

SOCIAL SCIENCE FICTIONS:
THE NUMERIC IMAGINARY OF COLD WAR AMERICA

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ABSTRACT

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Joan Lubin

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“Social Science Fictions” examines the production of science as an aesthetic category in mid-twentieth century America, identifying scale as its organizing logic and most persistent formal problem. By thinking of science as an aesthetic category, not just an ideological or methodological one, this project reads the scientism of the cold war era as the foundation for a set of literary experiments with scientific modes of representation. As the human sciences of the period newly professionalized and proliferated, a reading public was constituted around the ravenous consumption of scientific data about itself. The encounter between mass readerships and expert knowledges produces a social science fictional discourse charged with reconciling the representational protocols of literary characterization with the statistical aggregates of social scientific quantification. I trace the emergence of an aesthetics of quantification across the genres of science fiction, campus novel, gay pulp, b-movies, and contemporaneous sexology, sociology, and anthropology by reading the print and visual culture that sutured these discourses to one another. Chapter 1 reads responses to the Kinsey reports as indicative of a widespread cultural fascination with quantitative modes of representing human behavior and the social world. I read expert critiques of the reports, magazine reporting on their interview

methods, pulp fictionalizations of sexological research, and internal institutional documents of the Kinsey Institute for Sex Research along with a novel by Philip Wylie written as an homage to Kinsey. Chapter 2 continues its investigation of the aesthetic imprint of Kinsey specifically and quantitative social research generally by centering the history of the “gay novel” through readings of pseudonymous detective fiction by Gore Vidal and best-selling hustler narratives by John Rechy. Chapter 3 centers the problem space of the campus in the imaginary of postwar science fiction, architecture, and student protest. Through readings of novels by Robert Silverberg and Ursula Le Guin, I show how the university came to stand in for the universe itself in science fictional investigations of utopian institutionality. Chapter 4 reads the convergence of population bomb and atomic bomb panics in the crisis discourse of spaceship earth, centering a reading of *The Incredible Shrinking Man*.

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INTRODUCTION

“Social Science Fictions” examines the production of science as an aesthetic category in mid-twentieth century America. By thinking of science as an aesthetic category, and not only an ideological or methodological one, this project reads the scientism of the Cold War era as the foundation for a set of literary experiments with scientific modes of representation. In 1953, Isaac Asimov coined the phrase “social science fiction,” meant to describe the potential for a mutually transformative interaction between science fiction and society. Herman Kahn, just a few years later and in a rather different context, imagined himself to have coined the term as a name for the nuclear simulations being carried out in the RAND Corporation laboratories under his direction.¹ I set out from the co-emergence of this term in these two contemporary but disparate arenas in order to parse the relationships of fiction and social science to one another, and to the hybrid generic category that each conjures for their shared project. The simultaneous emergence of “social science fiction” in the laboratory and in letters shows the close links between fiction and simulation in the period, and how disciplinary differences were mediated by genre. Each of the chapters hones in on one facet of this

¹ Isaac Asimov, “Social Science Fiction,” *Modern Science Fiction: Its Meaning and Its Future*, ed. Reginald Bretnor (Coward-McCann, 1953): 157-196. On the RAND Corporation use of the phrase, see Sharon Ghamari-Tabrizi, “Simulating the Unthinkable: Gaming Future War in the 1950s and 1960s,” *Social Studies of Science* 30.2 (2000): 163-223. Ghamari-Tabrizi develops her argument about what she terms the “irrationalist” aesthetics of Cold War defense planning further in *The Worlds of Herman Kahn: The Intuitive Science of Thermonuclear War* (Harvard UP, 2005).

symbolic negotiation between the postwar genre system and professionalizing human sciences.

Reeling from the launch of Sputnik in 1957, Hannah Arendt warned against what she foresaw as the inevitable outcome of unchecked scientific advance: the degradation of humans into rats in a behaviorist maze, and of language into the “meaningless formalism of mathematical signs.”² At the same time, novelists found in this state of affairs not the death knell of human expression but a new frontier for its elaboration. Just a few short years later, Gore Vidal was praising his own pseudonymously authored pulp fiction as a masterful extension of a quantitative project: “The work that Dr. Kinsey began with statistics, Edgar Box has completed with wit in the mystery novel.”

Throughout the project I trace the emergence of the motif of science across the genres of science fiction, campus novel, gay pulp, b-movies, and contemporaneous sexology, sociology, and anthropology by reading the print and visual culture that sutured these discourses to one another. Each chapter does this work in a different way, taking for example a set of key cultural texts ranging from Alfred Kinsey’s Reports on human sexual behavior to Buckminster Fuller’s *Operating Manual for Spaceship Earth*, and novels by Philip Wylie, Joseph Hilton Smyth, Ray Train, Ted Mark, Gore Vidal, John Rechy, B. F. Skinner, Robert Silverberg, Ursula Le Guin, and Richard Matheson.

² Hannah Arendt, “Man’s Conquest of Space,” *The American Scholar* 32.4 (1963): 527-540.

Read together, these diverse sources show us the outlines of a numerical imaginary animating postwar American literature. “Social Science Fictions” shows how genre fiction took up mathematical formalism in the service of social realism and developed modes of narrative representation for an age of statistical aggregation. The cultural scene of cold war America has been understood as a battle of two cultures waged on the domestic front between arts and sciences.³ I argue that the arts and sciences were collaborators rather than combatants: together, they forged a new aesthetic paradigm that allowed mass market genres to carry the mantle of literary value in an era when the credibility of high literature was undermined by quantification. New computational technologies and statistical methods developed in state-funded think tanks and universities prompted a quantitative sea change in the midcentury social sciences, making human behavior and social processes newly available to quantitative capture and numeric description—to counting, in short. But this does not so much de-aestheticize the novel as it does convert math and science into potential aesthetic categories. From that perspective, the scientism of the cold war was not the enemy of literary humanism but rather a spur to the reconfiguration of the literary protocols of the period. As Vidal put it, assessing “The Novel in the Age of Science” in 1965, “This is scientism, a proper word,

³ On the “two cultures” see C. P. Snow, *The Two Cultures and the Scientific Revolution* (1959); F. R. Leavis, *Two Cultures? The Significance of C. P. Snow* (1962); and Lionel Trilling, “Science, Literature, and Culture: A Comment on the Leavis-Snow Controversy,” *Commentary* 33 (1962): 461-477.

by the way, for those addicted to the manner rather than the spirit of science. Scientism has been responsible for a century of deliberate experiment in all the arts.”⁴

The project is bookended by two supposed crises, or two discourses of crisis: the death of the novel and the crisis of the humanities. It reads these two kinds of “quantitative turn”—the first in representation, the second in method—into the long rise of “social science fiction” after 1945. One impetus of the project is to articulate genealogical relations between methods and the representational modes, styles, and vocabularies that are their conditions of possibility. Focusing on the rise in cultural prestige of scientific method is a naturally interdisciplinary project that finds its shape in a constellation of fields concerned with the gray area between quantification and quality of life, including literary studies and extending to history of sexuality, sociology, science and technology studies, and media studies. Adopting the term “social science fiction” from my archive, and leveraging it as a phrase situated between historical phenomenon and analytic category, each chapter pursues a site of representational negotiation between the postwar genre system and the professionalizing human sciences. Doing so enables me

⁴ Vidal’s assessment of the novel in the age of science concludes that “the state of fiction reflects, as I said, the state of the society. And that is why the two principal trends in our writing are the so-called novel of the absurd and the autobiography of the alienated, to use a cant word of the 1940’s. Novels of deliberate mystification seem to me a natural response to the world of statistics and applied science. Just as the psychologists are ‘perfecting’ a whole new series of tests which they are certain will reveal personality once and for all and help the Government to anticipate security risks, the novelists are showing us, through what only appear to be absurd narratives, the huge mystery of human personality and the impossibility of measuring it statistically.” Gore Vidal, “The Novel in the Age of Science,” *The Quarterly Journal of the Library of Congress* 22.4 (1965): 288-299.

to assess contemporary critical debates in light of a longer history of interdisciplinary negotiation.

Recent work in the field of post-45 literary criticism has attempted to upend literary historical accounts premised on assessments of cultural value and has undertaken instead a redescription of the social field and institutional history of literary production and reception. In kindred spirit to Merve Emre's recent book *Paraliterary: The Making of Bad Readers in Postwar America*, which centers "bad" readers to rethink the aesthetics and politics of the postwar period, I center "bad" writers.⁵ This dissertation offers readings of novels few scholars have read, and indeed in most cases I would not recommend reading them. Centering texts little known or maligned has been a strategy to evade assessing the relationship between the humanities and sciences on the premise that the humanities offer beauty, complexity, and subtlety while the sciences dehumanize, abstract, and quantify—a recapitulation of the "two cultures" discourse. The crisis discourse of the contemporary humanities sees literary criticism embattled by the over-funded sciences from without and ascendant quantitative methods from within. Rather than begin with this antagonism, I set out by centering literature that seems to have a greater affinity with the sciences than the humanities, and a greater interest in numeracy than literacy, in order to offer a history of the relation between the sciences and humanities not as preternatural antagonists, but as polarizing discourses of normative

⁵ Merve Emre, *Paraliterary: The Making of Bad Readers in Postwar America* (Chicago UP, 2017)

inquiry that between them constitute the field of postwar higher education, aesthetic discourse, and social theory.

