hanauer, D. & Englander, K. (2013). *Writing science in a second language*. Parlor Press.
- Hanauer, D. I., Sheridan, C. L., & Englander, K. (2019). Linguistic injustice in the writing of research articles in English as a second language: Data from Taiwanese and Mexican researchers. *Written Communication*, 36(1), 136–154. <https://doi.org/10.1177/0741088318804821>
- Harmon, J. & Gross, A. (2010). *The craft of scientific communication*. University of Chicago Press.
- Hoang, H. (2021, February 19). Why race matters when writing in the disciplines. [keynote presentation]. Racism in the margins. UCONN. Storrs, CT.
- Hoffman, A. (2019). *Scientific writing and communication: Papers, proposals, and presentations*. (4th ed.) Oxford University Press
- Hyland, K. (2004). *Disciplinary discourses: Social interactions in academic writing*. University of Michigan Press.

- Inoue, A. & Poe, M. (2012). Racial formations in two writing assessments: Revisiting White and Thomas' findings on the English placement test after thirty years. In N. Elliot and L. Perelman (Eds.), *Writing assessment in the 21st century: Essays in honor of Edward M. White*. (pp. 343-361). Hampton Press.
- Inoue, A. B. (2019). Classroom writing assessment as an antiracist practice: Confronting white supremacy in the judgments of language. *Pedagogy*, (19) 3, 373-404.
- Jones, C. E. & Poe, M. (2021 April 23). How can we prepare students for a changing world (of science)? [workshop]. Butte College, Oroville, CA, United States.
- Jones, C. E., & Medina, G. B. (2021). Teaching racial literacy through language, health, and the body: Introducing bio-racial rhetorics in the writing classroom. *College English*, 84(1), 58-77.
- Jones, N. (forthcoming). My testimony: Black feminist thought in scientific communication. In C. Hanganu-Bresch, S. Maci, M. Zerbe, & G. Cutrufello (Eds.), *Routledge handbook of scientific communication*. Routledge.
- Kane, M. T. (2013). Validating the interpretation and uses of test scores. *Journal of Educational Measurement*, 50, 1-73.
- Kishimoto, K. (2018). Anti-racist pedagogy: from faculty's self-reflection to organizing within and beyond the classroom. *Race Ethnicity and Education*, 21(4), 540-554. DOI: 10.1080/13613324.2016.1248824
- Kuhn, T. (1962). *The structure of scientific revolutions*. University of Chicago Press.
- Latour, B. & Woolgar, S. (1979). *Laboratory life: The construction of scientific facts*. Princeton University Press.
- Lee, J. (2020). Mental health effects of school closures during COVID-19. *The Lancet Child & Adolescent Health*, 4(6), 421. [https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642\(20\)30109-7/fulltext](https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642(20)30109-7/fulltext)
- Lippi-Green, R. (1997). *English with an accent: Language, ideology and discrimination in the United States*. Routledge.
- Maldonado-Torres, N. (2007). On the coloniality of being: Contributions to the development of a concept. *Cultural Studies*, 21(2-3), 240-270. <https://doi.org/10.1080/09502380601162548>
- Meadows, A.J. (1981). *Development of science publishing in Europe*. Elsevier Science Ltd.
- Mignolo, W. D. (2007). Delinking: The rhetoric of modernity, the logic of coloniality and the grammar of de-coloniality. *Cultural Studies*, 21(2-3), 449-514. <https://doi.org/10.1080/09502380601162647>

