

Introduction: Toward Critical Game Design

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Games and Design

In 2003, Brenda Laurel, game designer, researcher, and founder of the women-centered Purple Moon game production company, edited *Design Research: Methods and Perspectives*, a field guide for aspiring interactive designers.¹ The colorful volume approached design practice and research systemically and featured theoretical framings and interviews and reports from the field. These writings covered an array of design activities, including gathering user feedback, ethnographic and photographic methodology, techniques for material practice, and moving ideas and products through organizations and within cultures and communities. The volume was notable not only for its collection of diverse professional voices and author identities but also for its conscious efforts at bridging games and interactive design with the broader fields of design practice and theory. Like the practices of engineering design before it,² game development's contemporary origins as an extension of the STEM disciplines (in this case, computer science and programming) and the overlaps between game design and the "design disciplines," such as industrial design, architecture, and graphical arts, were minimal at best, often sharing only the nomenclature of "design" and a practice that produced "stuff" as its outcome.³ In the preface for the *Design Research* volume, media theorist Peter Lunenfeld notes the need for the new "design cluster" of the 2000s to develop shared though heterogeneous methods to "[participate] in the redefinition of the design process away from the stand-alone object and into the integrated system."⁴ Furthermore, echoing the calls of twentieth-century design theorists László Moholy-Nagy, Henry Dreyfuss, and Sir Christopher Frayling, Lunenfeld argues that the needed integrations of critical and political reflection, historical context, sociological and anthropological perspective, and interrogation of power, as well as the general weaving of theory and practice, are sorely missing in the "younger" interactive media design disciplines.⁵ "Design research," Lunenfeld argues, "can save the newest members of the profession from the solipsism of youth—the never-ending allure of exclusively designing for yourself and your friends."⁶

- 1 Brenda Laurel, ed., *Design Research Methods: Methods and Perspectives* (Cambridge, MA: MIT Press 2003).
- 2 James W. Malazita, "Translating Critical Design: Agonism in Engineering Education," *Design Issues* 34, no. 4 (Autumn 2018): 96–109.
- 3 Harvey Molotch, *Where Stuff Comes From: How Toasters, Toilets, Cars, Computers and Many Other Things Come to Be As They Are* (Oxfordshire: Routledge, 2004), 10–16.
- 4 Peter Lunenfeld, "The Design Cluster," in *Design Research Methods: Methods and Perspectives*, ed. Brenda Laurel (Cambridge, MA: MIT Press 2003), 11.
- 5 Lunenfeld, "The Design Cluster," citing László Moholy-Nagy, *The New Vision: Fundamentals of Bauhaus Design, Painting, Sculpture, and Architecture* (North Chelmsford, MA: Courier Corporation, 2012) 11; Henry Dreyfuss, "Visual Communication: A Study of Symbols," *SAE Transactions* (1970): 364–70, 79; and Christopher Frayling, *On Craftsmanship: Towards a New Bauhaus* (London: Bloomsbury Publishing, 2012).
- 6 Lunenfeld, "The Design Cluster," 13.

- 7 James W. Malazita and Korryn Resetar, "Infrastructures of Abstraction: How Computer Science Education Produces Anti-political Subjects," *Digital Creativity* 30, no. 4 (2019): 300–12; and Nassim Parvin and Anne Pollock, "Unintended by Design: On the Political Uses of 'Unintended Consequences,'" *Engaging Science, Technology, and Society* 6 (2020): 320–27.
- 8 "AAA" is a games industry term that describes large-scale, typically expensive projects developed and released by major publishers like Electronic Arts. These are the Hollywood "blockbusters" of the games world.
- 9 Jennifer DeWinter, Carly A. Kocurek, and Randall Nichols, "Taylorism 2.0: Gamification, Scientific Management and the Capitalist Appropriation of Play," *Journal of Gaming & Virtual Worlds* 6, no. 2 (2014): 109–27; and Carly A. Kocurek, *Coin-Operated Americans: Rebooting Boyhood at the Video Game Arcade* (MN: University of Minnesota Press, 2015).
- 10 See, for example, Tracy Fullerton, Chris Swain, and Steven Hoffman, *Game Design Workshop: Designing, Prototyping, & Playtesting Games* (Boca Raton, FL: CRC Press, 2004); Mary Flanagan, "Creating Critical Play," in *Artists Re: Thinking Games*, ed. Ruth Catlow, Marc Garrett, and Corrado Morgana (Liverpool: Liverpool University Press, 2010), 49–53; Mary Flanagan, Daniel C. Howe, and Helen Nissenbaum, "Values at Play: Design Tradeoffs in Socially-Oriented Game Design," in *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (2005), 751–60; Mary Flanagan and Anna Lotko, "Anxiety, Openness, and Activist Games: A Case Study for Critical Play," in *Proceedings of the Digital Games Research Association International Conference* (2009); Mary Flanagan and Helen Nissenbaum, "A Game Design Methodology to Incorporate Social Activist Themes," in *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (2007), 181–90; and Katherine Isbister, *How Games Move Us: Emotion by Design* (Cambridge, MA: MIT Press, 2016).
- 11 Sebastian Deterding, "The Pyrrhic Victory of Game Studies: Assessing the Past, Present, and Future of Interdisciplinary Game Research," *Games and Culture* 12, no. 6 (2017): 521–43.