Rather than reading mass market literature as the enemy of high culture, I read mass culture as a repository of minor aesthetics rightfully skeptical of the politics of cultural value, laboring to generate a representational protocol adhering to the tenets and utilizing the resources of the then ascendant master term of social discourse—quantification. This project asks after the genres that jump ship from the aspirational project of high literary value, articulating a different goal—to exploit the affordances of a new regime of quantitative social description and iterative simulation.

These circumstances were understood at the time to be precipitating the “death of the novel,” on the basis of its exhausted aesthetic possibilities, its marginalization by mass culture, or the failure of a juvenile American culture pathologically obsessed with death and incapable of mature sexuality to adequately translate the aesthetic project of European realism to its new context.⁶ In light of the history adduced in this dissertation, I suggest that the discourse prognosticating the death of the novel is best understood as a reaction to the ascendancy of quantification in multiple domains of life and letters. In Lionel Trilling’s assessment of the fate of the novel in the twentieth century, class society has become mass society, “ideological organization has cut across class organization, generating loyalties and animosities which are perhaps even more intense than those of

⁶ These perspectives were espoused, respectively, by John Barth, “The Literature of Exhaustion”; Lionel Trilling, “Art and Fortune”; and Leslie Fiedler, *Love and Death in the American Novel*.

class,” and the novel in America is consequently a bourgeois form without a bourgeoisie.⁷ In “Art and Fortune,” Trilling inquires whether the novel is “still a living form,” and concludes that its fate, while not sealed, is hanging in the balance. The new circumstance under which “ideological organization” has supplanted “class organization” interferes with the artist’s ability to maintain a healthy ambivalence towards his own society, eroding “the will” with “the rule.” In Trilling’s estimation, “now politics, and not only politics but the requirements of a whole culture, make verbal and articulate the motive of every human act: we eat by reason, copulate by statistics, rear children by rule.” The predominance of “reason,” “statistics” and “rule” is inimical to the novel, as “the increase of conscious formulation, the increase of a certain kind of consciousness by formulation, makes a fact of modern life which is never sufficiently estimated.” Of course the class system persisted and still does, but as an ideology it squared poorly with the postwar meritocratic fantasy that everyone in America is middle-class. The emergence of the masses as a demographic abstraction is an ideological transformation—“a certain kind of consciousness by formulation”—underwritten by statistical metrics that make groups and aggregates newly available to analysis and consolidation, and those statistical metrics have their own aesthetic imprint that proceeds in part by subjecting the novel to the same forces of disaggregation, specialization, and permuted recombination as everything else.

⁷ Lionel Trilling, “Art and Fortune,” *The Liberal Imagination* (MacMillan, 1948): 256-280.

Aggregation presents a problem for the novel. As Alex Woloch has shown, the strategies of novelistic realism for representing collectivity are many but finite, constrained by the “character-space” of the novel and the logics of proportion and representativeness that center individuals as drivers of narrative development and guarantors of verisimilitude.⁸ As Ursula Le Guin put it, “herds of bad guys are the death of a novel. Whether they’re labelled politically, racially, sexually, by creed, species, or whatever, they just don’t work” (vi).⁹ Put another way, social problems demographically rendered present an obstacle to novelistic representation, confounding the character system with masses and groups. As we will see in the chapters that follow, representing groups requires strategies and tools like seriality, cliché, scale shifts and scale collapse, and recourse to genre conventions. I center literature that embraces these principles to innovate aesthetic strategies made to the measure of a quantified world. I am guided by Joanna Russ’s proposition that science fiction, “despite superficial similarities to... modern fiction,” always has a collective protagonist, and Steven Marcus’s suggestion that “a pornographic novel might be written by a computer. If one feeds in the variables out will come the combinations” (271).¹⁰ Marcus notes that “the prose of a typical

⁸ Alex Woloch, *The One vs. the Many: Minor Characters and the Space of the Protagonist in the Novel* (Princeton UP, 2003).

⁹ Ursula Le Guin, “Introduction,” *City of Illusions* (Harper & Row, 1978).

¹⁰ Joanna Russ, “Towards an Aesthetic of Science Fiction,” *Science Fiction Studies* 2.2 (1975): 112-119. Steven Marcus, “Pornotopia,” *The Other Victorians: A Study of Sexuality and Pornography in Mid-Nineteenth-Century England* (Basic Books, 1964). In the interest of thickening the literary history of sexology, it is worth noting that Marcus’s

pornographic novel consists almost entirely of clichés, dead and dying phrases, and stereotypical formulas... [which are] interchangeable without any loss of meaning. They tend to function as non-specific abstractions, and can all be filled with the same general content” (279). He finds in this special case the possibility of insight into contemporary literature more generally, noting that, “inexorably trapped in words, pornography, like certain kinds of contemporary literature, tries desperately to go beneath and behind language; it vainly tries to reach what language cannot directly express but can only point toward” (279-280).

Novels that attempt to develop collective protagonists, or center groups rather than individuals, veer uncomfortably close to leaving the realm of the literary altogether—and becoming sociology. In his review of Mary McCarthy’s *The Group* (1963), Norman Mailer assesses that in the last analysis, “her book fails as a novel... but it is enormously successful as sociology.”¹¹ Mailer derogates the novel’s literary merits by associating it with sociology, but recognizes at the same time that sociology is itself an ascendant metric of cultural relevancy, suspecting that *The Group* “will continue to exist as a classic in sociology long after it is dim and dull as a novel, it will survive in Soc Sci I at every university and junior college.” With this assessment Mailer voiced a common backhanded compliment of the era, which Chapter 2 will explore in more detail with

influential study of pornography was composed while he was in residence at the Kinsey Institute for Sex Research in Bloomington, Indiana.

¹¹ Norman Mailer, “The Mary McCarthy Case,” *New York Review of Books*, October 17, 1963.

respect to the supposedly sociological merits of John Rechy's hustler novels. Mailer argues that *The Group* fails as a novel to the extent that the characters in the group are not "made sufficiently eccentric to separate clearly from one another," making it a "collective novel" in the worst sense—a novel depicting an undifferentiated mass, rather than a character network. Mailer writes of *The Group* that it is "a collective novel in which the most interesting character is missing, a collective novel in which none of the characters have sufficient passion to be interesting in themselves."

Mailer reads the failure of McCarthy's novel as of a piece with the failure of realism to be translated into the postwar period, speculating that "the work of realism was done for the nineteenth century, but whether it can be done for the middle of the twentieth century we shall indeed not know unless the attempt is made. So may have reasoned McCarthy," whose efforts amounted to taking "a little still-water of society and captur[ing] it in its proportions." Mailer not only derides McCarthy's novel as "sociology" but he likewise criticizes it as a kind of ploddingly materialist construction project. He sees McCarthy as "an engineer manqué in literature," whose "long unbroken paragraphs settle in like bricks. They are all too equal to one another." He describes a "mild physical boredom in the act of reading as if one were watching a wall being stacked up rather than seeing the metamorphosis of a creature." Mailer reads McCarthy as an engineer and her novel as a kind of masonry, forecasting a conflation of words and things that will be of interest especially in Chapter 3's investigation of the convergence of science fiction and campus novel, which aims to recast the theory of the campus novel

that takes McCarthy's earlier effort, *The Groves of Academe* (1952), as exemplary of the genre.

In Mailer's estimation, McCarthy's novel takes a stab at articulating a postwar realism that falls short of literary excellence and lands it in the domain of sociology, but it will be the argument of this dissertation that this is the sign of precisely McCarthy's success. Critiques of literature that bears an uncomfortable resemblance to sociology or brick-laying suggest an affinity between novelistic forms, social forms, and institutional forms, and they point to the history of this concern as imbricated with debates about cultural value, literary aesthetics and politics, and new social movements. This history helps us shed new light on a question that remains pressing today: what does literary form offer to an analysis of social form? Rather than approach this question through readings of exemplary canonical texts, instead I want to provisionally take seriously the critiques of literary novels like McCarthy's that see "collective novels" as slumming in the social sciences, and ask: what are the literatures that, rather than running from this critique, avowed their affinity with the sciences proudly?

I am guided by Samuel Delany's warning against reading science fiction for its sociological content. Delany argues that "the SF series" is a "specific form" and should be read as such. The reason we fail to read this way Delany attributes to a misplaced "nostalgia for sociological density," by which he means that the desire to dignify science fiction motivates critics to wrongly impute to its historical development the qualities of the high realist novel, when in fact it uses serial form to very different ends—not density,

but “plurality” and “recursivity.” He writes (specifically of Asimov, but with general applicability): “the basic strategy of the series seems to be: the solution of the problem in story N becomes the problem to be dealt with—either directly or in principle—in story N+ 1.” According to Delany’s account, that is, science fiction is formally bound by the principles of mathematical series, rather than serial literature.¹²

As the project develops, it could benefit from developing the readings of little-known literatures adduced in the chapters that follow in order to cast a new light on canonical texts flirting with the same thematics, like Nabokov’s sexological novel *Lolita* (1955) and his academic novels *Bend Sinister* (1947), *Pnin* (1957), and *Pale Fire* (1962), or Thomas Pynchon’s *Gravity’s Rainbow* (1973) which fuses mathematical formalism and sexuality into a quantitative erotics of war. But for now, an emphasis on the cultural field of mass market and minor literatures was necessary to establish the literary historical circumstance that might enable new readings of canonical works, and new canons.