- Mignolo, W. (2011). *The darker side of Western modernity: Global futures, decolonial options*. Duke University Press.
- Mignolo, W. (2017). Interview – Walter Mignolo/Part 2: Key Concepts. <https://www.e-ir.info/2017/01/21/interview-walter-mignolopart-2-key-concepts/>
- Mignolo, W., & Escobar, A. (2010). *Globalization and the decolonial option*. Routledge.
- Mignolo, W., & Walsh, C. (2018). *On decoloniality: Concepts, analytics, praxis*. Duke University Press.
- Nastal, J., Poe, M. & Toth, C. (forthcoming). *Writing placement in two-year colleges: The pursuit of equity in postsecondary education*. WAC Clearinghouse.
- Nilson, L.B. (2015). *Specifications grading: restoring rigor, motivating students, and saving faculty time*. Stylus.
- Northeastern Faculty Senate. (2002). Minutes, 2001-2002. Faculty Senate, 15 April 2002
- Northeastern University. (2021). Writing-intensive courses. Academic Catalog 2021-2022. <https://catalog.northeastern.edu/undergraduate/university-academics/nupath/writing-intensive/>
- Northeastern University. (2021). Requirements. <https://www.northeastern.edu/core/requirements/writing-across-audiences-and-genres/>
- Oxford English Dictionary. (2021). Oxford University Press.
- Pennycook, A. (2010). *Language as a local practice*. Routledge.
- Penrose, A. M. & Katz, S. (2005). *Writing in the sciences: Exploring conventions of scientific discourse*. (3rd ed.). Longman.
- Pew Research Center. (2021, July 1). Many black and Asian Americans say they have experienced discrimination amid the COVID-19 outbreak. <https://www.pewresearch.org/social-trends/2020/07/01/many-black-and-asian-americans-say-they-have-experienced-discrimination-amid-the-covid-19-outbreak/>
- Poe, M., Elliot, N., Cogan, J., & Nurudeen, T. (2014). The legal and the local: Using disparate impact analysis to understand the consequences of writing assessment. *College Composition and Communication*, 65(5), 588-611.
- Randall, J. (2021). "Color-Neutral" is not a thing: Redefining construct definition and representation through a justice-oriented critical antiracist lens. *Educational Measurement: Issues and Practice*, 40(4), 82-90. emip.12429. <https://doi.org/10.1111/emip.12429>

- Randall, J., Slomp, D., Poe, M., & Oliveri, M. E. (2022). Disrupting white supremacy in assessment: Toward a justice-oriented, antiracist validity framework. *Education Assessment*, <https://doi.org/10.1080/10627197.2022.2042682>
- Reid, G. (2019). Compressing, expanding, and attending to scientific meaning: Writing the semiotic hybrid of science for professional and citizen scientists. *Written Communication*, 36(1), 68–98. <https://doi.org/10.1177/0741088318809361>
- Reid, G., Jones, C. E., & Poe, M. (2022, June 7). Citational racism: How leading medical journals reproduce segregation in American medical knowledge. Bill of Health. <https://blog.petrieflom.law.harvard.edu/>
- Ruiz, I. (2022). Desconocimiento: A process of epistemological unknowing through rhetorical Nepantla. In J. R. Daniel, K. Malcolm, and C. Rai (Eds.), *Writing across difference: Theory and intervention*. (pp. 343-361). Utah State University Press.
- Ruiz, I. & Arellano, S. (2019). La cultura nos cura: Reclaiming decolonial epistemologies through medicinal history and quilting as method. In R. García and D. Baca (Eds.), *Rhetorics elsewhere and otherwise: Contested modernities, decolonial visions*. (pp. 141-168). Conference on College Composition and Communication, National Council of Teachers of English.
- Swales, J. (1990). *Genre analysis: English in academic and research settings*. Cambridge University Press.
- Tlostanova, M. & Mignolo, W. (2012). *Learning to unlearn: Decolonial reflections from Eurasia and the Americas*. Ohio State University Press.
- U.S. Department of Education (2021). Education in a pandemic: The disparate impacts of COVID-19 on America's students. Office for Civil Rights. <https://www2.ed.gov/about/offices/list/ocr/docs/20210608-impacts-of-covid19.pdf>
- World Bank. (2020). The COVID-19 pandemic: Shocks to education and policy responses. <https://openknowledge.worldbank.org/handle/10986/33696>
- World Health Organization (2022). WHO coronavirus (COVID-19) dashboard. <https://covid19.who.int/>
- Yeyati, E. L., & Filippini, F. (2021) *Social and economic impact of COVID-19*. Brookings Global Working Paper #158.
- Young, I. M. (2013). *Responsibility for justice*. New York: Oxford University Press.
- Zhang-Wu, Q. (2021). (Re)Imagining translanguaging as a verb to tear down the English-only wall: "Monolingual" students as multilingual writers. *College English*, 84(1), 121-137.