JAMES SHELDON

16. TOWARDS A QUEER CURRICULUM OF INFINITY

WHAT IS THE BIGGEST NUMBER YOU CAN THINK OF?

A recent television commercial starts in a school library. An adult in a suit and tie asks a group of children, "What's the biggest number you can think of?" One child answers, "a trillion billion zillion!" The next child answers quite matter-of-factly, "ten." The third child answers, "infinity." The adult asks another child, "Can you top that?" That child immediately replies, "infinity plus one." When the adult corrects them and states that the correct answer is "infinity plus infinity," another child quickly interjects with "infinity times infinity." The adult responds with hand signals and sound effects to indicate that his mind is exploding; suddenly his preconceptions are blown away and he realizes that there is more to the subject of infinity than he had originally imagined.

This kind of "one-up-personship" is to Howes and Rosenthal (2001) one of the most delightful ways in which people engage with infinity. Howes and Rosenthal offer a feminist case for the inclusion of infinity into the curriculum. They suggested that "infinity's innate, inescapable contradictions make it not merely the ultimate postmodern subject-object … but a superb article of study for kids from 1 to 92" (p. 178). Looking through the lens of gender, they sought to "scan the airwaves for instances of when conceptualizations of the infinite have been vividly related to beliefs and practices about sex and gender" (p. 178). Infinity's exclusion, in Howes and Rosenthal's conception, is a gendered process, and much like how feminism suggests that we as a society need to welcome women into professional jobs, into politics, and into civil society, so must we as teachers "welcome infinity into the classroom" (p. 188).

That last paragraph sums up fairly succinctly a more traditional feminist take on infinity. Infinity in its nature, in this schema, has something that is too transgressive to be included in a K–12 curriculum. Thus, a feminist response would be to include back in what has been excluded. But I want here to turn things in a queer direction, to move beyond a politics of inclusion and representation to uncovering and then challenging the mechanisms that produce the mathematical canon. With mathematical inqu[ee]ry (Rands, 2009) and queer curriculum theory (Sumara & Davis, 1998, 1999) as my interlocutors, I argue in this chapter that mere inclusion of nonnormative topics in the mathematics curriculum falls short and that, instead, mathematics education researchers need to take up an inqu[ee]ry into why these

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topics are left out and how they get "straightened" when presented in a formulaic, formalized, and/or rote algorithmic fashion.

TOWARDS A QUEER CURRICULUM THEORY FOR MATHEMATICS

In this chapter, I use the concept of *queer curriculum theory* as a theoretical framework for my inquiry. Queer curriculum theory, a phrase first used in print by Dennis Sumara and Brent Davis (1998, 1999), is not a theory about queers per se, but rather about the way sexuality is reflected in the production of knowledge.[1] Sumara and Davis contended that they "are interested in showing how all educators ought to become interested in the complex relationships among the various ways in which sexualities are organized and identified and in the many ways in which knowledge is produced and represented" (p. 203).

How do these relationships appear in mathematics? Kai Rands (2009) argued that in queer studies, mathematics is "the subject that dare not speak its name" (p. 182). One might ask what sexuality and queer studies, and even queer curriculum theory, have to do with mathematics. There is a difference between studying sexuality and looking at how sexuality underpins the foundations of curriculum. Mathematics (at least of the pure sort) may not be about sexuality per se, but as I will demonstrate in this chapter, libidinal dynamics underpin mathematics not just at the level of mathematical applications but at the basic level of mathematical foundations. Sumara and Davis (1998) argued that queer curriculum sees sexuality "not as an object of study but as a necessary valance of all knowing" (p. 215). Sexuality forms a foundation for knowledge, and in proper oedipal fashion, we learn to rely on authority figures in mathematics classrooms; the teacher or the (anthropomorphized) textbook decides if an answer is correct, rather than students relying on their own ability to make arguments, evaluate evidence, and produce knowledge.

Queer curriculum studies scholars see desire as forming the foundation for curriculum. They make an analogy between a physical body and a body of knowledge in order to demonstrate how our own relationship to desire forms the basis for curricular decisions. William Pinar (1998) argued in this vein that

> systems of knowledge production and distribution, such as school curricula, are likewise systems, or in the present context, codifications of desire. The knowledge we choose for presentation to the young is in one sense like the parts of our bodies we allow them to see. Both the physical body and the body of knowledge are cathected objects, and decisions and policies regarding them follow from our own organization and repression of desire. (p. 231)

Curriculum encodes our desires, hopes, and fears and turns them into legitimated truths that are then taught unquestioningly, without acknowledgment of this reification. Certain topics are covered while others are excluded, and the process of constructing curriculum acts to reify certain knowledge as legitimate and other knowledge as illegitimate.