I want to suggest that the “death of the novel” discourse, while a rhetorical formation more than an empirical description, nonetheless captures a historical phenomenon of much broader scope. That is, not the death of the novel so much as the disaggregation of its functions. The novel’s social functions have always been on the one hand, entertainment, and on the other, education, a form enabling private distraction and

¹² Samuel Delany, “Reflections on Historical Models in Modern English Language Science Fiction,” *Science Fiction Studies* 7.2 (1980): 135-149.

fantasy as well as a vessel for encoding and disseminating norms and knowledge. Science fiction and erotic fiction both recombine these elements in new and different ways. Pulp erotica pitches sexological knowledge for entertainment and titillation. Science fiction rejects its own juvenile entertainment imperatives of the early twentieth century as “escape literature” of the space-opera variety in favor of the knowledge-encoding function of “new wave” social science fiction committed to the extrapolation of social problems and speculative solutions. If the novel has been theorized by Mikhail Bakhtin and others as the great absorber of competing forms and genres, I want to suggest that in the postwar period what it might once have absorbed into its proper literary purview it now must give way to as the lines of flight of specialist discourse and atomization endow the partiality of genre with unprecedented representational purchase.

Hugo Gernsback was the founding editor of the first magazine devoted entirely to science fiction stories, the pulp periodical *Amazing Stories*, which began publication in 1926. Through the magazine, Gernsback named a genre, popularizing “scientifiction” and later “science fiction,” earning him the title “father of science fiction” in fan lore and histories of the genre, and precipitating the naming of the top award in the science fiction field “the Hugo.”¹³ But *Amazing Stories* was far from Gernsback’s only publishing venture. His Experimenter Publishing Company printed and distributed many gadgetry

¹³ Gernsback’s legacy was first and lastingly enshrined in the field of modern science fiction by Sam Moskowitz, *Hugo Gernsback: Father of Science Fiction* (Criterion Linotyping & Printing Co., 1959).

and radio magazines, as well as *Sexology: Sex Science Magazine*.¹⁴ As Gernsback's various radio and technology themed magazines lost traction in the lean years of the depression, he set out to publish more profitable titles. It was under these conditions that Gernsback founded *Sexology* in 1933, on the premise that prospective readers with the disposable funds to sustain their subscriptions during the depression would be serious-minded professionals more interested in scientific information than escapist science fiction. Gernsback's prediction proved profitable, and the financial success of *Sexology* effectively subsidized Gernsback's science fiction and technology publications for much of the 1930s and '40s.¹⁵ *Amazing Stories* and *Sexology* magazines shared staff, including illustrator Frank R. Paul, who brought his signature style to drawings of interplanetary travel and medical diagrams of genitalia alike.

¹⁴ *Sexology* magazine was variously subtitled *Sex Science Illustrated* and *Sex Science Magazine: An Authoritative Guide to Sex Education*, and much later it was re-titled *Sexology Together* and *Sexology Today*, before ceasing publication altogether after its final issue in December 1983. In its heyday, *Sexology* had a circulation of approximately 200,000 readers. It was published for fifty years, at which point it was effectively superseded by *Playboy* and the like.

¹⁵ Mike Ashley, "Science Fiction Depression," *The Gernsback Days* (Wildside Press, 2004): 202-213. Ashley's study is exceptional in its integration of *Sexology* into the discussion of Gernsback's professional trajectory; most studies of Gernsback tend to emphasize his contributions to science fiction without in some cases even mentioning his interest in sexology. More expansively defined histories of Gernsback as publisher tend to take a broader view of his publishing interests in radio and hobbyist technologies as significant context for his science fiction publishing, but again make scant mention of *Sexology*. There is evidence to suggest that *Sexology* was not merely an opportunistic publishing venture for Gernsback, but an area of genuine interest to him. Gernsback had an extensive correspondence with Alfred Kinsey, numbering more than 200 letters between them. Kinsey was very aware of and interested in Gernsback's popularization of sexology through his magazine. There is much research still to be done on this confluence of actors, interests, and publications.

Gernsback's interest in the print culture of tinkering extended to sexual science. Chuck Rowland, a co-founder of the early homophile organization the Mattachine society, recounts the transformative effect of encountering *Sexology* magazine as a ten year old, crediting his later political activity with the consciousness raising effect of discovering his sexuality in print:

I came across a series of articles on homosexuals in a magazine called *Sexology*, which I found in my father's drugstore. His drugstore had the only newsstand in town, a little rural village called Gary, South Dakota, population 535 at that time. I remember very distinctly snatching a copy as soon as it came in and reading that if one was homosexual, he shouldn't feel strange or odd, that there were millions of us, that there was nothing wrong with it. As soon as I read that there were millions of us, I said to myself, *Well, it's perfectly obvious that what we have to do is organize, and why don't we identify with other minorities...* we would wield tremendous strength.¹⁶

In a "little rural village" with a population of 535, Rowland read that there were "millions" of homosexuals—literally thousands of times more people than there were in his hometown, and all of them gay. *Sexology* spurred the political consciousness of Rowland and presaged the organization he would go on to co-found. Gernsback, often

¹⁶ Rowland was interviewed in 1989 by Eric Marcus, who recorded and transcribed Rowland's remarks for his oral history of gay liberation, *Making Gay History: The Half Century Fight for Lesbian and Gay Equal Rights* (Harper Perennial, 2002), pp. 11-12.

referred to as the “father of science fiction,” is in Rowland’s account recast as the unwitting grandfather of gay liberation.

The symbiotic material conditions of the production of a popular print discourse of sexology and of science fiction recommends a methodology attuned to the at once more capacious and more grounded history of social science fiction, an attunement to the aesthetics of scientism. Grant Wythoff has compellingly presented Hugo Gernsback as a “pulp media” theorist who anticipated the field of media studies with his attention to the cultural impact of emergent media and technology.¹⁷ Adding to this sensibility an attention to what John Rieder calls the “mass cultural genre system” enables us to see sexology among the technologies organizing the new media of postwar print culture.¹⁸ The popular culture of science fiction is most often described in terms of fandom, and the popular culture of sexology, to the extent that it registers as having one at all, is registered mostly in terms of moral panic, but it is the premise of this project that these two dispositions may not be so distinct. Thus the chapters that follow are about the entanglement of erotica and science (Chapters 1 & 2), and of science fiction and education (Chapters 3 & 4). Chapters 1 and 2 establish the relationship between quantitative social science and group identity, and Chapters 3 and 4 ask after utopian speculation in a postwar culture suffused by a logic of quantification.

¹⁷ Grant Wythoff, “Introduction,” *The Perversity of Things: Hugo Gernsback on Media, Tinkering, and Scientifiction*, ed. Grant Wythoff (Minnesota UP, 2016): 1-59.

¹⁸ John Rieder, *Science Fiction and the Mass Cultural Genre System* (Wesleyan UP, 2017).

In its attention to the interactions between social scientific and prose fiction discourses of the postwar period, this project is informed by Lennard Davis's idea of the "news/novels matrix."¹⁹ Davis's account of the origins of the novel finds that, "rather than a series of genres displacing each other, we are looking at a discourse [of 'prose narrative in print'] that is forced to subdivide" (44). Davis's account of the history of the novel is underwritten by a shift from considering the novel in terms of genre and instead analyzing it in terms of discourse, reconceiving of its logics of historical transformation according to a principle of discursive subdivision rather than generic displacement. While Davis marshals this analytical framework towards an account of the origins of the novel, I find it equally illuminating for the moment of the novel's purported demise at the hands of mass culture, under which conditions the novel appeared to be reabsorbed into a field of generic possibilities (the creative writing program's short stories, popular genre fictions, pop-sociology and pop-psychology, etc.) where it ceased for a moment to be the master term.

