# 

## Game Over: The Perils of Framing Feminist Game Design Pedagogy as Repair versus Transformation

Amy Corron

Rensselaer Polytechnic Institute

corroa@rpi.edu

Rebecca Rouse

University of Skövde

Rebecca.Rouse@his.se

### Abstract

Drawing on the experience of a multiyear research project bringing transformative pedagogies to game design education, we provide a critical reflection on the lack of sustainability of the project. Upon examination, we see that some reasons behind this perceived failure are due to institutional systems of power that seek to neutralize transformative feminist pedagogy as performative repair, resulting in the maintenance of existing curricula. Instead of fully engaging with transformative pedagogies, these teaching and learning methods are used as tools to provide a cursory fulfillment of the deep need for social justice education in games. We examine the ways in which structures and systems continually devalue and de-resource pedagogical work, specifically pedagogies that are centered in feminist, anti-racist, and critical approaches, as well as our own complicity within these oppressive structures at times. We draw connections with relevant disciplinary perspectives on higher education, and conclude by offering a framework for understanding the pitfalls that can hamper work with transformative pedagogical aims, characterized by the types of labor used to maintain the status quo, as well as a set of recommendations for moving beyond the frame of repair to sustainably and radically disrupt dominant pedagogies in games and related disciplines.

### Keywords

transformative pedagogy, STEM, feminism, social justice, higher education

### Introduction

In this paper, we share reflections on the long-term outcomes of a multiyear project developing transformative pedagogy in undergraduate games education. The focus of our work was to bring critical feminist perspectives to games via dialogic methods, bridging theory and practice. Looking back, we find we were not always engaged in the project we thought we were engaged in. While some outcomes were meaningful and positive, these were mostly on the individual level.1 Even though our project was successful for individuals in our course, and as a learning experience for ourselves, organizationally and culturally our project could be characterized as a failure in terms of its lack of sustainability and transformative change.

We examine the role of institutional and disciplinary structures in this inability to create sustainable transformational pedagogical change. Our aim here is not to signal blame, nor shift accountability away from ourselves (as institutions are made of people, and we are actors within them) but rather to become more aware of how we operated in ways we did not intend, by taking part in structures we are not fully at home within. As two younger white women working in a mostly white male environment, with different levels of employment security and power, and other social identity differences, we were both part of our institution and apart from it. Some specifics of our respective positions help illustrate the sometimes fraught nature of our participation within our institution:2

Amy Corron is a mid-level student affairs professional working in leadership development and has a background in social justice education, specializing in intergroup dialogue. She has her master’s degree in student affairs in higher education, and has been working at Rensselaer Polytechnic Institute for seven years as a staff member. Her current role straddles the line of student affairs and academic affairs, as she predominantly focuses on teaching leadership and team development to undergraduate students in the School of Engineering, as well as creating and providing training opportunities for faculty and staff on effective facilitation and teaching. Amy has been a leader of diversity, equity, and inclusion efforts at Rensselaer throughout her time at the institute, and is utilized as a resource for student, faculty, and staff development in these areas.

Rebecca Rouse is a mid-career faculty member, currently at the University of Skövde, Sweden. Previously, she worked at Rensselaer Polytechnic Institute as an assistant professor in the GSAS: Games and Simulations Arts and Sciences program for six years. Rebecca’s PhD is in digital media, and she has an interdisciplinary background in theater, interactive media design, games, and media studies. Her research focuses on using new and old technologies for new modes of storytelling and critical design methods. As an out member of the queer community, she has participated in many diversity and inclusion activities and initiatives throughout her career, including work with the Rensselaer LGBTQ Task Force for six years, for two of which she served as a co-chair of the group.

In what follows, we begin by introducing our project on radical pedagogy for games education, then move on to explore the institutional contexts we worked within, including the multiple contrasting ontologies of higher education that were in play. Ultimately, we demonstrate that we were not always doing the work we thought we were doing as we utilized repair strategies embedded within our existing environment versus acting transformatively. We identify a framework for understanding the range of challenges associated with transformative pedagogy work as characterized by the types of labor used to maintain the status quo, and conclude with suggestions for the future to break the cycle of repair and maintenance within the utilization of social justice education. Together, the above reflections and analyses provide new understanding about how rhetorics of change, progress, repair, and maintenance operate within particular ontologies of higher education to inform educators who might aim to advance similar initiatives.

### The Project

Since January 2018, we attempted to transform games education via the values and teachings of social justice. We embarked on this project without any official invitation or tasking to do so, out of our own desires to work with one another and our shared dedication to social justice education and transformative pedagogy. We met while working together on the Rensselaer LGBTQ Task Force, a working group that advocated for inclusion and support of LGBTQ+ students, faculty, and staff. Through training and programs with the task force, Amy shared her expertise in intergroup dialogue and Rebecca was interested in developing ways to use dialogic pedagogy in her classes, in particular to address problems identified in the required first-year course the History and Culture of Games(HCG).3

Using dialogic pedagogy and critical design methods in HCG, we invited students to consider how games and game histories have influenced our identities, how we perceive others, and think about ways to disrupt harmful systems of marginalization in games. The multiyear pedagogical research project was a success in terms of demonstrating students’ greater achievement towards course learning outcomes, increased abilities to communicate across difference, and enhanced design work that was less derivative of commercial games (Rouse and Corron 2020). It was similarly a successful learning experience for us as instructors, as we continuously reflected on teaching methods, our ability to foster vulnerable dialogue, and our capacity to create an inclusive classroom community where students felt comfortable taking risks in their learning.

As we were never tasked or invited by our supervisors to do this work, it may be no surprise that it was never properly resourced.4 While our choice to initiate and develop the HCG course in this manner without official sanction had disadvantages, creating and perpetuating a structure in which we were not fully recognized or compensated for our labor, we believe we would not have been given clearance to do this project if we had asked permission.5 Reflecting on the experience now, there was always the disjunction present in our project between our desires and actions in moving forward to create transformative course experiences, yet doing it in a way that would not be sustained. We worked at the borders of institutional systems and structures versus fully within them, but we also did not work to dismantle these structures to create new spaces for pedagogical innovation.

We continuously shared the positive outcomes of our use of dialogic pedagogy in games education with colleagues, and those in the games and intergroup dialogue academic communities.6 Our aim was to sustain the inclusion of social justice education within STEM beyond the footprint of our course and advocate for transformational change within our institution and professional disciplines. The response from colleagues was positive, with many espousing a desire for inclusion of social justice education in our STEM curriculum. The success of our course was included in a variety of internal institutional reports and presentations (often unbeknownst to us until after the fact) for both academic units and student affairs, to illustrate growth and development towards diversity, equity, and inclusion efforts. However, there continued to be no specific allocation of resources for our work, and while our work was continually made visible by institutional leadership, it seemed this visibility functioned more as a checkbox than as a way to advocate for broader campus engagement with the stated institutional diversity and inclusion goals and requirements. This checkbox approach could be interpreted as an institutional valuation of radical pedagogy as a form of performative repair, thus actually constraining the work in order to maintain existing curricula. As a result, even with the goodwill of many fellow faculty members and staff, the enactment of the desire to include more social justice education in STEM curricula that has occurred in the wake of our project has happened in fits and starts, and has not always been in alignment with our dialogic and transformative pedagogy approach.7

Regardless, while there was a generally positive response to the work we were doing in our course, there was no effort by the Games program’s leadership to amplify and grow the inclusion of dialogic pedagogy to other Games courses, despite the program’s recent launch of both master’s and doctoral degree programs in Critical Game Design. Undergraduate Games education was, once again, protected from the inclusion of more critical materials and approaches, and maintained at the status quo. Indeed, the visibility of the work we were doing in a single course could be used by others to justify their own inaction, citing our work as evidence of “enough” inclusion of critical methods and approaches in the undergraduate program.