Nearly twenty years later, the gaps that Laurel and Lunenfeld identified between games and design remain. Games training and early professionalization still largely occur in the context of computational science programs, where concerns of usability, culture, and politics—even when they are taken seriously—are treated as tertiary skills or foci, generally outside of the game developer's purview.⁷ Although public and internal playtesters form part of the backbone of AAA development,⁸ playtesting and user testing are often used instrumentally for bug-finding and balancing quality assurance, rather than as part of a recursive, co-designer or stakeholder-led iterative design process. While game design practices themselves have not progressed much in terms of thinking systematically about the effects of their products, the games industry has certainly shifted toward a systems-building model. From partnering with or being acquired by companies like Microsoft and Facebook (Meta) to using gaming technologies to build digital ecosystems that determine content accessibility and farm data from users, games will change collective futures of labor and of play. Our glimpses of these futures have thus far confirmed Lunenfeld's worries, with "metaverse" spaces displaying dull techno-masculinist fantasies of the future of office work, while ignoring the vibrant histories of collective participation in persistent digital spaces.⁹

On the academic side, game production and critique have developed into thriving research communities, but ones that are largely siloed from each other, despite critical work by foundational games scholar-designers such as Tracy Fullerton, Mary Flanagan, and Katherine Isbister.¹⁰ Sebastian Deterding has described the current formations of games in the academy as a Pyrrhic victory: the success of scholars in the 1990s of establishing games as legitimate objects of study means that "games studies" need no longer be its own subdiscipline or community of scholars.¹¹ Instead, games scholars, bound by the epistemic, political, and institutional boundaries of the academy, are incentivized to produce scholarship in forms that are knowable and legitimate by their institutions. The easiest way to do this, Deterding argues, is for researchers to cast their games scholarship in the forms and vestiges of more established disciplines, such that games and game design become the objects or instruments of study, rather than the vehicles or processes of research. The Gamesfield thereby reproduces the production/criticism split. Tenure and job search committees, already concerned with the disciplinary and epistemic fit of games candidates, are likely to discount production work by scholars in the humanities and social sciences, and inversely, critical work by scholars in the computational sciences and development. Researchers in game production face challenges when articulating the impact of colonial,

race-based, and gendered legacies of their “purely technical” field. Conversely, researchers in games criticism risk being accused of “selling out” when attempting to practice scholarly and political critique through game production.

Deterding has posited the incorporation of design methods as a way to muddle through these epistemic and institutional tensions, though this model is also fraught. Without thinking critically about institutions as designed, a design-centric games curriculum may only reinforce the modularized, consilience model of undergraduate games education,¹² one where students take courses in programming, arts, and writing spread across different departments and cultures on campus, perhaps complimented by a few interdisciplinary games production classes.¹³ The modular framework mirrors the capitalistic models of the now-idealized “T-shaped” STEM student,¹⁴ whose depth of expertise can be freely plugged into specialized labor slots, but surface-level understanding of multiple subjects provides for agile or other flexible models of employment that sustain hollowed-out businesses and institutions. Furthermore, although Deterding notes that design research has always featured practical material engagement and its “critical corrective,”¹⁵ design research has admittedly long struggled to bridge critical and political work with its industry-facing curricular apparatus. We are thus left with epistemic and institutional arrangements that not only continue the split between design research and games, and between critical analysis and production, but also systematically limit the ability to account for dimensions of power, race, gender, ability, and empire across our development practices.