Repurposing Davis's account for the postwar period, we find Bakhtin's account of the novel cannibalizing adjacent genres encountering Lyotard's account of the atomization of knowledge domains in post-modernity, such that the authority of the discourse long organized by the novel is subdivided into popular and mass-market genre fictions on the basis of their differentiated knowledge-functions as much as their

¹⁹ Lennard J. Davis, "News/Novels: The Undifferentiated Matrix," *Factual Fictions: The Origins of the English Novel* (Columbia UP, 1983).

divergent aesthetic practices. Rather than aesthetic displacement, we find cognitive specialization and generic consolidation made in the image of inward-facing expert discourse. This is not to imply any clean alignment between the mass cultural genre system and the professionalizing human sciences, but rather to recognize their shared discursive matrix: prose narrative in print, in which not the printing press but the paperback represented the major technological innovation constituting the material substrate of production, circulation, and generic definition.²⁰

The death of the novel imagines the history of the form in terms of displacement and supersession—in short, sequence—as the novel is killed off by its unworthy successors. But we might recast this sensibility in terms of a logic of discursive subdivision, a matter of multiplication. A few decades after Trilling, on the far side of the divide between late modernism and post-modern literature, John Barth’s “The Literature of Exhaustion” (1967) describes the recently translated Jorge Luis Borges as a mathematical formalist, nominating the permutational and probabilistic as the

²⁰ Barbara Foley’s work on the “documentary novel” is also instructive: “As M. M. Bakhtin has remarked, ‘The boundaries between fiction and nonfiction, between literature and nonliterature and so forth are not laid up in heaven. Every specific situation is historical. And the growth of literature is not merely development and change within the fixed boundaries of any definition; the boundaries themselves are constantly changing’...To say, as Bakhtin does, that the borderline between fiction and nonfiction is ‘constantly changing’ does not mean that writers have not routinely respected such a borderline; it means, on the contrary, that writers have composed their fictions in contradistinction to one or more acknowledged forms of nonfictional writing” (240-241). Barbara Foley, “The Documentary Novel and the Problem of Borders,” *Essentials of the Theory of Fiction*, eds. Michael J. Hoffman and Patrick D. Murphy (Duke UP, 2005): 239-253.

regenerative mechanisms of a revitalized postwar novel. Barth's programmatic statement for the post-modern avant-garde is that it must iteratively exhaust all possibilities in order to formalize its relation to form, to make the novel a caricature of "Novel" by an author only provisionally in the role of "Author."²¹ This is an irony reached through quantity. Irony—that is, artistic self-reflexivity—is the goal, and permutation is the means. Barth proposes that in a time of "ultimacies," of which the novel at its end is but one, a renewed literary project would take its own exhaustion as premise, and proceed from there to make a literature of extinguished linguistic possibility.

The trajectory charted between Trilling's assessment of statistical massification undermining the novel's relevance, and Barth's proposition that a permutative aesthetics of irony might reestablish it, tracks in lockstep with the developments in quantitative social analysis over the course of the same decades. Statistics and aggregates give way to permutation and probability as advances in sampling techniques and their analysis enable increasing degrees of mathematical abstraction in numerical descriptions of the social world. The chapters that follow investigate the literary consequences of these developments in quantitative social scientific methods, from the aggregation techniques of the 1940s (Chapters 1 & 2) to the multifactorial modeling techniques of the 1970s (Chapter 3 & 4), mediated by the development in the 1950s of probability sampling and other stepwise statistical innovations veering away from the empirical and into simulation and modelling.

²¹ John Barth, "The Literature of Exhaustion," *The Atlantic Monthly* (August, 1967).

In the present moment we are witnessing the literary novel referencing and incorporating elements of genre fiction (for instance in the work of Kazuo Ishiguro, Chang-rae Lee, Ruth Ozeki, Colson Whitehead, Karen Joy Fowler, Nathaniel Rich, and Michael Chabon, just to name a few), reasserting the capacity of the novel to incorporate heterogeneous forms and modes after a long interregnum of divergence between, on the one hand, postmodern meta-fiction and global anglophone literary novels, and, on the other, popular genre fictions of the sci-fi, horror, true crime, and romance varieties. This dissertation is situated in the cleft between these two paths for the novel, and it seeks to obliquely shed some light on the present moment of reconsolidation and generic intermixing. The novel now is asking what work genre can do within it, and the question of the aesthetic status of the extra-literary is once again being adjudicated within the novel rather than around or against it.

The dissertation has four chapters. The first two inquire after the effects of the conversion of sex into a quantifiable object of scientific scrutiny on novels' representations of interiority, intimacy, development, and morality. What is the biography of quantity? When the individual becomes a statistic, what vocabularies can be called upon to describe the arc of her life? Chapter 1 considers the mutual implication of social scientific and literary debates about how to adequately represent lived experience. Drawing on archival research conducted at the Kinsey Institute, I read a range of popular first-person accounts of the experience of being interviewed by sexologist Alfred Kinsey in magazines like *Ebony* and *The Woman* that register fascination with the conversion of

biography into quantum that the Kinsey Reports came to represent. The moral panic over the Kinsey reports was not directed at its exposure of lurid sexual secrets but rather its under-exposure of the meaning of sex, its mystification of human psychology by quantification, and its acceleration of the extinction of narrative in the face of a mass culture of numeration.

If the motto for Chapter 1 is the fascinated cry of the research subject—"I was quantified," that of Chapter 2 might be the shout of newly legible deviant collectivities—"We were quantified." Chapter 2 traces the drift of the trope of "number" from sexual science into sexological aesthetic, reading Gore Vidal's *The City and the Pillar* (1948) with his pseudonymously authored "Edgar Box" erotic detective trilogy (1952-1954), and John Rechy's two best-sellers *City of Night* (1963) and *Numbers* (1967). I argue that gay pulps offered a resolution to the antipathy of narrative and number that the popularity of the Kinsey Reports made so salient, marrying the distribution logics of demography and the humanist psychology of character in the literary form of serial sex.

The following two chapters take up these questions of number, narration, and character to ask after the quantification of collectivity. When statistical persons collectivize, do they multiply? What does reproduction mean in an arithmetic world? Chapter 3 reads 1970s science fiction by Ursula Le Guin and Robert Silverberg that reimagines the infrastructure of the city as a form for rescaling social transformation. I situate these narrative investigations of urban planning and social reproduction in the terms of contemporaneous social theory portending the coming of the "multiversity,"

former University of California President Clark Kerr's name for the administratively top-heavy postwar college campus. Social science fiction of the postwar period turns to inner space and asks after the relationship between interior spaces and psychological interiority. If Kinsey embodied the authority of quantification to tell society what it is, this chapter asks who has the authority to tell society what it should be.

The motto of Chapter 3 might be "I was multiplied," pursuing the consequences of social reproduction that adheres to a logic of self-similar replication. In Chapter 4, "We were multiplied," as the unchecked reproduction of the species spells planetary peril in the form of population crisis. Chapter 4 puts the discourse of population explosion into contact with contemporaneous space race anxiety to elaborate a genealogy of parametric thinking that set the historical ground for our present discussions of planetarity and climate change. Collating a diverse set of cultural texts, including ecological disaster fiction, propaganda pamphlets, and the films *The Incredible Shrinking Man* (1957), *Fantastic Voyage* (1966), *Soylent Green* (1973), and *The Incredible Shrinking Woman* (1981) around their shared interest in describing the limits of the earth as a vessel for containing human life, I show how a discourse of scale articulated the fates of humanism and scientism with one another.

CHAPTER 1: I WAS KINSEY-IZED: VITAL STATISTICS

“All this is going to be exceedingly important, the whole paraphernalia, tables and norms and graphs.”

— Margaret Mead, “An Anthropologist Looks at the Report”²²

I. The Kinsey Epoch

On May 14th of 1957 Wardell Pomeroy of the Kinsey Institute for Sex Research wrote to Philip Wylie (novelist, journalist, polemicist) to thank him for the invitation to go deep sea fishing—he was sorry he could not accept—and to report that Alfred C. Kinsey was dead. Wylie’s correspondence with Kinsey had begun in May of 1949 when Kinsey wrote Wylie to thank him and his wife for contributing their sex histories to his studies of *Sexual Behavior in the Human Male* (1948) and *Female* (1953), collectively known as the Kinsey Reports. On May 15th of 1949 Wylie replied and enclosed a copy of his recently published novel, *Opus 21: Descriptive Music for the Lower Kinsey Epoch of the Atomic Age, a Concerto for a One-Man Band, Six Arias for Soap Operas, Fugues, Anthems, and Barrelhouse* (1949). Wylie noted that he had

²² Margaret Mead, “An Anthropologist Looks at the Report,” *Problems of Sexual Behavior* (American Social Hygiene Association, 1948), p.63.

“marked, underneath my signature in the book, a few page references to you and your work as they are discussed here.”²³

Kinsey and his work are discussed all over the novel, including in a scene of reading the report itself—newlywed Yvonne covertly reads the volume on the male, wrapped in the dust jacket of Aldous Huxley’s *Ape and Essence* as a decoy, looking for insight into her botanist husband Rodney’s newly efflorescent homosexuality. But the novel’s uptake of Kinsey is most evident in its style, a prose thick with winking half-puns issuing from a substrate of pithy scientism and arrayed in the service of an aesthetics of quantification. Upon reading the report Yvonne exclaims, “Men! Why should anyone care what they feel?” Her companion, Philip, is quick with an answer: “O-h-h-h,” he sings, “because they’re so plentiful” (26). Affect vouchsafed by quantity: the feelings one might have about the narrativized affective experience of another—“why should anyone care?”—are underwritten by the quantifiable demographic presence of others like them in one’s milieu—“they’re so plentiful.” Philip says this to Yvonne half-jokingly, but *Opus 21* elaborates the idea with concerted seriousness.