Outside of the Games program, however, there were additional positive reactions to the success of the course, and the beginnings of a potential cultural shift to encourage the adoption of more radical and transformational teaching methods. The provost’s office sponsored an optional diversity workshop open to all faculty and staff led by an outside facilitator. This workshop began to lay a foundation for incorporating inclusive teaching methods. As the desire to learn more about teaching methods grew, this desire led to additional training programs facilitated by internal Rensselaer faculty and staff (including Amy and Rebecca) on inclusive pedagogy and managing participation in the classroom, as well as training opportunities from external groups.8 Further collaborations coming out of the dialogue training included Amy assisting a faculty member in implementing dialogue in a first-year seminar course focused on scientific misconduct and ethics. This course was able to work through the first few stages of dialogue before the course moved to asynchronous remote instruction due to the COVID-19 pandemic in the spring of 2020. Further progress within the last year has stalled due to limited staffing resources and increased teaching loads. As we look to the future, dialogic teaching methods are now a focus for the School of Humanities, Arts, and Social Sciences, with intergroup dialogue courses being planned for the spring and summer of 2022. There is hope for an institutional focus on creating an intergroup dialogue program in collaboration across multiple departments and divisions.

In reviewing the development and discontinuation of our course, and the impacts of the following connected events and initiatives discussed above, we see themes of repair and maintenance in how we have approached transformative pedagogy for STEM. Both institutionally and at the individual level (here we include ourselves) we find espoused values of social justice, and a desire by many to further advance our pedagogy and curriculum to critically engage students in issues of power, privilege, and oppression. This project has largely been framed, however, as a response to something we need to repair or fix—holes to fill in course content, teaching methods that need to be improved, diversification of faculty to be hired, and so on. Each workshop and training has been aimed to accomplish some increment of this repair work, by highlighting the absences of social justice in our STEM education, and by trying to equip faculty with new skills and teaching methods to engage in more radical pedagogy in their individual classroom.

Even with an overall intention to enact radical change, by approaching this issue with a framework of repair, we see now that we actually contributed to systems of maintenance. As we continued to confine ourselves and work within the structures and systems that were embedded within the institution and higher education overall, we were unable to transform the curricula to be fully inclusive of social justice. Sarah Sharma has warned against rhetorics of repair, and has invited feminists and other radical actors to reclaim “the perspective of the Broken Machine” (2020, 174). She describes feminists as “the faulty aberration in a long line of otherwise efficient technologies that have been designed for caretaking and reciprocating love in a male-dominated world,” and suggests that because feminists and other “nonconforming subjects” are already characterized as “obsolete technology that isn’t working properly,” there is an opportunity to reclaim this subject position and use it to enact transformation (2020, 173). Given this status of identification with the broken machine itself, Sharma encourages us “to co-opt the already attributed status of the Broken Machine and continue this work of not working well” in the name of revealing systems of power and oppression in new ways (2020, 174). These new perspectives on the often hidden systems and struggles of those both within and apart from institutions can provide insights useful in moving forward, not with repair, but with transformation. In the following section, we examine the specifics of our institutional context and related ontologies of higher education to provide a framework for understanding the challenges faced by those seeking to transform existing systems as characterized by the types of labor used to maintain institutional stasis.

### Institutions and Ontologies

#### Institutional Context and the Labors of Stasis

Since this paper examines a particular type of institutional stasis, we will share some of the particularities of our institution. Many of these particularities are similar to those of other institutions of higher education both in the United States and around the world. Rensselaer Polytechnic Institute, a private college,9 articulates its focus as “addressing the global challenges facing the 21st century—to change lives, to advance society, and to change the world,” (Rensselaer Polytechnic Institute, 2014) with a trademarked slogan “Why not change the world?” This institutional perspective is further elaborated in a lengthy poem, unattributed to any particular author but rather to the institution itself, which hangs framed in several buildings on campus (see Figure 1).

The photograph shows a poem hanging on a beige wall in a brown wood frame, behind glass. The poem is printed on red paper in white text and set in a white matte. The poem is untitled and unattributed, and the text of the poem reads: 

    “The New Polytechnic
    Is the place for those who LOVE change.
    We instigate and incubate it. 
    Quintessentially curious, 
    We embrace the race
    To make our world better in every way. 
    
    We believe innovation and discovery thrive
    In a caring community 
    Where head meets heart …
    Science meets art …
    And collaboration lights the way. 
    
    And we believe in thinking big—
    From our upstate envlave, we connect
    To a global network of support and entrepreneurship.
    Because big change is what the world needs. 
    From energy to infrastructure, 
    From food security and fighting disease, 
    To national defense.
    
    People come here hard-wired for the havoc of change. 
    They know it isn’t easy—
    That theories can fail and world changing can feel futile. 
    But that’s the calm before the brilliant storm.
    The breath you take before you break through.
    
    Small change comes from asking “Why?”
    Changing THE WORLD comes from asking “Why not?”
    That’s the question we ask everyone, 
    From freshmen to faculty …
    It’s the question that fuels us to find THE NEXT NEW…
    The question we ask YOU.
    
    Why not change the world?”
    
    At the bottom of the text the Rensselaer school seal and logo is printed, also in white on red background, with the trademarked school slogan text: why not change the world?

Figure 1. The Rensselaer poem (2018). Photo by Rebecca Rouse.

The built environment of the campus includes a range of structures both new and historical, in a variety of architectural styles but with a thread of Colonial Revival brick throughout, and is dotted by small grass quadrangles. The campus sits atop a steep hill above the adjacent town of Troy, New York, accessible by foot only via a set of steep early twentieth-century white marble stairs known as The Approach. These physical characteristics are a manifestation of the institution’s identity as a place of rigor and meritocracy: those who can survive the climb are worthy of being let in. At the center of campus stands a Gothic Revival chapel that has been converted to house the IT center for the college, while the building across from the chapel, a brutalist mid-century concrete structure, houses the library and archives. The spiritual center for the campus, a chapel and cultural center, lies at the edge of campus and is technically operated by an unaffiliated non-profit. The campus includes no affinity centers or identity-based resource centers. As a polytechnic institute, STEM disciplines are emphasized, and housed within the Schools of Engineering and Science, with most other disciplines collected together in a School of Humanities, Arts, and Social Sciences, which had a history as a service teaching unit but today includes graduate programs and research faculty.