Some math topics are too queer for the K–12 math classroom and are thus excluded from the curriculum. In addition to infinity, topology, fractals, and non-Euclidean geometries are topics that challenge mathematical normativity and so are not generally included in K–12 curricula. Challenging mathematical normativity is not always synonymous with challenging heteronormativity, but both offer a similar critique of categorical boundaries (Rands, in press), challenging the traditional notion of mathematics as being composed of discrete, bounded objects (Sheldon, 2017).

In the rare cases that such queer topics show up in the K–12 curriculum, they tend to be de-queered by being taught in an algorithmic or formulaic way rather than by allowing students to engage with them conceptually and to articulate their own ideas. An example from the high school curriculum is infinite series, where students are often taught formulas to find the sum of an infinite series of numbers (e.g., $\frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \ldots$) instead of having opportunities to inquire into the nature of such a strange, counterintuitive mathematical object. Students, rather, are taught that there is one right way to approach such topics, ignoring the long histories of contestation and desire that form what today are considered accepted truths.

Mathematical topics are not necessarily inherently queer, but I do believe it is possible to develop a generally agreed upon list of topics that can be considered queer. In doing so, I am inspired by Susan Sontag's (1964) list of what constitutes the canon of campy cultural expressions, such as King Kong, Flash Gordon comics, or women's clothes of the 1920s. Rands and I (Sheldon & Rands, 2013) put together a list of mathematical topics that we thought had a certain queer potential, aesthetic, or history to them and that we felt were particularly good starting points for mathematical inqu[ee]ry. On our list, we included

> time, infinity, space, topology, knots, numbers, measurement, statistics, place value, alternate number bases, modular arithmetic, composition and decomposition, cardinality, counting, differentiation, integration, zero, irrational numbers, rational numbers, dimension, binary, polygons, polyhedra, spheres, tori, double tori, gluing, imaginary numbers, complex numbers, the complex plane, complex analysis, [and] linear algebra. (p. 1371)

These topics are not inherently queer, much like women's clothing of the 1920s is not inherently campy, but there is often value to asserting queerness as a property rather than as a process. When a mathematician asks me why I think queer theory is relevant to mathematics, it is often far more poignant to challenge their normative ideas of mathematics by saying, "Well, complex numbers sure are queer," rather than to explain that I am choosing to ascribe queerness to them in a form of strategic essentialism. This essentialism is not intended to reify queerness; rather, I intend it as a way of opening up uncomfortable questions about mathematical normativity.

For instance, Rands and I once arranged to meet a graduate student at a math education conference who had expressed curiosity about the idea of queer mathematics after having read Rands (2009). For a half hour, he asked question after question, trying to place what we were saying into some other framework. He asked if we were talking about constructivism, if we were talking about sociocultural theory. Finally, what we had said about queer epistemology started to click. His next words after finally seeing what we were getting at were: "That makes me really uncomfortable." Engaging in mathematical inqu[ee]ry ought to be uncomfortable; it is uncharted territory for many. Think of alternate number bases. Imagine spending your whole life in base ten, only to find out that arithmetic can be worked in the base of any positive integer. You would probably feel curious and uncomfortable at the same time, much like that graduate student did when he learned about Dr. Rands's work on queer mathematics.

Many of the topics on our list are deferred until more advanced courses, ostensibly because students first need a foundation in algebra before they can consider them. In reality, though, it is possible to explore them without formal foundations; for example, *Heart of Mathematics* (Burger & Starbird, 2012), a mathematics textbook for nonmajors, has an entire chapter that introduces topology without relying on formal mathematical proof. Perhaps these nonnormative topics are considered too transgressive to study before one has first been indoctrinated into normative mathematical ways.

The nonnormativity of these topics is in some ways relative to one's mathematical background; alternate number bases to a sixth grader represent uncharted territory while to a number theorist seem banal and almost not worthy of mention. The challenge then is to convince mathematicians of the nonnormativity of mathematics that to them seems routine, *and* to expose mathematics educators and mathematics students to these queer bodies (of knowledge) that provoke uncomfortable questions and open up new (queer?) possibilities.