Wylie’s *Opus* is less a novel than it is the program music that would conjure the novel form in another register. Its subtitle, *Descriptive Music for the Lower Kinsey Epoch of the Atomic Age, a Concerto for a One-Man Band, Six Arias for Soap Operas, Fugues, Anthems, and Barrelhouse*, cites a motley crew of minor musical genres intermingling

²³ Letter from Wylie to Kinsey, May 15, 1949, in the Kinsey Correspondence File at the Kinsey Institute Archives in Bloomington, Indiana.

across spectrums of scale and taste. “A concerto for a one-man band” enfolds the orchestra into the circus-trick soloist; “arias for soap operas” bring the virtuosic vocal performance to the melodramatic small screen. The musical thematics of the subtitle do not map in any straightforward way onto the novel—it neither consists in nor represents any music, musicians, performance, or composition. Rather, it designates with its title an effort to stretch literary modes of representation to capture worlds seemingly beyond their ken, finding a model in “descriptive music,” a technical term for instrumentals designed to musically render extra-musical narrative elements like bird calls, running water, marching soldiers, and, perhaps, sexological research. Like Yvonne, who reads the Kinsey Report wrapped in the jacket of a novel, Wylie offers a reading of Kinsey inside of a literary framework, but one that itself dissimulates as music.²⁴ *Opus 21* performs a concentric set of displacements of narrative function away from language, nominating music as a tool for tuning in to the shared representational registers of literature and quantification.

Unaffectionately but accurately described as a “portmanteau fantasy” by an early reviewer, Wylie’s novel does not synthesize these seemingly divergent registers so much

²⁴ It is worth noting that the dust jacket Yvonne selects as disguise is itself a literary critical polemic in miniature. Aldous Huxley’s *Ape and Essence* (1948), published the same year as the Kinsey Report on the male, is a formally experimental science fiction novel that presents a screenplay dramatizing large scale destruction within a pseudo-autobiographical frame story. Yvonne disguises the Kinsey Report as a near-future dystopia of quantophrenic disaster for the human species, which in the end may be no disguise at all. On “quantophrenia,” a mania for potentially meaningless quantification, see Pitirim Sorokin, *Fads and Foibles in Modern Sociology* (London: Mayflower, 1958).

as it abuts them to one another, and leaves the rest to the reader's imagination.²⁵ The novel follows the character Philip Wylie—who shares the profession of writer and much else besides with his creator—through a single weekend in New York City spent holed up in a hotel room attempting to edit a serial he has written for a “slick magazine.” The action of the novel thus unfolds in the interstices of the editing process for a magazine serial, turning its form into the mirror-image of the magazine piece around which it takes shape. Between his edits, Philip meets a rotating cast of characters in the hotel lobby, which is where he finds Yvonne with her covert Kinsey Report.

Yvonne reads the Kinsey Report wrapped in the jacket of a novel, indexing her shame at being caught reading a report on sexual behavior in plain sight, but at the same time suggesting that the Report wrapped in a literary frame might yield new results, and further that under its skin the novel may have always had something scientific in it, too. Wylie's novel is “a sample of the aggregate” set to a melody. In a parenthetical aside to the reader, the narrator (the character Philip Wylie) asks “Do you imagine I tell you all that happens, here?” and proceeds to explain that what he offers is neither comprehensive nor exemplary: “I give you hardly the essence, my friend—but only a sample of the aggregate—a biopsy of its own sort” (268-269). This play on the biopsy and the aggregate—on the body and the social body—is the crux of the novel. Its characters become instruments in the elaboration of its “descriptive music,” and they riff freely on

²⁵ Albert Guerard, Jr., “Portmanteau Fantasy,” 29 May 1949, *New York Times Book Review*, p. 46.

their feeling for numbers. The novel positions female prostitutes and male homosexuals as the new protagonists of a numeric social order, for they know what it means to be counted, and to have your number counted against you.²⁶ One character says to another, “A man can get as intense feelings from statistical tables as a woman can from Sinatra’s brow wave. Vital statistics give them to me. I had such sensations when, after the publication of the Smythe Report, I pensively ran over the Periodic Table. Many other charts and graphs deeply affect me” (22). “Vital statistics” is the novel’s organizing pun, and I suggest that what it may lack in elegance as rhetorical play it recoups as historical descriptor, capturing an animating tension between life and math that makes it an apt mnemonic for the period the novel nominates the “Kinsey Epoch.”

Wylie’s novel thematizes an inquiry into the biography of quantity. Through his novel we can see a question being newly posed: what if the ontology of the self is not narration but rather numeration; and what if the elaboration of the self in number, rather than evacuating its grounds for meaning, enriches it with new resources? By nominating its moment the “Kinsey Epoch of the Atomic Age,” Wylie’s novel also gestures to a more expansive context of significance for the Kinsey Reports—not merely a watershed text in

²⁶ With this uneasy coalition of the quantified, the novel anticipates subsequent developments in deviance studies as it develops in part through the Institute for Sex Research. William Simon & John Gagnon’s *Sexual Deviance* (1967) was conceived based on research the two editors conducted while fellows at the Kinsey Institute for Sex Research starting in 1959 and 1964, respectively. That volume unites juvenile delinquents, female prostitutes, and male homosexuals under the shared conceptual banner of “sexual deviance”—with a speculative addendum regarding that fabled but as yet unsubstantiated group, “the lesbians.”

the field of sexology, but a lightning rod for a larger cultural reordering around quantitative social description. The “Kinsey Epoch” directs our attention to an inter-media network in which the novel constitutes but one technology and one discourse for articulating the national-cultural meaning of sex. The novel is situated among the musical arts, soap opera, memoir, journalism, the Smyth report, the Kinsey report, the census, etc., constituting an interdisciplinary and multimedia effort to adjudicate the question of national character on the basis of the narration/numeration of sexual practice. This inquiry—into the narrative meaning of number and the cultural meaning of sex—is pursued across an expansive array of cultural production and professional consideration.

Work in the history of the quantitative social sciences has described the way in which the American public fell into the thrall of the quantitative in the mid-twentieth century, making for what Sarah Igo has called a “cult of statistics,” for which the Kinsey reports were a galvanizing object.²⁷ They are documents of the fervor to “stand and be

²⁷ On the long history of statistics and the sciences of society subtending the moment about which Igo is writing, see Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (Pantheon, 1970 [1966]) ; Ian Hacking, “Biopower and the Avalanche of Printed Numbers,” *Humanities in Society* 5 (1983):279-95; Gerd Gigerenzer, et al., *The Empire of Chance: How Probability Changed Science and Everyday Life* (Cambridge UP, 1989), especially chapter 7, “Numbers Rule the World”; Ulrich Beck, *Risk Society: Towards a New Modernity*, trans. Mark Ritter (Sage, 1992 [1986]); Jean-François Lyotard, *The Postmodern Condition: A Report on Knowledge*, trans. Geoff Bennington and Brian Massumi (University of Minnesota Press, 1984 [1979]), especially the section on “Knowledge in Computerized Societies.” On the aesthetics of the statistical in the postwar period, analyzed from highly divergent dispositions regarding the social-psychic-affective consequences of this aestheticization, see Kathleen Woodward, *Statistical Panic: Cultural Politics and the Poetics of Emotions*

counted” that overtook the American public in this moment—the excitement and the trepidation of embarking on a large scale social investment in the order of the numeric.²⁸

Under these conditions, it was not entirely clear who among the humanistic and qualitative fields was in a privileged position from which to critique the sweeping claims of quantitative social studies; the rangy roster of intellectuals and disciplinary affiliations marshalled to comment on the social significance of the Kinsey Reports in the ubiquitous expert symposia convened upon their publication is illustrative in this regard.²⁹ As Donna

(Duke UP, 2009) and Orit Halpern, *Beautiful Data: A History of Vision and Reason since 1945* (Duke UP, 2014).

²⁸ Sarah Igo, *The Averaged American: Surveys, Citizens, and the Making of a Mass Public* (Harvard UP, 2007).

²⁹ See for instance, *About the Kinsey Report: Observations by 11 Experts on “Sexual Behavior in the Human Male,”* eds. Donald Porter Geddes and Enid Curie (The New American Library of World Literature, 1948), which includes contributions from an anthropologist, philosopher, psychologist, psychiatrist, medical clinician, anatomist, lawyer, sociologist, economist, biologist, and expert on maternal health. *Problems of Sexual Behavior* (American Social Hygiene Association, 1948) documents the “proceedings of a symposium held by the American Social Hygiene Association during its annual conference of Social Hygiene Executives, March 30-April 1, 1948, in New York City, to consider the first published report of a series of studies of sex phenomena by Professor Alfred C. Kinsey, Wardell B. Pomeroy, and Clyde E. Martin, and its relation to the social hygiene program.” It includes contributions from an embryologist, anthropologist, sociologist, statistician, primary school educator, concerned parent, psychiatrist, lawyer, public health expert, and two reverends. Many periodicals published similar “expert panels” on the Reports, including “Kinsey’s Runaway Best-Seller and Its Implications Discussed by 14 Experts,” *PM Newspaper*, May 2, 1948; Harriet Smith, “The Kinsey Report Presents Some Facts and 13 Experts Find Varied Conclusions,” *Sacramento Bee*, April 24, 1954; Nate Haseltine, “Experts Evaluate Kinsey Sex Study,” *Washington Post*, January 17, 1954; “Four Experts Examine the Kinsey Report,” *Saturday Review of Literature*, March 13, 1948; “The Kinsey Report and Its Contributions to Related Fields,” *The Scientific Monthly*, May 1950; “A symposium on one of the most vital question of our times: Must We Change Our Sex Standards?” *Readers Digest*, June 1948; Kathryn Close, “Specialists and the Kinsey Report,” *The*