Many of these qualities and aesthetics are not unique to Rensselaer. These are structural, cultural markers of many STEM-oriented institutions of higher education in the landscape of today’s corporatized universities—a landscape in which an institution can write its own poetry as an ode to the values of technologically centered disruption and the fetishization of change itself. Even as these institutions espouse values of change and transformation, issuing five- and ten-year plans printed in glossy brochures that assure board members and investors the institution will produce things like “transformative impact,” these institutions’ main impacts are often to maintain a profound stasis in terms of economic, intellectual, and power relations both on campus and in the world. Sara Ahmed has described the encounter of this stasis as a kind of “brick wall” (2016, 96). Staying still, however, is far from easy. Significant labor of a particular kind, enacted by particular kinds of people, is necessary to maintain this stasis. We characterize this labor as *Revolving Doors*; *Steep Pathways*; and *Planned Performativity*.

##### Revolving Doors

Revolving doors refers to the continual leaving and sometimes replacement of particular people and positions—usually those who are engaged in diversity work or who through their mere presence constitute diversity by their existence in the non-diverse environment, as Ahmed discusses (2021). For example, colleagues of color often rotate in and out of a predominantly white institution. These colleagues are often the people tasked with doing diversity work, both explicitly and implicitly. The movement of this continually revolving door enables the institution to stand still in terms of advancement of diversity and inclusion initiatives. Colleagues are not in place in positions long enough to effect any meaningful change. The function of the revolving door is institutional stasis.

##### Steep Pathways

The rhetoric of the climb is powerfully materialized by lack of physically accessible spaces on a campus. The paths that are available are well worn by a particular type of person, but ironically the grand entrance into a campus atop a steep hill actually functions as an exit, showing others *out* who cannot get *in,* in a manner similar to the dual function of “diversity doors” theorized by Ahmed (2021). Steep pathways materially influence the presence of people with physical disabilities on a campus. There are very few visibly disabled people on campus, because there are very few disabled people visible on campus. The need for accessible pathways is never perceived, because the need is never allowed to surface or rise to the top. Commonly repeated stories shared by those who hold marginalized identities yet do survive within the institution help to suppress stories of struggle. These dominant narratives minimize oppression through perspectives such as “It was hard for me, so it should be hard for you too” and “this is just how the world is.” These narratives naturalize the experience of oppression for particular types of people, and similarly naturalize the relative lack of obstacles for others. Much of this naturalization is achieved via the rhetoric of meritocracy, but also through the strategic deployment of equality as an institute goal, as opposed to equity.10 The hard-won actions of the few community members who are visibly disabled and do succeed within the institution are co-opted by the institution to keep itself in stasis; the presence of the few who do reach the summit can be interpreted as evidence that the summit may be reached. Similar logics are applied to justify the relative absence of people of color and women on the campus.

##### Planned Performativity

The activity of performance planning—in this case, a yearly activity in which all units on the campus supply evidence of achievement and advocate for funding for initiatives that align with “institute-wide highest priorities”—is another type of labor for maintaining stasis. To obtain money for anything new, goals must be articulated in the language of the old (the institute’s “priorities”). Even when these priorities may explicitly include critical thinking, community engagement, or diversity and inclusion, it often ends up that the very act of using these terms functions to foreclose potential meaningful progress or action on these foci. The act of planning for future work becomes the future work itself, which is reduced to a performative display of the espoused values and goals, as opposed to work toward the goals themselves.

The particularities of the language employed in performance planning is important to examine. Phrases such as “Strength through Diversity” are used, but in the absence of clear discussion of who is being strengthened, why they are in need of strengthening, by what means this strengthening will occur, and what precisely is meant by diversity. *Diversity* and *inclusion* are used interchangeably, without definition, or even as a two-part catchphrase. These catchphrases are taken up and repeated again and again, in university planning documents, policy documents, and in speech by administrators. Yet, by maintaining a lack of specificity in the meaning of these phrases, the language takes on other meanings in practice, and operates in ways that may seem counterintuitive. In practice, diversity and inclusion can come to mean the maintenance of a *lack* of diversity and inclusion. Working from within the institution, we are advised to take on the language of the institution, to yoke it to our own radical project, as a strategy to win resources for our project. But when the functional definitions of terms are actually incommensurable, the slipperiness of this language can work to slip a radical project under the rug. Ironically, this disappearance of radical work is sometimes achieved by making the work hypervisible.

It is in this third category of maintenance activity, planned performativity, in which we find our own unwitting complicity, in hindsight. In seeking to sustain our multiyear research project beyond our own labor and capacities, we proposed the allocation of future resources to our project via the performance planning process. But, by participating in this process, our work was transformed into performative work, functioning to absolve others of meaningful action, and actually curtailing our real work. Ahmed has discussed this kind of sleight of hand in the uneasy relations between institutions and diversity work as follows: “the tools you introduce to address a problem can be used as indicators that a problem has been addressed....A program developed in response to a problem is assumed to resolve a problem” (2016, 110). The shifting location of the problem becomes informative to trace. We sought to address a problem in STEM pedagogy, a problem shared by our institution. In addressing the problem through our research in our games classroom, we met with success, which we sought to sustain. In working to grow the impact and reach of our work, we found the “brick wall” Ahmed discusses. Interestingly, it was not always made of the “bricks'' we might have expected. Some of the resistance came from faculty who were very open to the work we were doing but expressed fear at joining us. Some fear was more oppositional in nature. These fears were expressed in a range of ways:

* Fear that students do not have the capability to engage difficult issues. This fear is wrapped up in the perception of students’ continual exhaustion due to the rigor11 demanded in their technical study, such that there is no energy left for social justice components in education. Social justice components are understood as extraneous and separate from technical education.
* Fear of making a mistake, causing harm, or looking foolish as a teacher. Dominant pedagogical approaches on the campus still emphasize the faculty member as expert, both explicitly (through the use of degree and rank titles, hierarchies of power, and conditions of employment), and implicitly (through structures such as the dominance of lecture-based courses).
* Fear of lack of institutional support, given the history of the uses of language around diversity and inclusion initiatives, and the history of failed progression of these initiatives.
* Fear of punitive action, such as bad student course evaluations, poor performance evaluations, or even getting fired. In an environment with increasing numbers of contingent contracts and fewer tenure-track and tenured positions, employment precarity takes on a larger role in faculty decision making. Additionally, metrics used for faculty evaluation include no mechanism for rewarding social justice work, so in an official capacity the work can have at best a neutral effect on a faculty member’s evaluation.
* Fear of exhaustion. In a culture of the valorization of overwork, many faculty are already exhausted and are wary of taking on additional work.
* Fear of critical pedagogy, and critical theory at large. This fear was expressed in a less well-intentioned manner, both by students and faculty who forcefully shared their complete opposition to teaching and learning about games from any critical perspective, with particular vitriol expressed toward the application of a feminist perspective.

Learning about the many layers of fear standing between intention and action for faculty members indicated to us a larger culture of fear on the campus. For all the fetishization of change in the institutional and disciplinary value systems, faculty rightly perceived that not all kinds of change would be welcome. Indeed, the types of change that were held up as valued were usually those identified with individual actors, perpetuating the myth that “one person can change a culture.”12 The institution’s selective obsession with a particular type of change is directly related to its identity as a STEM institution with a strong research focus. This obsession with change is bound up with an underlying ontology of higher education shared by many similar institutions in the US.