As I consider the status quo, in which mathematical topics are de-queered by the K–12 curriculum's insistence on formulas, algorithms, and procedures, I am reminded of Gunckel's (2009) suggestion that a queer pedagogy of science necessitates moving beyond knowledge transmission to allow students to enter into inquiry, drawing upon "curiosity and passion" (p. 71) in the exploration of scientific possibilities. This idea of exploring nonnormative possibilities through inquiry leads nicely into the next section, where I elaborate further on mathematical inqu[ee]ry.

DEFINING MATHEMATICAL INQU[EE]RY

Gunckel (2009) proposed that students and teachers inquire not just into the natural world but into the nature of science itself, exploring the ways in which normativity becomes embedded into the scientific tools that we teach our students. Rands (2009) offered a similar inquiry, or as ze calls it, "inqu[ee]ry," into the normative constructions of mathematics. Styling the term as *inqu[ee]ry* highlights the ways in which queerness and inquiry coconstruct each other, while at the same time playing with the normative conventions of grammar. To illustrate inqu[ee]ry Rands offered an initial thought of including families with two moms or two dads in word problems ze teaches in hir classroom. Ze then further suggested that we need to go beyond this add-queers-and-stir approach in order to help students queer how "time is measured and regulated within classrooms" (p. 189), to explore how mathematics is used to make rhetorical arguments, to look at alternative kinship structures, and to question normative temporalities.[2] Rands makes a case, informed by hir work on mathematics for social justice as well as careful reading of queer theory, for approaching mathematics curriculum and teaching praxis through a queer lens, engaging not merely in tactics of inclusion, but instead taking the entire curriculum in a different direction of "scribbling graffiti over its texts" (to borrow a concept from Bryson & de Castell, 1993, p. 299).

Sheldon and Rands (2013) continued this discussion of how to queer mathematics curriculum by suggesting that a queer analytical lens be used to "critique what is normative … and how inquiry/inqueery might move beyond what is normative" (p. 1369). Mathematical inqu[ee]ry suggests the need for a mathematics curriculum to explore nonnormative topics and how these queer subjects affect our own subject-ness and sense of self. Applying mathematical inqu[ee]ry to our mathematics curriculum means seeing how sexuality and desire underpin our curricular decisions and teaching praxis.

INQU[EE]RY: INFINITY IN AN UNDERGRADUATE MATHEMATICS TEXTBOOK

Given that considerations of the infinite are rare in K–12 curricula, my inqu[ee]ry into questions of the infinite will start with where these discussions are most prolific, in undergraduate mathematics texts. Discussions of the infinite occur at a variety of points in a typical undergraduate curriculum. The most common place is in courses on mathematical foundations, which teach techniques of mathematical proof as well as the basics of mathematical logic. Material about infinity is often found, too, in the prefatory sections of upper-division texts, as well as in textbooks specifically about set theory or mathematical logic. It also (although rarely) is found in textbooks for nonmajors that are designed to introduce them to topics of mathematical interest. I focus here on the study of mathematical foundations, given that set theory and the associated study of cardinality are generally taught in modern courses only as a subset (pun intended) of mathematical foundations courses. Cardinality is the study of the sizes of sets, which is a key foundational topic for studying infinity. Foundations courses, in addition to being taken by mathematics majors, are often required for those seeking to become secondary school mathematics teachers. So this inqu[ee]ry is relevant not only to the study of higher education but also to those interested in further developing secondary-level teacher knowledge and classroom curricula.

The text under consideration is *The Art of Proof: Basic Training for Deeper Mathematics* (Beck & Geoghegan, 2010), part of the seminal Springer series, Undergraduate Texts in Mathematics. This book is written in an unconventionally conversational style, offering quotations about mathematics and a variety of comic strips, as well as advice on mathematical study skills and frequent marginal notes and pointers for students. I conducted this analysis to examine how this text explores nonnormative topics such as infinity and how the authors construct and produce knowledge in both queer and "straight"/linear modalities.