Toward Critical Game Design

What is needed, we argue, are epistemic practices, material interventions, and institutional and noninstitutional systems that work toward the deep synthesis of game design, cultural critique, and reflective design research practices. These critical game design practices, like the research practices of Lunenfeld’s design cluster, would necessarily be heterogeneous and in conversation with a longer history of critically engaged work.

To date, the use of the term “critical” in the design fields is as varied as the fields themselves. Interaction designers Jeffrey and Shaowen Bardzell categorize critical design as deriving from three separate but overlapping intellectual traditions.¹⁶ First is the “capital C” Critical Theory of the Frankfurt School, Marxist social scientists and philosophers writing under the growing shadow of European fascism in the early twentieth century. For Frankfurt School thinkers, particularly Theodor Adorno and Max Horkheimer, the entwinement of the state and capital through cultural industries

12 Georgina Born, “For a Relational Musicology: Music and Interdisciplinarity, Beyond the Practice Turn: The 2007 Dent Medal Address,” *Journal of the Royal Musical Association* 135, no. 2 (2010): 205–43.

13 James Malazita, Rebecca Rouse, and Gillian Smith, “Disciplining Games,” *Game Studies*.

14 Emily York, “Doing STS in STEM Spaces: Experiments in Critical Participation,” *Engineering Studies* 10, no. 1 (2018): 66–84; Kathryn A. Neeley and Bernd Steffensen, “The T-Shaped Engineer as an Ideal in Technology Entrepreneurship: Its Origins, History, and Significance for Engineering Education,” in *2018 ASEE Annual Conference & Exposition* (2018).

15 Deterding, “The Pyrrhic Victory of Game Studies,” 537.

16 Jeffrey Bardzell and Shaowen Bardzell, “What Is ‘Critical’ About Critical Design?,” in *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (2013), 3297–306.

led to new forms of social and ideological domination.¹⁷ A new Critical Theory, which combined formal conceptualizations of social structure with linguistic, psychoanalytic, and semiotic readings of literary studies and psychology, was needed to account for popular culture and mass-produced ideology that traditional Marxist thought was ill-equipped to diagnose. The Bardzells' second tracing of "critical" is more broadly encompassing of a long arc of political and interpretive analyses of text, art, design, and society, contemporarily evidenced by such fields as science and technology studies, feminist analysis, and queer theory. Finally, "critical design" as developed and coined by industrial designers Anthony Dunne and Fiona Raby casts a large umbra over criticality in design contexts.¹⁸ As opposed to the more sociological and literary traditions in critical theory, critical design represents a material, speculative, and internalist critique of the capitalist and market-driven logics of industrial design in the academy and focuses on the creation of objects and exhibitions that stimulate debate or call into question fundamental assumptions about the role of design in the human world. Although Dunne and Raby have made explicit calls for the contrary, "critical design" has become something of a shorthand for multiple kinds of material design practices that reject or question the field's consumerist orientations.¹⁹

The influences of these three traditions are overlapping and fraught across the design fields. Whether critical theory and readings deserve a place in design education, and whether they substantively change how design students imagine their practice and purview are still open questions. Both the effectiveness and the politics of critical design have been called into question, with Cameron Tonkinwise, among others, arguing that Dunne and Raby's specific imaginations of critical design reinscribe the classist and neoliberal values they claim to reject—that critical and speculative designs are more about building a designer's brand than acting in service of better futures.²⁰ Similarly, there remains the question of how deeply integrative critical design practice and critical inquiry actually are, with Matt Malpass arguing that even in critical design, critical theory is often applied "strategically and sporadically, using concepts for inspiration and explanation rather than attempting to construct a complete and internally consistent argument."²¹

Design's tensions between critical analysis and material practice, as well as their relative merits in the institutions and goals of the discipline, echo in game design and game studies as well. Many researchers find themselves at the intersection of "studying" and "making" games. Many did or do so at their own precarity. The fields and departments in which they find themselves working have

17 Theodor W. Adorno and Max Horkheimer, "The Culture Industry: Enlightenment as Mass Deception," in *Philosophers on Film from Bergson to Badiou*, ed. Christopher Want (New York: Columbia University Press, 2020), 80–96.