Drucker notes, “Examining [the] criticism shows that Kinsey’s work was absorbed so quickly and extensively across academe that it changed the dynamics of intra-disciplinary conversations about sexuality even if it did not transcend disciplinary boundaries” (76).³⁰

While the Kinsey reports famously incited a public outcry against their perceived threat to moral propriety—most famously in the congressional pornography proceedings that led to the research’s defunding by the Rockefeller Foundation in 1954—on the whole the gripe with Kinsey was not about the lurid exposure of sexual secrets to an innocent general public. Quite the contrary: the contemporary concern was that the report’s account of American sexuality was drained of all the lurid details that would give it social meaning. As Margaret Mead put it, “whenever you start talking about the meaning of sex, you get into trouble. Dr. Kinsey doesn’t. Dr. Kinsey has limited himself to the description of a non-inter-personal and meaningless act” (64)—and that was itself the problem.³¹ The horror of the Kinsey research was that of watching one’s most privately held experiences redacted into behavioral data that could be recorded on a single page, and encoded on a single punch-card. As one anonymous woman put it, reporting in 1950 on her unanticipated “emotional reaction” to seeing her sex history “Kinsey-ized,” “there, in

Survey, April 1948. George Gallup, in what retrospectively appears to be nearly a mise en abyme of survey methodologies deployed to assess one another’s validity, conducted a Gallup Poll that discovered “Opinion Divided on Discussion of Sex Matters by Medical Experts in Newspapers,” July 17, 1943.

³⁰ Donna J. Drucker, “‘A most interesting chapter in the history of science’: Intellectual Responses to Alfred Kinsey’s *Sexual Behavior in the Human Male*,” *History of the Human Sciences* 25.1 (2012): 75-98.

³¹ Margaret Mead, “An Anthropologist Looks at the Report,” *Problems of Sexual Behavior* (American Social Hygiene Association, 1948): 58-69.

code, on one sheet of paper lay my emotions, my dreams, my life” (109).³² George Corner’s overview of the Kinsey research in the 1948 American Social Hygiene Association symposium dedicated to the Reports notes that part of the disarming efficacy of Kinsey’s interview method involved the interviewer sitting so as to reveal his score-sheet to the interviewee: a gestural performance of impersonality that is simultaneously a burlesque of numeric redaction on full display to the interview subject who can watch her autobiographical sentences transcribed into an uninterpretable grid of checked boxes and single letters.³³

At that same social hygiene symposium, Margaret Mead would claim that “it is not daring in the United States to talk about copulation; it has been done for a long time. The thing that is daring in the United States is to discuss the fact that sex has emotional connotations and meaning to people” (64).³⁴ She faulted not just the report for its singular pursuit of the quantitative, but the cultural milieu that validated that investment, writing that “we have here a document of great size, validated by the expenditure of a great lot of money which is very important in America... It has every single requirement of importance – size, numbers, money, meetings, publicity, and sales, all to reinforce the major basic trends in our society that have made sex behavior dissociated, sinful and

³² Anonymous, “I Was Interviewed by Dr. Kinsey,” *Everybody’s Digest* (March 1950): 109-112; condensed from *The Woman*.

³³ George Corner, “The Origins, Methods, and Findings of the Report—*Sexual Behavior in the Human Male*,” *Problems of Sexual Behavior* (American Social Hygiene Association, 1948): 1-19.

³⁴ Margaret Mead, “An Anthropologist Looks at the Report,” *Problems of Sexual Behavior* (American Social Hygiene Association, 1948): 58-69.

meaningless, because it has not been placed in an inter-personal context, it is not attached to the most important values of the relations between people” (68).

Margaret Mead’s own contemporaneously published study of American sexuality, *Male and Female: A Study of the Sexes in a Changing World* (1949) attempted to describe the modes and meanings of sex roles and practices in, as its subtitle announces, “a changing world”—the world at large. Kinsey rejected the comparative, noting in the introduction to the report on the male that studies of sexual behavior undertaken in Soviet Russia and elsewhere were of entirely indeterminate significance to the American public. It is not “a changing world” that underwrites the study, but rather advances in statistical sampling that would allow his team of researchers to quantitatively assess American practices in totally immanent fashion. That is to say, the drift away from narrative extends to an indifference to the historiographical, as well as the biographical: human sexual behavior belongs not to a longer story about the development of civilizations, as it did for Mead, so much as to the synchronic taxonomization of a national typology. In this pursuit, and this framing—American exceptionalist in its very essence—Kinsey’s project (however much it would ultimately come under fire for seeming to be just the opposite) was of a piece with those of the cold warriors attempting to elaborate a theory and typology of American national character that would hold together a social fabric under threat of deterioration from within by deviant types—spies, communists, addicts, homosexuals, rebels, mothers, others.

II. How An Anthropologist Writes

Sexology: Sex Science Magazine reviewed Mead's *Male and Female: A Study of the Sexes in a Changing World* in its April 1950 issue, seizing the occasion to describe the special character of anthropological "aims and methods," for readers more familiar with "the countless sex books which are physiological, psychological, medical or technical." That special character is a professional capacity for "seeing ourselves *objectively*" (604, original emphasis):

The anthropologist is the one person who has devised a *scientific method* for 'seeing ourselves as others see us.' He uses as his laboratory primitive societies, small isolated groups of people who because of their geographical or historical isolation have remained outside of the main stream of history, and preserved special practices of their own that contrast vividly with behavior in large societies.... By immersing himself in many cultures of this foreign type, he compares and contrasts them, and can finally come to recognize his native culture from an 'outside' point of view. Dr. Mead has done just this in seven different primitive cultures... An attentive reading of these descriptions gradually leads the reader to an objective and critical point of view.³⁵

But Mead's own reflections on anthropological objectivity are not so sanguine. She sees the "laboratory" conditions of "primitive societies, small isolated groups" that the

³⁵ "Book Reviews," *Sexology: Sex Science Magazine* 16.9 (April 1950): 604. All emphases quoted here are present in the original.

reviewer names as the conditions of possibility for anthropological knowledge production being dismantled by American imperialism and postwar geopolitical reordering.³⁶

Margaret Mead's *Male and Female: A Study of the Sexes in a Changing World* (1949) repurposed anthropological insights for the American scene. Its introduction, "The Significance of the Questions We Ask," expresses ambivalence about the cultural value of extant methods of social research, symptomatizing Mead's concern that the "changing world" is being reordered by the homogenization of prior cultural particularity at the hands of an ascendant global hegemony of American culture. She sees these conditions as upsetting the grounds of the comparative and microcosmic logics that underwrote her work in the South Sea islands, and her earlier book, *Coming of Age in Samoa* (1928). *Male & Female* will be about American sexuality and sex roles because she can no

³⁶ The perception that island cultures offered *in situ* "laboratory conditions" for American experimentation and study underwrote much cold war research—not just anthropology—described in interdisciplinary detail in *How Reason Almost Lost Its Mind: The Strange Career of Cold War Rationality*, by Paul Erickson, Judy Klein, Lorraine Daston, Rebecca Lemov, Thomas Sturm, and Michael Gordin (Chicago UP, 2013), and in its particular ramifications for studies of American social behavior in Rebecca Lemov, *World As Laboratory: Experiments with Mice, Mazes, and Men* (Farrar, Straus, and Giroux, 2005). Taking isolated primitive cultures as illustrative models of cultural development generally entails a logic of analogical modelling that, in the postwar period, seeks new sites of exemplarity and finds them in the small and relatively insular groups constituted in American institutions like corporations and schools, an insight later deployed purposively in group therapy techniques. See Jamie Cohen-Cole, *The Open Mind: Cold War Politics and the Science of Human Nature* (University of Chicago Press, 2014), especially chapter 4, "The Academy as Model of America." This relocation of the site of exemplarity for the study of developmental dynamics to the campus is something I explore further in Chapter 3.

longer work out the analogical claims that her studies of island cultures as ready-made laboratories seemed to enable.³⁷

The contradictions in Mead's introduction to *Male & Female* are symptomatic of her manifest awareness of this problem but unwillingness to entertain it as a valorization of methods she has historically scorned: the changing times she does not want to make for a change of values, nor for the grounds upon which to recognize the new affordances of old approaches for fear that their negative valences will persist (ahistorically) despite their (historically) new purchase on social reality. Mead worries that the main thrust of the quantitative is homogenization, making of the numerical "the background not for using difference constructively, but for inventing some methods for equalizing the differences so that they do not matter, or for pigeon-holing individuals in one job rather than another" (14). That is to say, Mead worries that quantification will turn people into data and/or economic instrumentalities, but her examples of the benign versions of such conversion cast a strange light on this concern. As benign evidence on behalf of this

³⁷ It is important to note that the statistical innovation of Kinsey—midwived by statistician Raymond Pearl, who was also at work adapting mathematical models for animal husbandry to human population control, as I explore in Chapter 4—was his use of the technique, unlike typical modes of numerical generalization about population subgroups, of "total sampling," where he would get the sex histories of every member of a given community, club, institution, or group to cancel volunteer and memory biases and other problems of sample representativeness. One way to think of this is an incorporation of the island-as-microcosm-of-western-civilization method and logic into the American domestic scene, where communities immanent to American national culture are reimagined as islands unto themselves that can relate to one another and the nation writ large with the same provisional isolability as cultures distanced by their perceived primitiveness used to do.

thesis Mead adduces the examples of “eye-glasses and hearing devices,” which superimpose a homogenous perceptual experience on a naturally diverse human group. While Mead’s aim in providing these as examples may have been to countermand the stigma attached to deviations from the norm that are freighted with more social significance than corrective lenses, it also operates to change the whole cast of her argument: the problem with quantification is not, or not only, that it would identify deviance so as to eradicate it or “equalize” it out of existence. What is at stake is not simply behavioral conformity with statistical norms but also the homogenization of worldview born of the eradication of the perspectival (even when some perspectives are compromised vision or hearing), the attempt to convert “objective” research methods and metrics into the cultural value of objectivity, the consolidation of a shared perspective. Mead wants objectivity to remain the special professional skill of anthropologists, who know how to “use difference constructively,” and she worries that quantitative social studies will de-specialize objective scientific protocol into objectivity as a generalized cultural style, also known as the culture of conformity.