Cardinality is covered in the final chapter of the book. The word "cardinal" comes from the Latin *cardinalis*, meaning "principal, chief, or essential," yet the material on these topics is relegated to the last chapter. The map of section dependencies (p. xix) shows that chapter 13 depends on the material in chapter 12 (decimal expansions), chapter 9 (embedding $\mathbb{Z}$ in $\mathbb{R}$, in other words, rigorously proving that the integers are a subset of the real numbers), and chapter 11 (rational and irrational numbers). Being last, though, none of the material depends on what is in chapter 13, and so, even though in a sense everything in the book might be building up to this topic, given that chapter 13 depends on everything before it, it would not be uncommon for a time-strapped teacher to omit the topic entirely; it is typical for teachers not to reach the end of the textbook by the end of the semester in mathematics courses.

I began my analysis with the chapter epigraph. Chapter 13 starts with a quotation from T. S. Eliot's (1917/2017) poem "La Figlia che Piange":

> Sometimes these cogitations still amaze
> The troubled midnight and the noon's repose. (stanza 3)

Placing the quotation in the context of the original poem, I find that the poem is about a narrator who witnesses a breakup between a man and a woman. It starts in the present tense with the narrator commanding her to "weave the sunlight in your hair" as she turns "with a fugitive resentment in your eyes" (stanza 1). Then the poem moves to the conditional as the narrator tries to find a way to mark what just happened, looking for some way to share in the experience in a way that is both "light and deft" (stanza 2). The narrator then moves into the past tense, describing his fascination with the haunting past, exploring what might have happened over and over again in his head. And even now, in the present, he sometimes is still amazed by what comes up when he stays up all night and is not able to find rest until morning.

This poem raises interesting questions about the construction of identity, something that is critical to doing a queer reading of a curricular text. In this poem, we know nothing about the narrator other than his obsession with this woman, and we know nothing of this woman except a single slice of time. Much as how Sumara and Davis (1999) suggest that we must "wonder what circumstances lead to different identification experiences" (p. 204), I suggest we must ask what it means to constitute your identity based on a single moment in time. As Anne Carson (1999, cited in Halberstam, 2005) says about memory, "Remembering brings the absent into the present, connects what is lost to what is here. Remembering draws attention to lostness and is made possible by emotions of space that open backward into a void" (p. 47). The narrator brings this scene from the past into the present, constantly shifting temporality through the changing use of tense, drawing the reader into the queer temporality not only of the poem but of infinity itself.

The narrator's obsession with the woman in the poem is to me reminiscent of Georg Cantor's (1845–1918) obsession with a mathematical theory he invented known as the continuum hypothesis. The continuum hypothesis is a theory that there are no sizes of infinity between the size of the set of the integers (called *countable infinity)* and the size of the set of the real numbers (*uncountable infinity*). Thus, the continuum hypothesis proposes that despite there being an infinite number of sizes of infinity, there are no infinities in between the countable and uncountable infinities. Cantor struggled with both depression and psychosis, and spent much of his later years in mental institutions. Amir Aczel (2000) conjectured (perhaps oversimplistically) that trying to prove the continuum hypothesis literally drove Cantor insane.

At the turn of the 20th century, the continuum hypothesis topped mathematician David Hilbert's (1862–1943) list of the most significant unsolved mathematical problems. In 1963, it was proven that the continuum hypothesis can never be proved or disproved under the Zermelo-Fraenkel set theory axioms, which are the standard set of axioms used by most mathematicians when working with set theory. It is still not agreed upon whether or not this proof constitutes a solution to the problem, and the continuum hypothesis, as well as questions of cardinality in general, continue to leave mathematicians with both amazement and troubled nights, much like the narrator's memories of the woman with sunlight in her hair.

The textbook authors, though, rather than using the epigraph from T. S. Eliot as the foundation for what they are about to present about cardinality, immediately jump into a comic strip discussing cardinality through the eyes of a child whose teacher has been reading him a little too much of a fictional book called *Adventures of Ed the Actuary*. Although the precocious child and (possibly) campy sense of humor in the comic could be seen as queer, the juxtaposition with poetic lines about the amazing and haunting nature of memories (?) and infinity (?) seems disjointed. Some might see this disjointedness as queer; queer could be, perhaps, playful and yet haunting at the same time. Sumara and Davis (1999) discuss how juxtaposition is key to queering curriculum, explaining that when "things not usually associated with one another are juxtaposed, [it allows] language to become more elastic, more able to collect new interpretations and announce new possibilities" (p. 205). I hoped to see some of this campy playfulness, haunting deepness, and new interpretations and possibilities in the text that follows.