18 Anthony Dunne and Fiona Raby, *Speculative Everything: Design, Fiction, and Social Dreaming* (Cambridge, MA: MIT Press, 2013).

19 Matt Malpass, *Critical Design in Context: History, Theory, and Practice* (London: Bloomsbury Publishing, 2019).

20 Cameron Tonkinwise, "How We Intend to Future: Review of Anthony Dunne and Fiona Raby, *Speculative Everything: Design, Fiction, and Social Dreaming*," *Design Philosophy Papers* 12, no. 2 (2014): 169–87.

21 Malpass, *Critical Design in Context*, 11.

very specific metrics that often fit more squarely in the “studying” aspects of their work. Only as they are able to establish themselves are they able to justify the “making” components of their work. In some respects, this is also the cause of the division between the “social scientists”/“humanists” and those working more in the realm of human-computer interaction or HCI. This is why, to a great degree, much critical design work is motivated by critical work in the humanities and social sciences. They form a somewhat symbiotic kind of relationship. All of this is to say, yet again, that this is precisely why it is important to establish a field of critical game design.

Academics and artist-designers Lindsay Grace and Mary Flanagan have experimented with “critical play” and “critical game design,” respectively, as a way of using forms of play and game mechanics to engage players in critical dialectics.²² Flanagan’s work interrogates play at large as reality-making, in that our social and material worlds are shaped by the forms of play we practice in them. In addition to producing her own works that challenge assumptions of what it means to play—such as a giant Atari-style joystick that requires several collaborating players to use—Flanagan documents public critical arts practices as examples of playing with the social. While these pieces often take the form of performance arts or “culture jamming,” such as the media hoaxes developed by the Yes Men, Flanagan also traces digital games-based cultural interventions, such as Iraqi artist Wafaa Bilal’s *Night of Bush Capturing: Virtual Jihadi*,²³ a mod—of an Al-Qaeda mod—of an independent game celebrating the Iraq War. Here, the “critical-ness” of play emerges through what Alex Galloway calls “art gaming,” the use of gaming technologies to create critical or subversive interactive experiences.²⁴ A unifying factor in these kinds of critical interventions, Galloway notes, is that games and gaming technologies serve as the medium for political intervention, rather than as the mechanism. The primary qualities of intervention are aesthetic, with the remixing of gaming technologies serving to achieve those aesthetic purposes.

Grace’s critical design work centers gaming-specific interactions and mechanics as the site of critical intervention and explicitly draws on Dunne and Raby’s version of critical design. Grace begins by deconstructing game mechanics, revealing how the procedural rhetorics operating in games spaces are shot through with political power. In doing so, Grace’s design work inverts these mechanics to call attention to their underlying social and political ramifications. His game *Bang!* replicates first-person shooter tower defense gameplay, where a player must locate and

22 Mary Flanagan, *Critical Play: Radical Game Design* (Cambridge, MA: MIT Press, 2009); and Lindsay Grace, “Critical Gameplay: Design Techniques and Case Studies,” in *Designing Games for Ethics: Models, Techniques and Frameworks*, ed. Karen Shrier and David Gibson (Hershey, PA: IGI Global, 2011), 128–41.

23 Wafaa Bilal, *Shoot an Iraqi: Art, Life and Resistance Under the Gun* (San Francisco: City Lights Books, 2013).

24 Alexander R. Galloway, *Gaming: Essays on Algorithmic Culture* (Minneapolis: University of Minnesota Press, 2006), 107.