#### Ontologies of Higher Education: Worldbuilding vs. Human Development

##### Worldbuilding in STEM

Within this STEM- and research-focused environment, the dominant ontology of higher education is less learning-focused than it is both revenue- and change-focused. The change described here is not the slowly developed change in perspective that arises from deep contemplation and dialogue, or in complex coalition, but rather a corporatized branding of change as disruptive and enacted by individuals “moving fast and breaking things” (Taplin 2017). This emphasis on speed and disruption conceptualizes change as a desirable energy that is generative (in spite of so-called collateral destruction13) and capable of producing new and better worlds. In other words, a worldbuilding ethos underlies the dominant STEM ontology of higher education. While some particulars of the corporate-university entanglement are new and specific to our current moment, such as the primacy of the Big Tech sector, the seeds of these relationships and the values that underlie them can be seen in the earliest days of the nineteenth-century US university and are threaded throughout the development of both engineering and computer science (CS) education. This heritage is important for us to examine, to understand the structural inheritance we receive in games, a discipline closely linked to both CS and engineering.

Rensselaer was established as a result of a major worldbuilding project, in response to the development of the Erie Canal.14 Both the canal and the school opened in the same year, 1825, both born out of a nineteenth-century vision of technologically enabled progress.15 And yet, this ethos of progress, speed, and commerce, which we might understand as the nineteenth-century version of “moving fast and breaking things” was not without cost. As Carol Sheriff (1997) has discussed, when one examines impacts of the canal on the human level, as opposed to the worldbuilding level, complexity emerges, making it more difficult to judge the sum outcome of the canal project.16 It is within this context that US engineering education emerges, with close ties to industrial and national worldbuilding projects, and less focused on the human. The history of engineering education has been well chronicled by scholars such as Matthew Wisnioski, who has documented the history of the many attempts at reform throughout the twentieth century, along with the dubious success of these efforts.17

The history of CS education is also important to examine due to its strong links with games education. CS has a different and more recent origin story in the US, with World War II as a key point in the development of the discipline. Following the war, as government and industry sought to develop a commercial sector for declassified wartime computing technologies, one avenue created early on was through the university. Jointly subsidized by government and industry, computers were placed at universities in the 1950s to support research in physics, mathematics, and engineering. The presence of the machines necessitated the development of trained staff to run them, and over the course of the next decade and a half eventually led to the establishment of CS as its own discipline. The first undergraduate curriculum was developed in 1965 by an Association for Computing Machinery (ACM) curriculum committee,18 and there is no evidence of any inclusion of courses on ethics or the impacts and role of computers in culture and society in the initial years of CS curriculum (Atchison 1985), perhaps a bold move since computers had been developed as military technology. This erasure has proven difficult to correct, in spite of the many attempts that have been made to remake, fix, or refashion CS curriculum to incorporate vital humanistic, critical perspectives (Goldweber et al. 1997). While more advances have been made at the K-12 level over the past two decades (Ryoo 2019), much remains to be done, particularly at the university level.19

These long histories of engineering and CS education are relevant to our discussion, as key components of games’ disciplinary inheritance. The ontology of higher education embedded in both engineering and CS is also shared in games, and notably at odds with conceptions of higher education found in other disciplines, such as student affairs, social justice education, and pedagogy. While we broadly characterize the engineering, CS, and games ontology of higher education as one of “worldbuilding,” the student affairs, social justice education, and pedagogy ontologies of higher education are based in “human development.”

##### Human Development in Student Affairs

Student affairs, originally identified as “student personnel services,” originated in the 1930s and 1940s through the established interest to promote the holistic development of students as people, attending to developmental areas beyond just the intellectual (American Council on Education 1937). After the Civil War, there was a shift for higher education institutions in the US from focusing on individual student development and towards scientific research and knowledge creation. Pressure grew for faculty to contribute to this growth of knowledge, leading to a focus on their areas of studies and neglecting holistic student development. This change highlighted the need to appoint specific university staff members to be responsible for student developmental needs, as well as new educational functions that entered the institutional context as universities continued to grow and develop (American Council on Education 1937).

Student personnel officers originally helped relieve faculty with specific issues, but their responsibilities grew rapidly extending to include psychological, vocational, and financial counseling, graduate placement, health, extracurricular and social programs, and more. Their focus was predominantly the human development aspects of higher education as universities continued to pursue outcomes related to student physical, social, emotional, spiritual, and intellectual development in order to ensure graduates were prepared to be responsible participants in American democracy (American Council on Education 1949).20 As student personnel services expanded, university staff structures began to include a centralized system of administrators dedicated to student development needs. This system has grown into what we consider to be student affairs today.21

Since the initial foundations of student affairs, the profession continues to focus on holistic student development, and now extends further into promoting student learning and advancement within researched-based young adult developmental frameworks. Additionally, assisting students to develop a sense of agency has been a consistent value of the profession with a focus on creating opportunities for students to develop self-awareness and self-direction, and to play an active role in their own development (Evans and Reason 2001). Since the 1950s, there has been encouragement to partner with academic faculty to create student learning experiences across all parts of higher education.22 Through a shift away from positivist epistemological views of learning, student affairs emphasizes the importance of personal meaning-making and student experience within transformative learning processes.23 While student affairs has grown from a framework of personnel services into a field of scholar practitioners and graduate-level trained educators, student affairs professionals remain committed to facilitating holistic student development and providing integrated learning experiences that allow students to engage in self-discovery and transformative development.

With the rapidly changing demographics in higher education within the last few decades, there has been a call for student affairs to adopt activism as part of its core professional functions. This includes advocating for marginalized students and viewing professional roles with a critical lens to act as change agents within the university (Evans and Reason 2001). As the profession continues to develop to meet student needs, equity, inclusion, and social justice education have come into the fold of student affairs practice.24 Social justice education, itself, is also deeply rooted in human development ontologies, with the main goal of enabling individuals to develop the critical tools necessary to understand issues of power and oppression. Social justice education has a long history reaching back to the nineteenth century and extending to today, often led by Black feminist educators as researched by Stephanie Evans (2008) and developed by noted scholar bell hooks (1994, 2003, 2010). Social justice pedagogy aims to assist individuals in developing their own awareness and knowledge to examine issues of justice, and also to connect reflection and analysis to action in order to interrupt and change oppressive patterns and behaviors within themselves and the communities that they are a part of (Adams 2016).25 Additionally, social justice education pedagogy specifically acknowledges the emotional, as well as cognitive, components of learning and encourages participants to reach new levels of self-awareness as they work through more challenging levels of complexity and uncomfortable emotions. Utilizing participants’ lived experiences and the intergroup dynamics in the learning environment also helps facilitate discussions of social justice content. Therefore, inclusive classroom communities with clear norms and guidelines that allow participants to be vulnerable and take risks are essential (Adams 2016). The classroom community foundation also can create meaningful relationships, leading to further collaboration and action towards social change. Overall, social justice education focuses on the personal development of individuals' understanding of themselves, as well as systems of marginalization, how they interact within those systems, and the ways they can enact changes towards social justice. It is deeply rooted within different frameworks of self-awareness and human development, and certainly aims to recognize and celebrate the humanity of all participants.