Disappointingly, however, the textbook proceeds into a rather traditional presentation by stating: "The goal of this chapter is to compare the sizes of infinite sets. More generally, how should we measure the size of infinite sets?" (Beck & Geoghegan, 2010, p. 121). In doing so, it reduces the contemplation of the infinite to merely a question of measurement, setting aside the "cogitations [that] still amaze" in favor of showing only the simplest of mathematical results. Section 13.1 begins on the following page, where the text retreats from haunting amazement and campy humor into a swamp of mathematical formalism offering a slew of propositions, theorems, and proofs with little sense of where the authors are taking the students.

In section 13.2 the authors present on Cantor's most famous proof, the diagonalization proof, which shows that the real numbers constitute a larger infinity than the natural numbers. The book presents this topic, though, as a rather obvious result rather than showing how much struggle and effort went into its development. Showing the messy, complex, and socially constructed nature of mathematics, as well as the human side of history (cf. Aczel, 2000), are some ways the topic of this section could be further queered. By showing the entire proof, the authors also miss out on the opportunity of having students try to prove the same result for themselves. The authors then, in rapid succession, prove that there is an infinite hierarchy of infinities, with only a brief mention of how revolutionary these ideas were in the history of mathematics. Their exposition in this section is certainly intriguing but still fails to live up to the promise of "cogitations [that] still amaze."

The chapter's opening poem set a high bar, and I expected to be kept up all night pondering the infinite. Instead, the chapter straightened out infinity into a clear set of theorems and proofs, preventing the reader from becoming entangled with infinity like the poem's narrator became inexorably obsessed, confused, and fascinated with the woman that he witnessed in the first stanza. In the undergraduate curriculum, we present infinity within a carefully constructed walled garden; students are not to ask questions or make their own conjectures; there will be no inqu[ee]ry on Beck and Geoghegan's watch. In the next section, I will address how to construct a queer curriculum of infinity with space for passion and history and which compels one's imagination in the way the woman in Eliot's poem captivates its narrator.

CONSTRUCTING A QUEER CURRICULUM OF INFINITY

A queer curriculum of infinity would, above all, take seriously the libidinal dynamics that underpin all mathematics. More than just starting a traditional presentation with a quotation or a comic, or augmenting it with sidebars about famous mathematicians, a queer curriculum of infinity would consider Pinar's (1998) arguments about a "body of knowledge" (p. 231) and would be open to the possibilities that queerness raises for this "body." Even in the more modern and unconventional text just discussed, the topic is presented rather formulaically, organizing (queer?) desire into a straight, linear presentation. A queer curriculum of infinity would guide students to have key moments of "cogitations [that] still amaze" that would be so exciting they would want to stay up all night working on the questions raised. Cantor spent his entire life struggling with the continuum hypothesis, and yet we expect to spend 10 minutes presenting this hypothesis in lecture and somehow believe that does justice to the continuum hypothesis? Queer bodies of knowledge captivate, engross, and puzzle in a similar fashion to the way that literal bodies do.

This queer curriculum would also engage with questions generally thought to be relegated to literature and philosophy. It would draw upon literary references much like Beck and Geoghegan's (2010) textbook attempted to do, and it would also focus on the philosophical study of infinity, particularly with reference to religion. Cantor himself was devoutly Jewish. Some of the terminology he uses comes from Jewish mysticism, such as the word *aleph* (א), used to denote different sizes of infinity (Aczel, 2000). If we are going to seriously explore the queer potential and possibility of infinity to amaze our students, we need to tell the fascinating tales of mysticism and demonstrate the ways in which infinity (despite the historical attempts to squelch it) has fascinated philosophers and mystics throughout the centuries. We need to bring the mind, the body, and the spirit all into the classroom in order to fully grasp the complexities, subtleties, and libidinality of these curriculum topics.