These circumstances are dramatized in Theodore Sturgeon’s novel *Venus Plus X* (1960), which extrapolates from them a future society that has so thoroughly lost its capacity for objectivity that it must import it from the past. Sturgeon cites “various recent magazine articles by Margaret Mead” (212) as well as books by Ruth Benedict, William

Whyte, Erich Fromm, and Philip Wylie as inspirations for the novel.³⁸ *Venus Plus X* reestablishes the conditions for anthropological objectivity through time travel, setting the novel in a future Earth populated by humans sufficiently evolved to seem nearly an alien species. They call themselves the Ledom (“model,” backwards, as Sturgeon is sure to point out) and the principal outcome of their evolutionary departure from the “homo saps” of the twentieth century is a complete biological hermaphroditism and a total social androgyny. Allegorizing the postwar culture of conformity as the supersession of sex difference, the Ledom’s homogeneity portends a global monoculture consequently incapable of anthropological insight. With no cultural contrasts to underwrite their self-insight, the Ledom kidnap an unsuspecting earthling man from the 1950s to offer, by way of his historical alterity, a precious quotient of “objectivity.” Objectivity must be imported from the past, and the 1950s seem to be the last viable moment to capture one of its native practitioners.³⁹

³⁸ Theodore Sturgeon, “Postscript,” *Venus Plus X* (Vintage, 1988 [1960]): 211-213.

³⁹ *Venus Plus X* is also of interest as a novel that nominates mathematics as the privileged vocabulary of eroticism, and American institutions as the proper parents of a new generation of social actors—in one of the interpolated chapters set in 1950s suburbia, making explicit reference to “Margaret Mead the anthropologist,” Jeannette offers her husband Herb some sociological pillow-talk: “You tell Margaret to go climb Annapurna and paint herself a picture. I told you before—we’re a new kind of people now... my parent is a Committee” (85). Early in the literary historical trajectory of social science fiction—sci-fi thematizing the soft sciences rather than the hard ones—Sturgeon bridges the gap between the hard and soft sciences by employing a quantitative vocabulary to explore themes of human sexuality, social differentiation, and historical transformation. The title of the novel is lifted from a scene in which Charlie, the abducted Earthling, struggles to articulate his understanding of sex difference with the androgyny of the Ledom in the language of the algebraic: “they used to use the astronomical symbols for

The partial resolution to the contradictions Mead introduces in “The Significance of the Question We Ask” is found in her derivation in the following chapter, “How An Anthropologist Writes,” of something like standpoint epistemology redacted for the professions as experiential identity categories: “In this book I want to do something rather different. I do not want merely to document vividly [...] I want to somehow give to the reader the positive findings [...] and yet keep the sense of how these findings have been arrived at” (30-1) in order for the reader “to get some sense of the experience an anthropologist brings to the consideration of a human problem” (35). This chapter is also a crucial moment of self-reflection on the job of the anthropologist as professional writer, as someone whose research puts them into relation not just with the culture under study but with the culture in which her work will circulate. That is to say, this is a moment of conceptual re-alignment of anthropologist from the researcher/researched relation into the artist/audience and professional/amateur ones.

The turn to “home anthropology” in the United States, unlike the English example, is not a consolidation of a retracting imperial culture into a potent national one, but rather is necessitated by the shifting locus of exemplarity in a new world order of American cultural hegemony that has infected would-be exemplary microcosms with qualities of the culture to which they had been meant to be only abstractly related as structural proxies or precursors. As payloads of extractive imperialism and human capital

Mars and Venus for male and female... What in hell would they use for these? Mars plus y? Venus plus x? Saturn turned upside down?” (77).

their status as representative cultures is questionable. This is not to say that American nationalism is not distilled to new potency in the early cold war—for quite obviously it is—but the self-reflexivity of the discourse of American national character, to the extent that it is an anthropological one, is born as much of a methodological crisis as it is of a cultural one—that is, of their imbrication.⁴⁰

When canvassed for her expert opinion on the Kinsey Report “as an anthropologist,” Mead, effacing the capacity of other cultures to produce anthropological insights, postulated an expert from space, proposing that “any anthropologist from Mars,” presented with Kinsey’s findings, would see that “sex in the United States... is an impersonal, meaningless act” (65). Thus, she offered:

The anthropological comments I can make best on this material are, I think, based on treating the Kinsey report as a cultural phenomenon, just as if I were to go to a South Sea island and attend a cremation ceremony, or a cannibal feast, or a puberty rite. I regard such phenomena as cultural, study them, and find out what I can learn about the culture by examining events and data of this sort. The principle things that make the Kinsey report a cultural phenomenon of sorts are two: its scale and the amount of publicity it has received, not its findings.⁴¹

⁴⁰ On Margaret Mead’s involvement in the human sciences as weapons of warfare, and more generally on anthropology as a method of “culture cracking,” see Peter Mandler’s thorough and insightful study *Return from the Natives: How Margaret Mead Won the Second World War and Lost the Cold War* (Yale UP, 2013).

⁴¹ “An Anthropologist Looks at the Report,” p.58.

The Kinsey report confounds anthropological interlocutors because its form and style themselves constitute “a cultural phenomenon,” making it not a piece of interdisciplinary knowledge available for anthropological use, but rather an object of anthropological scrutiny, an event. It is hard not to hear in Mead’s comparison of the report to a “cremation ceremony” or “cannibal feast” some figurative invocation of Kinsey’s research as deadening, self-consuming, and depersonalizing, chiming with her earlier critique of the Reports which, rather than arranging their data “culturally,” take “a large amount of individual data about identified individuals, but then those identified individuals have been de-identified, the data has been scattered, and separate correlations have been worked out” (58). Comparing it likewise to a “puberty rite,” Mead sees the report as a troubling coming of age in America. Reading the Kinsey report as a publicity event that elevates decontextualized facts to the level of public sensation, Mead asserts that “the most significant thing from this point of view is that the Kinsey report... has upset the balance in our society between ignorance and knowledge, between the things we don’t mention, and the things we do. And it may be expected to have considerable effect in our society for that reason” (60). The problem of the Kinsey report according to Mead is that it has unleashed the cultural unconscious from the recesses of deliberate ignorance, setting the stage for a return of the repressed which would find its realization in sexual liberation and the new social movements of the next decades, as I explore further in the next chapter.

III. Justification by Numbers

In the summer of 1948, in a review of Kinsey entitled “Justification by Numbers,” anthropologist Geoffrey Gorer, Mead’s student, speculated that “people who are disturbed about their ‘deviance’ will not get psychological comfort for more than a very few days from the tabular demonstration that their deviations are more widespread than they had suspected” (284).⁴² Gorer surely underestimated the power of numbers to “comfort” those “disturbed about their ‘deviance,’” as the galvanizing uptake of social statistics by a range of homophile groups in the period readily attests, and upon which I will elaborate at length in Chapter 2. But his assessment quite aptly sums up a major debate spurred by the Kinsey report about the relative abilities of qualitative versus quantitative social science to capture lived experience. The Kinsey report marks a major moment in the methodological negotiations of postwar social science, effectively sounding the death knell of narrative case histories in favor of large-scale statistical analyses.⁴³ The report literally encodes the conversion of case histories into statistical data by its own methods: interviewing research subjects about their narrative “sex

⁴² Geoffrey Gorer, “Justification By Numbers: A Commentary on the Kinsey Report,” *The American Scholar* 17.3 (1948): 280-286. Gorer’s title is likely a citation of Mead’s lecture, “An Anthropologist Looks at the Report,” in which she writes that “the most serious possible effects of the Kinsey report lie in its being so completely representative of these particular trends in American culture, of this quantification, justification by numbers, atomization, this tendency to handle sex non-inter-personally—and in its Puritanism” (67).

⁴³ For a historical overview of methodological developments in the context of sexology, see Howard Chiang, “Liberating Sex, Knowing Desire: *Scientia Sexualis* and Epistemic Turning Points in the History of Sexuality,” *History of the Human Sciences* (2010): 1-28.

histories” and converting them into tabulated and encrypted data primed for statistical processing.