Looking back, we can see our project was enmeshed within these structures and histories of higher education, with our work taking place in tension between worldbuilding and human development ontologies. Games as a discipline has a strong CS and engineering heritage, and is therefore more “at home” in the “worldbuilding” ontology of higher education.26 However, we rooted our pedagogy within social justice education principles and frameworks, specifically intergroup dialogue facilitation, with the goal of creating transformative learning experiences that would foster social change within and through games. Much of our work was also aligned with student affairs’ focus on holistic student development, and encouraging the development of self-awareness and personal meaning making. Working within and through this tension, often unrecognized by us at the time, created an unsustainable project that remained rooted in mechanisms of repair and maintenance as opposed to transformation. In the concluding section, we share specific lessons learned as useful strategies for continuing the work of transforming curriculum in higher education towards a meaningful incorporation of social justice pedagogy, especially in STEM contexts such as games.

### Lessons Learned

Reflecting on our experiences, we can see our story is not particular to our institution but shares many commonalities with others who have attempted similar work in higher education. For example, Chen, Mejia, and Breslin share that the outcome of their work to incorporate critical race theory in an undergraduate engineering course “drifted toward *appeasing the masses rather than challenging the status quo*—not because we don’t want to challenge students but to protect our own vulnerabilities” (2019, 335). In their case, the work of diversity fell to diverse people, faculty who were women and/or people of color, but without any additional support or institutional change to protect against the already vulnerable position of these faculty in the STEM classroom. This lack of support ultimately led to maintenance of the curricular status quo.

Writing here is an act of persistence and resistance, and provides us with a platform for taking voice for ourselves when we have not been heard elsewhere, or not heard as we intended. Beyond the reflective identification of our own perceived failures in creating sustainable transformational change, the identification of structural and institutional pitfalls can also be seen as a successful outcome for this type of project, revealing the brokenness of the machine, as Sharma (2020) describes when previously this awareness had not been articulated or acknowledged in a clear manner. While we did not meet the transformative institutional outcomes we were originally working toward, revealing the systemic brokenness of higher education we had been working within could perhaps be an even greater success for this pedagogical project. We are able to move forward with the abilities to recognize and avoid mechanisms of repair and maintenance. We can provide a set of recommendations, targeted toward ourselves as much as anyone, for ways in which future work may be differently configured to increase the chance for transformative outcomes as opposed to maintenance.

* Look out for the institutional language of performance planning/planned performativity. Tying radical work to these catchphrases in the hopes of receiving funding or other resources to sustain the work may have the opposite effect, due to the incommensurability in your usage of the words and the institutional meanings.
* Be wary of being offered hypervisibility for your project without accompanying funding or resources needed to sustain it. This hypervisibility and oversharing of your work can have the effect of absolving others of the need to act, and ultimately result in the disappearance of your work.
* It may be ideal to involve a broad coalition of faculty from the ground up with this type of project. There are very serious difficulties that stand in the way of this goal, including a lack of institutional support and reward structure for faculty who pursue this type of work, as well as difficulties in recruiting faculty to join this type of project due to the many different types of fear that may impede them moving from intention to action.
* Team teaching structures may be best for this type of work, not only because of the need for multipartial facilitation as opposed to advocacy-based approaches (Fisher and Petryk 2017) but also because teaching teams made of faculty who do not share all aspects of social identity may provide the project with a better chance at being taken seriously, and therefore sustained. A pairing that includes a faculty member with “diverse” identities could be paired with a faculty member with a more privileged identity (i.e., a straight cis white man). These collaborations would need to be carefully developed, however, so that work including less visible forms like emotional labor are shared as much as possible in equitable ways between the teaching team members.

Finally, we suggest the need for better integration of student affairs faculty and academic faculty. This integration could provide opportunity for more attention to student affairs as a discipline itself, more attention to the scholarship of student affairs, and social justice pedagogy.

The ongoing containment of who engages with issues of critical perspectives, holistic development, and social justice education serves to maintain departmental faculty members’ distance from these subjects within their own disciplines. This separation is easy for students to perceive and interpret as a value judgment regarding the worth of critical perspectives and social justice education. A more integrated approach, in which student affairs staff were hired directly into departments, and supported on an equal power level with departmental faculty, or in which existing staff were given permission to teach credit-bearing courses, would go a long way to solving these problems. Additionally, resourcing sustained collaboration between student affairs staff and faculty across campus would help achieve campus-wide learning goals and create a holistic student experience that fosters student development across all areas of the university.

In the meantime, even though our History and Culture of Games course will not continue, we each work to carry this research forward in different ways. Amy continues to promote dialogue, collaborate with other faculty by including dialogue in their courses, and provide training to faculty and staff on dialogue facilitation. She also continues to develop capacity-building experiences for faculty, staff, and graduate students to learn about effective facilitation and teaching methods, focusing particularly on inclusive teaching skills and creating transformative classroom communities. No longer at Rensselaer, Rebecca has moved to a position at University of Skövde, Sweden, where she has collaborated on the development of a critical Games User Experience master’s program, new additions to the undergraduate games program, and faculty training in critical pedagogies.

Even though the lack of support for sustaining our History and Culture of Games pedagogical research has been disappointing, we recognize that the task of working toward liberation is never finished, and the pace of progress is often slow. In Bobbie Harro’s discussion of her model of the Cycle of Liberation, she notes, “It is important to note that one can enter the Cycle at any point, through slow evolution or a critical incident, and will repeat or recycle many times in the process. There is no specific beginning or end point, just as one is never ‘done’ working to end oppression” (2018, 628). Returning to the Rensselaer poem, we see a deep irony in the externalized focus on changing a world “out there” that seems to be shared by many institutions of higher education and the STEM disciplines in particular. The change in the poem is identified with “thinking big” and is focused on everything from “energy to infrastructure / from food security and fighting disease / to national defense.” This type of “thinking big” is remarkably small. These world-changing efforts often are enacted through strong-arm tactics, and meet with only limited success. This perspective on change, however, does fit smoothly with the worldbuilding aesthetics of many games, which abstract material elements of society, often reducing humans to pawns or erasing them completely.27 The ethos of dialogue, on the other hand, is truly transformative, and while it is also concerned with changing the world at a core level, the focus is intensely centered on the human. Dialogue begins not with change to be enacted “out there,” but within the self in deep exchange with others, in sharp contrast to the performative gestures of change valorized in our institution’s poetry.

### Notes

1 We have previously written about our ongoing dialogic pedagogy project in games education in Rouse and Corron (2020), which reviews the evolution of the ways we used dialogic pedagogy in games education, the results we saw from students throughout the process, and a toolkit for other educators and practitioners who are also looking to use dialogic pedagogy.

2 In sharing these details, we aim to make clearer the ways in which we operated both against our institutional norms and in complicity within them. Joseph Dumit has discussed the importance of attending to the particularities of situated knowledge: “Non-innocence and complicity are necessary if one is to confront world histories as histories that one is a part of and accountable to. Without these stances, one easily falls into some incarnation of a god-trick, claiming to see the world from nowhere in particular” (2014, 348).