- 25 Grace, "Critical Gameplay," 138.
- 26 Lindsay D. Grace, "An Introduction to Black Games, Blackness in Games, and Otherness," *Black Game Studies* (Morrisville, NC: Lulu, 2021), 2.
- 27 Petri Lankoski and Jussi Holopainen, *Game Design Research* (Pittsburgh, PA: ETC Press, 2017).
- 28 See, for example, Rebecca Goodine and Rilla Khaled, "Ctrl+ R: Reflections on Prompting Reflective Game Design," in *Proceedings of the Digital Games Research Association International Conference* (2019); Rilla Khaled, "Questions Over Answers: Reflective Game Design," in *Playful Disruption of Digital Media*, ed. Daniel Cermak-Sassenrath (Singapore: Springer, 2018), 3–27; Paolo Pedercini, "Videogames and the Spirit of Capitalism," *La Mollenindustria*, February 14, 2014, <https://www.mollenindustria.org/blog/videogames-and-the-spirit-of-capitalism/>; Miguel Sicart, *Beyond C: The Design of Ethical Gameplay* (Cambridge, MA: MIT Press, 2013); Bo Ruberg, "No Fun: The Queer Potential of Video Games that Annoy, Anger, Disappoint, Sad, and Hurt," *QED: A Journal in GLBTQ Worldmaking*, no. 2 (2015): 108–24; and Bo Ruberg, "Kissing for Absolutely No Reason: Realistic Kissing Simulator, *Consentacle*, and Queer Game Design," in *Video Games Have Always Been Queer* (New York: New York University Press, 2019), 110–32.
- 29 Laureline Chiapello, "Epistemological Underpinnings in Game Design Research," in *Game Design Research: An Introduction to Theory & Practice*, ed. Petri Lankoski and Jussi Holopainen (Pittsburgh, PA: ETC Press, 2017), 15–33.
- 30 T. L. Taylor, "Beyond Management: Considering Participatory Design and Governance in Player Culture," *First Monday* (2006), <https://doi.org/10.5210/fm.v0i0.1611>.
- 31 Ingrid Burkett, *An Introduction to Co-design* (Sydney: Knode, 2012).
- 32 Elizabeth B.-N. Sanders and Pieter Jan Stappers, "Co-creation and the New Landscapes of Design," *CoDesign* 4, no. 1 (2008): 5–18.
- 33 Sasha Costanza-Chock, *Design Justice: Community-led Practices to Build the Worlds We Need* (Cambridge, MA: MIT Press, 2020).
- 34 Elizabeth B.-N. Sanders and Pieter Jan Stappers, "Probes, Toolkits and

eliminate enemy soldiers sneaking through brush. However, upon successfully defeating an enemy, the game pauses and plays a slideshow of that soldier's life, from growing up, to falling in love, to accepting their ultimately fatal mission. The goal of the game, Grace argues, is to use mechanics to reveal games' "duplicity of values";²⁵ in this case, the ludic need for the player to take the enemy soldier's narrative and history seriously to view him as a threat—but only up to the point of death, when that narrative must be forgotten for the player to not feel guilt or remorse. Grace's practice has also worked to highlight Blackness in design, in terms of the identity of game designers and in incorporating Black experiences and an orientation toward community building in the narratives and mechanics of gameplay.²⁶

The object-centered approach to criticality in game design, where the designed game operates as a provocative or otherwise normative text that aims to reorient its players, serves as a common approach across Flanagan's, Grace's, and Bilal's work. Arguably, the centering of the game artifact or of the game maker as auteur figure has been the dominant paradigm of critical game production since about 2000. Petri Lankoski and Jussi Holopainen have described as "conceptual" or "autobiographical"²⁷ the object-centered design processes of artists like Paolo Pedercini, creator of the anti-imperialist Phone Game; the moral and ethical design strategies developed by Miguel Sicart; the emotive and affective game designs traced by Katherine Isbister; and queer game designs explored by designers and scholars Rebeca Goodine, Rilla Khaled, and Bo Ruberg.²⁸ As Laureline Chiapello traces, the design epistemologies that influence game design practices, even critical ones, have been those that have tended to frame the gameric artifact as a mode of communicating the intentions, emotion, or messaging of a design practitioner to their intended players/users.²⁹

Drawing on calls by other researchers,³⁰ games also saw a shift in the 2000s toward codesign,³¹ participatory design,³² and community-led design³³ practices in established design disciplines, critical game design practitioners have begun questioning the boundaries of designer and player as well as the notion that players/users engage with a designed artifact only at the completion of its design. Codesign methods invite users and other stakeholders into the design process earlier—ideally, during the moment of problem definition that shapes the goals and directions of the project or artifact. By initially and consistently involving user groups in the design process—in ways that afford users agency in the process, not just opportunities for consultation—codesign practices reframe the designer-user relationship from "design for" to "design with."³⁴