Returning once again to Sumara and Davis (1998, 1999), we need to look at how knowledge is produced and represented. I suggest that a queer curriculum of infinity would bring the historical events and characters to life (much more than a mere sidebar showing a picture of a key mathematician) and show the dramas and passions behind key players in historical encounters with infinity: for instance, the wars between Cantor and Leopold Kroenecker (1823–1891) concerning the possible existence of infinite sets,[3] Cantor's obsession with the continuum hypothesis, and even the legendary tales of the Kabbalists' encounters with infinity. Aczel (2000) recounts the story of a group of Kabbalists, led by Rabbi Joseph ben Akiva, who around 100 CE attempted to visualize the intense light of God's infinitely bright robe as he greeted Moses on Mount Sanai. This visualization exercise led to death, insanity, and loss of faith, respectively, in three out of the four who attempted the exercise. As Aczel concludes, "Only Rabbi Akiva survived this experience" (p. 27), at least if we count physically, mentally, and with his faith in God intact, the things which the other three lost. Infinity in this story is thought to be powerful and dangerous, something that only the most skilled can afford to harness. This story has an interesting parallel to the way that mathematicians deal with infinity; it is presented only in the most carefully chosen, formal ways, which I suggest reflects our fear not just of infinity but of all topics that challenge mathematical normativity.

As an example of what a queer curriculum of infinity might look like, I offer a five-week class that I taught about counting, modular arithmetic, set theory, and infinity to adults interested in learning about approaches to mathematical problem-solving. I used Dr. Tova Brown's (2015) series of videos about the Hotel Infinity thought experiment. (I suggest you take a few minutes now to watch one of the videos before you proceed. See https://www.hotel-infinity.com) Each video ends with a thought-provoking puzzle for students to solve. I asked students to consider each of the problems as a group with only light facilitation by me during the discussion. I did not offer any answers and instead showed the next segment of the video, which gave the solution, during the next class. I asked them not to watch the videos at home before the next class so that they would have the entire week to process what we discussed without rushing ahead to the next concept or idea. The ideas in the videos were so captivating that my students begged and pleaded with me to show the next section; the idea of waiting a week to see the next segment was almost inconceivable to them.

I supplemented Dr. Brown's videos by telling historical stories from Aczel's (2000) book, such as the aforementioned Rabbi Akiva story, in order to provide extra context and color to the ideas I was asking students to consider. Heeding Aczel's warning, I did not ask students to attempt the visualization themselves, but asked them to consider the power that such an exercise might entail. I also told the story of the conflict between Cantor and Kroenecker, drawing on the narratives from Aczel (2000) and Theoni Pappas (1997). Infinity became the one topic that formed the common thread throughout the course rather than being "dispensed with" at the beginning or "relegated" to the end. This gave infinity its "cardinal" importance in the curriculum that I designed and implemented, and invited students to feel the sense of the mystery, fascination, power, intrigue, drama, and contradictions that infinity entails. By rejecting the role of the teacher as the Oedipal father that presents straight mathematical narratives and then enforces conformity to them through grades, I instead built affective connections with my students, premised on entangling them in infinity's web rather than straightening out their experience of queer mathematics.

CONCLUDING REMARKS

Infinity is by no means the only mathematical topic filled with these mysteries, fascinations, and contradictions. If one was to pick any of the topics with queer potential that were proposed by Sheldon and Rands (2013), one would find ways in which the topic is both elided within the standard curriculum and "straightened" by rote instruction. Mere inclusion of queer topics in the curriculum is not enough to challenge mathematical normativity, much like how including LGBTQ folks in mainstream societal institutions fails to adequately challenge heteronormativity.

In this chapter, I demonstrated how to construct an alternative to the status quo of (hetero)normative mathematics, first by queerly reading a curricular text, and then by discussing how to construct a curriculum that puts inqu[ee]ry into practice. I offer this demonstration as a case study for those who might choose to tackle other topics on the list of queerable topics. Mathematics is no longer the subject that dare not speak its name in queer studies, and the possibilities for further inqu[ee]ry here are, well, rather infinite.

NOTES

1. I asked Brent Davis about the origins of the phrase "queer curriculum theory." Davis said that similar phrases were utilized by other attendees of the Bergamo Conference on Curriculum Theory and Classroom Practice around the time they first used it in print, and that their choice of term was prompted by discussions with Patti Lather, Deborah Britzman, Liz Ellsworth, and Janet Miller (personal communication, November 15, 2017).
2. For a more thorough introduction to theories of queer temporalities, see Sheldon and Rands (2017).

[3] Kroenecker spent years attempting to suppress Cantor's research into infinite sets, working behind the scenes to keep him from presenting and publishing, and blocking him from more prestigious positions.

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