3 Prior to our collaboration on HCG we had worked together fruitfully to incorporate initial steps toward dialogic pedagogy in another first-year course at Rensselaer called World’s Fairs: Technology, Design, and Society.

4 We had demonstrated that the work could be done on a volunteer basis, and this may have helped provide evidence for deciding not to provide resources for our work. To share some additional context, at the start of our work together on the HCG course, Amy had just transitioned to a teaching role at Rensselaer, and initially began adding dialogue into Rebecca’s course as a volunteer workshop facilitator. Over several iterations of the course, we continued to work together, and this collaboration grew into a fully shared co-facilitation of the course. Even as Amy took on this increased role, she was never officially listed as a co-instructor, and her work was officially framed as volunteering.

5 This was our belief based on shared experience with the nature of institutional bureaucracy and the limitations preventing staff from teaching outside very specific contexts, which we had encountered in our prior collaboration as a roadblock.

6 We presented our research findings at conferences, including Engage for Change (Corron and Rouse 2017), Different Games (Rouse and Corron 2018), and Intergroup Dialogue (Corron and Rouse 2019).

7 For example, we invited male games faculty and department leadership to observe our dialogue class, and while they appreciated the content, they questioned why we were using a multipartial facilitation approach versus advocacy facilitation methods in the inclusion of social justice education in the course (Fisher and Petryk 2017).One colleague seemed befuddled by our dialogic approach, because he found success in simply telling his students what is right and wrong, in terms of labeling certain game designs as racist or sexist. These comments demonstrated a lack of understanding of dialogic pedagogy in aiming to share power in the classroom and have students feel open to sharing their own life experiences in order to increase understanding across difference. This reaction likely also reflects the unexamined privilege and power our colleagues hold as male instructors in the games classroom. Given their social identity alignment with dominant power holders in games, and the majority of students in the classroom, our male colleagues do probably have some degree of success with more advocacy-based teaching methods, which we knew from experience were not productive for us to employ.

8 In terms of the implementation of dialogue specifically, roughly thirty faculty from multiple schools and staff from the Student Life division were also invited to participate in a multiday training on intergroup dialogue and facilitation from the University of Michigan’s Program on Intergroup Relations in the summer of 2019. The training was collaborative and highly engaging, yet there were few inroads made on future plans and sustainable change to curriculum and programs. There were multiple times during the workshop when participants highlighted the limitations and bureaucratic red tape (funding resources, curriculum change approvals, abilities to co-facilitate with staff, confidence in facilitation abilities etc.) that they feared would curtail their abilities to fully implement dialogue. Participants left focusing more on smaller scale changes that they could make in their spheres of influence, such as individual classrooms and departments, but without a plan for larger structural support to advance the work in community. Further training with the University of Michigan occurred in the summer of 2021, leading to plans of intergroup dialogue courses in the spring and summer of 2022.

9 Founded in 1824, Rensselaer was the first engineering school “to be established in any English-speaking country,” a fact displayed on the institution’s “About” page online. Other “Quick Facts” presented on the website include Rensselaer’s acquisition of “one of the most powerful university-based supercomputers in the world,” the institution’s high ranking as a research university, and listing as a top-ten college “where students go on to earn the most money.” (Rensselaer Polytechnic Institute, n.d.)

10 Indeed, a long history of the institution as a punishingly difficult place can be observed in the reflections of former student Washington Roebling, the engineer who built the Brooklyn Bridge, who studied at Rensselaer in the 1850s. Roebling wrote, “Rensselaer was the most heart breaking, soul grinding, system crushing institution in the whole world” (Wagner 2017, 75).

11 This notion of rigor is a key part of STEM disciplinary identity, and is understood both as necessary and as a mark of prestige. Rigor here is rooted in rhetorics of meritocracy, and often functions as a gatekeeper to prevent “others” from entry or success within STEM disciplines. See Donna Riley (2017) for an analysis of the uses of rigor in engineering education in particular.

12 Indeed, this was a comment from an upper-level administrator in support of our research, meant as encouragement to us. This notion of social change as initiated by a single individual, or even “star system” of individuals, stands in contrast with research on how social change actually functions. As sociologist Bobbie Harro (2018) has described, liberatory social change happens via complex coalitions, over longer periods of time.

13 See Nassim Parvin and Anne Pollock (2020) for an in-depth discussion and critique of the framing of these destructive outcomes as unintended consequences.

14 Founders Stephen Van Rensselaer and Amos Eaton met while working to survey the land for the site of the canal in 1820 (see McAllister 1941). The canal was built by engineers without formal education, or education they had received abroad in European countries such as Germany, thus revealing the need for the development of US civil engineering education.

15 While the development of the canal had controversial, the waterway’s impact was significant. Not only did the canal enable an increase in shipping of agricultural goods from the Midwest to the northeast within the US, but by the 1850s the canal was also a key factor in the increased export of goods such as corn to Britain from the US, and influential in Britain’s shift away from agricultural production into fully fledged Industrial Revolution (see Bernstein 2005).

16 For example, Sheriff points out one of the “perils of progress” was the large presence of children in the workforce that supported the canal, a quarter of which depended on the exploitive labor of boys aged six through twelve. The boys’ labor was seasonal, low-wage, took place in harsh and dangerous conditions, precluded their attendance at school thus curtailing their education, and exposed them to the seedy underbelly of canal commerce including criminal activity (Sheriff 1997).Additionally, as Laurence Hauptman (2001) has described, the development of the Erie Canal was a key move in the dispossession of the Haudenosaunee (Iroquois Confederacy), and had terrible environmental and cultural impacts that are ongoing.

17 Wisnioski (2009) examines, for example, a 1918 report that was the first review of US engineering education, and called for more integration of humanities and social science in engineering curricula in order to develop a more well-rounded engineering student. Wisnioski also chronicles the many attempts at rupture of the military-industrial complex from within engineering research and education, particularly during the 1960s and 1970s, but notes that “It remains to be seen, however, whether these efforts represented cracks in an exaggerated ethos of ‘total control’ or whether they were minor knots—perhaps even refinements‚in the evolution of ‘The System’” (2003, 328). In other words, the project to reform engineering education in more humanistic, critical modes has been ongoing for over one hundred years (since 1918 in the US, at least) and has yet to yield any decisive advance.

18 This curriculum development work was carried out at the IBM corporate campus in Poughkeepsie, New York, not far from the first lock of the Erie Canal. The history of this curriculum development process is described in detail by William Atchison (1985).

19 Sepehr Vakil’s 2018 paper on a justice-centered approach to CS education makes many incisive and thoughtfully articulated arguments and concrete recommendations for how to advance the cause of equity in CS pedagogy, rightfully pointing out a key failing of ethics in CS education today as the individualistic framing that relegates issues of morality in CS to personal responsibility, rendering complex histories, power structures, and continued legacies of violence and oppression invisible and therefore unexamined. But, given the long legacy of stasis in CS education, it is difficult to predict the future impact of the many proposed radical pedagogies put forward by Vakil and others, including Malazita and Restar (2019) and Ko et al. (2020).