Codesign practices also challenge assumptions about the nature of expertise and power in the design process, shifting the role of designer away from sole visionary maker toward that of a facilitator, whose experience and knowledge of common design patterns help bring community-driven ideas into workable existence.³⁵

Although community-led design and critical design are considered different modes of practice in product design, the relative under-definition and under-theorization of design methods in games opens up a productive space for them to be thought together. So does the close relationship between the professional game development and independent game modding—user-generated content—where the same tools of production are used to modify or make new versions of previously developed games. The separation of design practice from professionalization in games allows for broader questions of identity and positionality to enter critical game design methodology, including questions of race, gender, orientation, and sovereignty. Yolanda Rankin and India Irish have developed game codesign practices that center Black feminist thought, as well as workshops that bring Black women into design practices from which they have been systematically excluded.³⁶ These workshops worked to include Black women in the conceptualizing and early stage designing of a mobile game and allowed participants to self-determine the kinds of gameplay and narratives that were important to represent in their games. Rankin and Irish highlight that these elements centered values and experiences typically sidelined or considered marginal when developing games, including the ability to represent a diverse array of Black women's bodies and redefining forms of customizability for in-game assets. Institutional and organizational changes in the game development process create ripple effects throughout the entirety of the game.

Elizabeth LaPensée, Outi Laiti, and Maize Longboat uplift sovereignty as the center of their codesign practice, arguing that representing the lives and stories of Indigenous people is only a first step for game developers. The capacity for Indigenous self-determination is fundamental to the creation of “sovereign games,”³⁷ or games led by Indigenous persons, practices, and world orientations. Reflecting on the development of three of their own games, LaPensée, Laiti, and Longboat trace how sovereign leadership and self-determination not only means having Indigenous members on a design team, but also centering Indigenous relationships with kin, community, and land. LaPensée's *When Rivers Were Trails* involved extensive collaboration and communication with elders and knowledge-keepers, and through grant and agency support was able to hire Indigenous artists and developers, as well as to hold sovereign

Prototypes: Three Approaches to Making in Codesigning,” *CoDesign* 10, no. 1 (2014): 5–14.

- 35 Christopher Alexander, *A Pattern Language: Towns, Buildings, Construction* (Oxford: Oxford University Press, 1977).
- 36 Yolanda A. Rankin and India Irish, “A Seat at the Table: Black Feminist Thought as a Critical Framework for Inclusive Game Design,” in *Proceedings of the ACM on Human-Computer Interaction* 4, no. CSCW2 (2020): 1–26.
- 37 Elizabeth A. LaPensée, Outi Laiti, and Maize Longboat, “Towards Sovereign Games,” *Games and Culture* 17, no. 3 (2021): 155541202111029195.

game jams. Most importantly, these interactions with Indigenous communities were not extractive; artists, writers, and knowledge keepers were compensated to game industry standards, and care was taken to ensure that community involvement focused on capacity-building, or the infusion of both skills and sustainable funding into a community, over the “one-and-done” nature of many game jams. As such, sovereign design highlights the networks of relation that make up game production and Indigenous community and critically examines how those networks overlap with, are entangled with, and disrupt networks of coloniality and capital. Critical game design, then, is not just a synthesis of critical corrective and design practice, or only developing a more representative narrative and more ethical gameplay; it is an interrogation of the power of the operational logics in games and in games spaces and institutions.

Queer game scholars and game makers further push the boundaries and intersections between critical game studies and game design. One early example of this kind of connective tissue can be found in the critical work by Adrienne Shaw on the spaces that queer gamers find or make for themselves.³⁸ This work becomes mobilized in later work archiving LGBTQ games to inform not just critical work but also future design work. Another early straddler of the scholar/maker divide was Anna Anthropy, whose work highlighted that many queer makers tended to work in forms and formats that were not always recognizable to more traditional game players and game makers.³⁹ Anthropy further presents much of this work, such as critiques of “empathy games,” through their critical making practices in games such as *The Road to Empathy* and the installation game *Empathy Game*, which was featured in 2015 at Babycastles, an independent game developer and art gallery space. A more recent example can be found in Bo Ruberg’s critical work on games and queerness⁴⁰ being mobilized in subsequent work and collaborations with Josef Nguyen.⁴¹ In all cases, many queer scholars tend to find themselves by default straddling the same lines that other scholars have in different fields.