20 Personnel programs continued to develop post–World War II to emphasize the importance of learning outside the classroom in areas of student orientation, educational advising, residential life, sense of belonging, emotional intelligence, student activities, career advising, ethical and spiritual advising, and overall promoting student development towards individuality and a sense of responsibility (American Council on Education 1949).

21 Interestingly, even in the initial development of student affairs when higher education was predominantly only accessible to white men, there was a desire to have a diversity of staff identities and professional backgrounds and approaches in order to best serve a wide variety of students and their individual needs.

22 For more on the move to partner with faculty in creating student learning experiences, see Lloyd-Jones and Smith (1954); Brown (1972); National Association of Student Personnel Administrators (1987); Calhoun (1996); Potter et al. (1998). In more recent years, this push has extended to the promotion of establishing integrated transformative learning experiences, seamlessly combining both academic learning and student development, that are centered on the whole student and responsive to their unique developmental needs (Keeling 2004).

23 The profession also identifies that it is impossible to separate learning, development, and context, and therefore advocates for integrating learning opportunities across the institution with clearly defined institutional learning goals and outcomes that apply to all areas of the campus experience. Collaboration and powerful faculty partnerships remain integral to achieving these campus-wide learning goals, as well strong assessment processes to measure student learning and development (Keeling 2006).

24 The two overarching professional associations for student affairs, American College Personnel Association (ACPA) and the National Association of Student Personnel Administrators (NASPA), jointly drafted “Professional Competency Areas for Student Affairs Practitioners” in 2010 as a foundational reference guide to establish the main competency areas of the profession, and assist professionals in assessing their development within the competencies at the levels of “Basic,” “Intermediate,” and “Advanced.” The competency areas include historical pillars of the profession, such as “Advising and Helping” and “Student Learning and Development,” among others. “Equity, Diversity, and Inclusion” is also a main competency, and includes “the knowledge, skills, and attitudes needed to create learning environments enriched with diverse views and people” (American College Personnel Association and National Association of Student Personnel Administrators 2010). This competency was renamed “Social Justice and Inclusion” in 2015 to highlight a shift from awareness of diversity to a more active orientation that aligns itself to the research and practice of social justice as an ongoing process and goal. The overall description of this competency area has similarly expanded in alignment with definitions of social justice, to now include “the knowledge, skills, and dispositions needed to create learning environments that foster equitable participation for all groups while seeking to address and acknowledge issues of oppression, privilege, and power” (American College Personnel Association and National Association of Student Personnel Administrators 2015). The foundational, intermediate, and advanced outcomes also more explicitly connect to social justice at personal, professional, and institutional levels.

25 Given the goals of social justice education, experiential pedagogy as championed by student affairs is central to the learning process because participants are encouraged to engage actively in their own learning and interactions with one another through reflections and experiential activities.

26 Indeed, worldbuilding is an explicit core theme in the instruction of game design as well as games themselves (see Schell 2008; Silverstein 2012; Mukherjee 2017; Nelson 2019).

27 This is a common design tactic of so-called “resource-development games,” such as Civilization or Settlers of Catan.

### References

Adams, Maurianne. 2016. "Pedagogical Foundations for Social Justice Education." In *Teaching for Diversity and Social Justice*, 3rd ed., edited by Maurianne Adams, Lee Anne Bell, Diane J. Goodman, and Khyati Y. Joshi, 27-55. New York: Routledge.

Ahmed, Sara. 2016. *Living a Feminist Life*. Durham, NC: Duke University Press.

———. 2021. “Complaint, Diversity, and Other Hostile Environments.” Paper presented at Courageous Conversations Series, University of Calgary, Calgary, AB, Canada, March 22, 2021.

American College Personnel Association and National Association of Student Personnel Administrators, and Joint Task Force on Professional Standards and Competencies. 2010. *Professional Competency Areas for Student Affairs Practitioners*. <https://www.naspa.org/images/uploads/main/ACPA_NASPA_Professional_Competencies_FINAL.pdf>.

———. 2015. *Professional Competency Areas for Student Affairs Practitioners*. <https://www.naspa.org/images/uploads/main/ACPA_NASPA_Professional_Competencies_FINAL.pdf>.

American Council on Education. 1937. *Student Personnel Point of View*. Report from the American Council on Education Studies.

———. 1949. *The Student Personnel Point of View*. Report from the American Council on Education Studies.

Atchison, William F. 1985. “The Development of Computer Science Education.” *Advances in Computers,* no. 24, 319–77. <https://doi.org/10.1016/S0065-2458(08)60370-8>.

Bernstein, Peter L. 2005. *Wedding of the Waters: The Erie Canal and the Making of a Great Nation*. New York: W.W. Norton.

Brown, Robert D. 1972. *Student Development in Tomorrow's Higher Education: A Return to the Academy.* Washington: American College Personnel Association.

Calhoun, John C. 1996. “The Student Learning Imperative: Implications for Student Affairs." *Journal of College Student Development* 37 (2): 188–222. <https://doi.org/10.201429/gcpa.2019.350101>.

Chen, Diana A., Joel A. Mejia, and Samantha Breslin. 2019. “Navigating Equity Work in Engineering: Contradicting Messages Encountered by Minority Faculty.” *Digital Creativity* 30 (4): 329–44. <https://doi.org/10.1080/14626268.2019.1678486>.

Corron, Amy, and Rebecca Rouse. 2017. “Communicating across Difference: Building an Intergroup Dialogue Program at a STEM Institution.” Paper presented at Engage for Change: Community Engagement Conference, Siena College, Albany, NY, May 2017.

———. 2019. “Playing at High Stakes: Using Intergroup Dialogue to Advance Critical Pedagogy for Game Design.” Paper presented at Intergroup Dialogue Conference, University of Massachusetts Amherst, Amherst MA, June 2019.

Dumit, Joseph. 2014. “Writing the Implosion: Teaching the World One Thing at a Time.” *Cultural Anthropology* 29 (2): 344–62. <https://doi.org/10.14506/ca29.2.09>.

Evans, Nancy J., and Robert D. Reason. 2001. “Guiding Principles: A Review and Analysis of Student Affairs Philosophical Statements." *Journal of College Student Development* 42 (4): 359–77. <https://dr.lib.iastate.edu/handle/20.500.12876/22872>.

Evans, Stephanie Y. 2008. *Black Women in the Ivory Tower, 1850–1954: An Intellectual History*. Gainesville: University Press of Florida.

Fisher, Roger, and Taryn Petryk. 2017. “Balancing Asymmetrical Social Power Dynamics." University of Michigan Program on Intergroup Relations Working Paper Series. <https://igr.umich.edu/working-paper-series>.

Goldweber, Michael, John Impagliazzo, Iouri A. Bogoiavlenski, A.G. Clear, Gordon Davies, Hans Flack, J. Paul Myers, and Richard Rasala. 1997. “Historical Perspectives on the Computing Curriculum.” In *Proceedings of the Conference on Integrating Technology into Computer Science Education*: *Working Group Reports and Supplemental Proceedings*, 94–111. <https://dl.acm.org/doi/pdf/10.1145/266057.266119>.

Harro, Bobbie. 2018. “The Cycle of Liberation.” In *Readings for Diversity and Social Justice,* 4th ed., edited by Maurianne Adams, Warren J. Blumenfeld, D. Chase J. Catalano, Keri “Safire” DeJong, Heather W. Hackman, Larissa E. Hopkins, Barbara J. Love, Madeline L. Peters, Davey Shlasko, and Ximena Zúñiga, 627–34. New York: Routledge.

Hauptman, Laurence M. 2001. *Conspiracy of Interests: Iroquois Dispossession and the Rise of New York State.* Syracuse, NY: Syracuse University Press.

hooks, bell. 1994. *Teaching to Transgress: Education as the Practice of Freedom*. New York: Routledge.

———. 2003. *Teaching Community: A Pedagogy of Hope*. New York: Routledge.

———. 2010. *Teaching Critical Thinking: Practical Wisdom*. New York: Routledge.

Keeling, Richard P. 2004. *Learning Reconsidered: A Campus-Wide Focus on the Student Experience*. Report from the National Association of Student Personnel Administrators and ACPA.

———. 2006. *Learning Reconsidered 2: Implementing a Campus-Wide Focus on the Student Experience*. Report from the National Association of Student Personnel Administrators and ACPA.

Ko, Amy J., Alannah Oleson, Neil Ryan, Yim Register, Benjamin Xie, Mina Tari, Matthew Davidson, Stefania Druga, and Dastyni Loksa. 2020. “It Is Time for More Critical CS Education.” *Communications of the ACM* 63 (1): 31–33. <https://doi.org/10.1145/3424000>.

Lloyd-Jones, Esther, and Margaret Ruth Smith, eds. 1954. *Student Personnel Work as Deeper Teaching*. New York: Harper and Bros.

Malazita, James W., and Korryn Restar. 2019. “Infrastructures of Abstraction: How Computer Science Education Produces Anti-political Subjects.” *Digital Creativity* 30 (4): 300–12. <http://doi.org/10.1080/14626268.2019.1682616>.

McAllister, Ethel M. 1941. *Amos Eaton: Scientist and Educator, 1776–1842.* Philadelphia: University of Pennsylvania Press.

Mukherjee, Souvik. 2017. *Videogames and Postcolonialism: Empire Plays Back*. Cham: Palgrave Macmillan.

National Association of Student Personnel Administrators. 1987. “A Perspective on Student Affairs: A Statement Issued on the 50th Anniversary of the Student Personnel Point of View.” <https://www.naspa.org/files/dmfile/A_Perspective_on_Student_Affairs_1987.pdf>.

Nelson, Mark A.2019. *Fantasy World-Building: A Guide to Developing Mythic Worlds and Legendary Creatures*. New York: Dover.

Parvin, Nassim, and Anne Pollock. 2020. "Unintended by Design: On the Political Uses of ‘Unintended Consequences.’” *Engaging Science, Technology, and Society*, no. 6, 320–27. <http://doi.org/10.17351/ests2020.497>.

Potter, David L., Paul M. Oliaro, Judith Berson, Patrick T. Terenzini, Susan Engelkemeyer, Geneva M. Walker-Johnson. 1998. *Powerful Partnerships: A Shared Responsibility for Learning*. A joint report from the American Association for Higher Education, American College Personnel Association, and National Association of Student Personnel Administrators. <https://www.naspa.org/images/uploads/main/Powerful_Partnerships.pdf>.

Rensselaer Polytechnic Institute, n.d. “Rensselaer Polytechnic Institute: About and Quick Facts.” Accessed November 3, 2021. <http://rpi.edu/about>.

Rensselaer Polytechnic Institute. 2014. “The Rensselaer Plan 2024.” Accessed June 30, 2022. <https://president.rpi.edu/2024-plan>.

Riley, Donna. 2017. “Rigor/Us: Building Boundaries and Disciplining Diversity with Standards of Merit.” *Engineering Studies* 9 (3): 249–65. <http://doi.org/10.1080/19378629.2017.1408631>.

Rouse, Rebecca, and Amy Corron. 2018. “Incorporating Intergroup Dialogue in Games Education to Increase Diversity and Inclusion.” Paper presented at DGC: Difference Games Collective 2018 Conference,Worcester Polytechnic Institute, Worcester, MA, October 2018.

———. 2020. “Levelling Up: A Critical Feminist Pedagogy for Game Design.” *MAI: Feminism and Visual Culture Journal*, no. 5 (January 27). <https://maifeminism.com/leveling-up-a-critical-feminist-pedagogy-for-game-design/>.

Ryoo, Jean J. 2019. “Pedagogy That Supports Computer Science for *All*.” *ACM Transactions of Computing Education* 19 (4): 1–23. <http://doi.org/10.1145/3322210>.

Schell, Jesse. 2008. *The Art of Game Design: A Book of Lenses*. Boca Raton, FL: CRC Press.

Sharma, Sarah. 2020. “A Manifesto for the Broken Machine.” *Camera Obscura* 35, no. 2 (104): 171–79. <http://doi.org/10.1215/02705346-8359652>.

Sheriff, Carol. 1997. *The Artificial River: The Erie Canal and the Paradox of Progress, 1817–1862*. New York: Farrar, Straus, and Giroux.

Silverstein, Janna, ed. 2012. *The Kobold Guide to Worldbuilding*. Kirkland: Kobold Press.

Taplin, Jonathan. 2017. *Move Fast and Break Things: How Facebook, Google, and Amazon Have Cornered Culture and What It Means for All of Us*. New York: Macmillan.

Vakil, Sepehr. 2018. “Ethics, Identity, and Political Vision: Toward a Justice-Centered Approach to Equity in Computer Science Education.” *Harvard Educational Review* 88 (1): 26–52. <http://doi.org/10.17763/1943-5045-88.1.26>.

Wagner, Erica. 2017. *Chief Engineer: Washington Roebling, the Man Who Built the Brooklyn Bridge.* New York: Bloomsbury.

Wisnioski, Matthew. 2003. “Inside ‘the System’: Engineers, Scientists, and the Boundaries of Social Protest in the Long 1960s.” *History and Technology* 19 (4): 313–33. <https://doi.org/10.1080/0734151032000181077>.

———. 2009. “‘Liberal Education Has Failed’: Reading Like an Engineer in 1960s America.” *Technology and Culture* 50 (4): 753–82. <https://doi.org/10.1353/tech.0.0346>.

### Author Bios

**Amy Corron** is a leadership educator, focusing on social justice education and promoting critical perspectives to examine STEM education. As an experienced intergroup dialogue facilitator, she has incorporated dialogic pedagogies into STEM curriculum to give space and abilities for students to explore social identity and social inequality.

**Rebecca Rouse** is an Associate Professor in Game Development at University of Skövde, Sweden, where her research focuses on investigating new forms of storytelling with new technologies such as immersive and responsive systems via queer, critical, feminist perspectives and methods. Rouse’s applied design and artistic research is complimented by work in critical pedagogies, design methods, queer feminist media theory and history of technology.