Although the literature presented here is largely founded on work done by scholars in North America and Western Europe, this falls in line with much of the work published in the field of game studies on the topic of design research and design studies. While the subfield of production studies⁴² in game studies has begun grappling with the importance of more area-focused research, the field remains relatively small. Thus, much of the research examined in this introduction falls into this same pattern. This is one aspect of what we hope to prompt in the future. Where

38 Adrienne Shaw, *Gaming at the Edge: Sexuality and Gender at the Margins of Gamer Culture* (MN: University of Minnesota Press, 2015).

39 Anna Anthropy, *Rise of the Videogame Zinesters: How Freaks, Normals, Amateurs, Artists, Dreamers, Drop-outs, Queers, Housewives, and People Like You Are Taking Back an Art Form* (New York, NY: Seven Stories Press, 2012).

40 Bo Ruberg, *Video Games Have Always Been Queer* (New York: New York University Press, 2019).

41 Josef Nguyen and Bo Ruberg, “Challenges of Designing Consent: Consent Mechanics in Video Games as Models for Interactive User Agency,” in *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (2020), 1–13.

42 Casey O’Donnell, “Game Production Studies: Studio Studies Theory, Method and Practice,” in *Independent Videogames: Cultures, Networks, Techniques and Politics*, ed. Paolo Ruffino (Oxfordshire: Routledge, 2020), 148–60.

are the gaps and margins in the field even as it begins to establish itself? The articles in this special issue all engage with the political and epistemological dimensions of design research, including how systems of power legitimize certain ways of knowing over others; the challenges of integrating critique and material practice; questions of the boundaries of methodology, discipline, and institution; and the potential for games and design to highlight feminist, Indigenous, and raced knowledges that have been marginalized in game studies and design research. The first set of articles plays with development processes and form to highlight how marginalized perspectives, methods, and worldviews can be centered at the heart of game design. Kara Stone furthers a process of reparative game creation, one that underscores possibilities for game design to be used for healing, repair, and sharing vulnerability. Michael Anthony DeAnda and Gracie Lu Straznickas counter what they identify as a merit-based ideological structure to game-level design practices—a structure, they argue, that can be undermined or subverted through incorporating lenses of queerness and disability—particularly that of “passing”—into level design heuristics. Joshua Wood produces a series of game design exercises used to think through a Chicano theory of game design—ones that play off Jesse Schell’s design “lenses” and Brenda Brathwaite’s design “challenges” to represent Indigenous and Mexican identities and ways of knowing.

The second set of articles approaches critical game design institutionally, examining how the epistemic and structural conditions of the industry and academy can be reconfigured to allow for new kinds of design practices. Rilla Khaled and Pippin Barr highlight the pragmatic and epistemological gaps between the formal design disciplines and game design. A potential solution, they argue, can be found in their development of a method for design materialization, a game-specific design research that blends critical interpretation with evidence-based forms of design research and knowledge. The interdisciplinary team of Colin Milburn, Katherine Buse, Ranjodh Singh Dhaliwal, Melissa Wills, Raida Aldosari, Patrick Camarador, Josh Aaron Miller, and Justin Siegel trace their modification of the protein-folding simulation game Foldit, titled Foldit: First Contact. The science-fiction-themed game seeks to build better narrative and community connections with the Foldit game, but in ways that allowed for reflection on the intersection of scientific practice with the needs and values of local and national communities. Finally, Rebecca Rouse and James Malazita trace the structural and political tensions at play during the development of the critical game design master’s and PhD programs at Rensselaer Polytechnic Institute. For Rouse and Malazita,

building new formations of games programs in the academy is itself a kind of game design, one that plays with the epistemic foundations of humanities and technical fields.

Each article helps form a foundation for critical game design and draws from intellectual traditions and debates not only from both game studies and game design but also from the classical design disciplines. There are, of course, limits and gaps and missing pieces, but this issue does not seek to be a field summary or a defining moment of critical game design. Rather, this issue speaks to our hope for the future—that this collection opens space for a plurality of approaches, methods, and models for the future of games scholarship and scholars working in academic and professional spaces. We also hope that our presence in *Design Issues* will begin to build more connections and collaboration between game design and the broader design disciplines, allowing space for research, scholarship, and creative work that drives the underlying epistemological core of the many spaces in which all designers find themselves educated and employed.