By far the most significant measure implemented to ensure the accuracy of the data collected in the sex histories was the assurance of total anonymity for the respondents. This assurance was vouchsafed in two major ways: by recording responses in code, and by limiting the number of people who knew how to decode it to a very select and stringently vetted few. Most of the employees of the Institute for Sex Research, including all of the research assistants who processed the data and all of the statisticians who conducted computational analysis of it, did not have any knowledge of the code. Only Kinsey and his small team of interviewers knew the cipher. Interviewers were vetted for their discretion, objectivity, indifference to the diversity of sexual experience, and ability to adapt their interview style to respondents whose discourses of sex and sexuality were differentially shaped by class, race, gender, religiosity, marital and sexual status, legal standing, institutional affiliations, and so on. The select few interviewers memorized the code of letters and check-marks to record sex history responses in a penciled grid, which would subsequently be transferred to a punched card for statistical processing by Hollerith machine.⁴⁴

While the public and professional commentator class decried the Reports for their statistical opacity, Kinsey had thought statistical matters were beside the point. By his

⁴⁴ On the use of machine processing in the Kinsey research, see Donna Drucker, “Keying Desire: Alfred Kinsey’s Use of Punched-Card Machines for Sex Research,” *Journal of the History of Sexuality* 22.1 (2013): 105-125.

lights, his work was in a sense even anti-statistical, precisely because it was so massively quantitative. When he began his research in the 1930s, probability sampling methods were in their infancy, and the study of a topic as alien to public discussion as personal sex practices presented special obstacles to obtaining unbiased data. To obviate statistical theory that would establish the significance of a given sample size relative to the population it was taken to represent, and in an effort to cancel volunteer and memory biases, Kinsey employed the unusual method of “total sampling,” in which he would take the interviews of every member of a given group—most often groups constituted through recreational clubs or institutions like schools, churches, and prisons. The research sample incidentally over-represented college students and graduates and members of the professional class because of the researchers’ own affiliations, and deliberately over-represented sexual minorities like homosexuals and pedophiles about whom the researchers wanted to be able to meaningfully generalize.⁴⁵ In 1939, in the early days of

⁴⁵ These problems with the representativeness of the sample were much remarked upon at the time of publication of the Reports, most caustically perhaps in an essay by disgruntled ex-employee of the Kinsey Institute, Gershon Legman, who wrote an essay called “Minority Report on Kinsey” detailing the misleading “megalomania” of the title “Sexual Behavior in the Human Male” for a report that in fact represents little more than the findings on approximately 5,000 mostly college-educated white men in America—far from the “human male” as such. Legman’s essay was published as the preface to an opportunistic Kinsey Report spin-off by Norman Lockridge, *Sexual Conduct of Men and Women*, printed by Samuel Roth under the imprint Hogarth House in 1948, which came under scrutiny for obscenity shortly thereafter. Legman and others point out that not only is the title misleading on the count of representativeness, it also disguises the racial politics of the research, which recorded sex history data from approximately 3,000 African American men and women but withheld that data from the final studies. For contemporary reporting on the racial politics of the Reports, in addition to Legman and

his sexual behavior research, Kinsey consulted with then-president of the American Statistical Association, Raymond Pearl—to whom I will return in Chapter 4 in his capacity as eugenic ecologist. Kinsey notes that “when I told [Pearl] that someone else would have to handle the mathematics of the material, he told me that when one has such quantities of material as I have it needs very little manipulation.” Pearl “point[ed] out that statistical theory is largely a substitute for adequate data.”⁴⁶ Kinsey mistakenly assumed that the numbers would speak for themselves. But the problem he did not anticipate was that while numbers may obviate “statistical theory,” they confronted a public conditioned into a moral discourse of sex and thus beset by a deeply unsettling need for an interpretive theory of numerical representation. His numbers may not have needed a theory to describe their statistical significance, but they demanded a theory to describe their social meaning.⁴⁷

Cold war era cultural commentators and critics otherwise quite remote from scientific discourse spilled much ink trying to account for its crux. Among them was,

the *Ebony* magazine coverage discussed below, see for instance Albert Barnett, “Would Dr. Kinsey Write ‘Sexual Behavior of The Sepia Female?’” *The Chicago Defender*, September 5, 1953, p. 4; “Omission of Negroes From Sex Study Arouses Scholars,” *The Chicago Defender*, August 29, 1953, p. 1; L. F. Palmer, Jr., “Sex Study Snubs Negroes, Experts Critical,” *The Chicago Defender*, August 29, 1953, p. 1.

⁴⁶ Quoted in *Alfred C. Kinsey: A Life*, by James H. Jones (NY: Norton, 1997), p.358.

⁴⁷ It is also worth noting that despite Pearl’s imprimatur, Kinsey’s faith that his data obviated statistical theory proved quite unfounded. Upon its publication in 1948, the report on the male was panned by many statisticians and quantitative social scientists who found his total sampling techniques and statistical analyses suspect, and Kinsey would substantially revise his statistical methods of analysis (but not his sampling technique) for the volume on the female published five years later.

perhaps most famously, Lionel Trilling, whose 1948 *Partisan Review* essay, “Sex and Science,” was reprinted as “The Kinsey Report” in his best-selling essay collection *The Liberal Imagination*, otherwise devoted to literary criticism of novels.⁴⁸

Trilling was wary of the popular disposition towards scientific abstraction, and his essay amounts to a strange rumination on the aesthetics of the scientific presentation of data. Trilling is concerned that the report removes “sexual behavior” from the social world, demarcating a realm of purely “physical fact” that is “not available to social interpretation at all” and can have “no ascertainable personal or cultural meaning and no possible consequences” (242). He worries that “the tendency to divorce sex from the other manifestations of life is already a strong one. This truly absorbing study of sex in charts and tables, in data and quantities, may have the effect of strengthening the tendency still more with people who are by no means trained to invert the process of abstraction and put the fact back into the general life from which it has been taken” (226). It is along these lines that Trilling’s inclusion of this essay on Kinsey among his essays

⁴⁸ Trilling was perhaps singular among literary critics in his direct uptake of the Kinsey Reports as the occasion for an essay, but he was not alone in registering the Reports’ popularization of a scientific style disruptive to the conduct of literary criticism. See, for instance, William K. Wimsatt’s “History and Criticism: A Problematic Relationship” in *The Verbal Icon*: “Our value judgments of past literature can certainly not be decided by the simply historical side of empirical findings about what groups of persons, larger or smaller, for longer or shorter periods in the past, have thought or felt about this or that – anthropomorphism or anthropophagy. This is Kinsey Report technique. It is the opposite of value judgment. And if it is more ‘scientific’ than the criticism of poetry, this should warn us against attempting to apply to criticism what can be only a parody of ‘scientific’ method,” p. 257. Wimsatt, *The Verbal Icon: Studies in the Meaning of Poetry* (University of Kentucky Press, 1954).

on the novel begins to make sense. Throughout the essays collected in *The Liberal Imagination*, Trilling is describing the American cultural conditions presiding over the purported “death of the novel.” This so-called death does not just portend the termination of the lifespan of the novel’s cultural salience, but the death of the trope of the biological lifespan itself as the guarantor of a social referent for narrative form: the coherence of “the general life” was at stake not least because life itself appeared newly available to capture by non-narrative representation.

Trilling was worried that the general readership of the Kinsey reports would not be able to repair the social context to them that their methodology had taken such pains to strip away. But he should not have been so concerned, it would seem, at least insofar as the immediate proliferation of (re)narrativizations of the scene of Kinsey’s data collection—in magazines, songs, raunchy fan fiction, novels, and the like—would suggest that the urge he feared would be absent was in fact being readily felt and fulfilled.

IV. The Incorporation of Sexology

Trilling thought sexology was removing sex from life in order to reconstitute it in its own scientific domain as an object of empiricist scrutiny, implicitly conveying a sense of sexology as an inward facing scientific discourse lumbering onto the cultural scene rather than dialogically interacting with it. While the humanist wariness of a culture infiltrated by “charts and tables” and “data and quantities” finds Kinsey representative of

sexology operating monolithically as official discourse, the Institute for Sex Research's self-registration gives us a different picture of its relation to culture and society, and to science. By self-registration, I mean the way the ISR turned its photographic lens on itself and its day to day operations, its banality as workplace. But I also mean to indicate the way the documents of incorporation that make the ISR independent from Indiana University—on whose campus its facilities are located—create a preponderance of “research assistants” that then register as official to the outside world in a way that flattens the particulars of their actual work tasks, which may or may not have had much to do with research. And finally, I also mean the way Kinsey tried to control the journalistic, professional, and public discourses about his work under the guise of fact-checking, all the while endorsing his staff photographer's staged photographs of interviews and other scientific procedures as publicity materials.

In the course of a 1971 oral history of the Institute for Sex Research, Kinsey biographer James Jones interviewed Institute employees of the Kinsey era. In the transcript of Jones' interview with Dorothy Collins, he begins by introducing her to the tape recorder: “Mrs. Collins is today secretary to Chancellor Herman B. Wells.” Mrs. Collins replies: “No.”

Jones: “No?”

Collins: “Research and editorial associate.”

Jones: “Was formerly, however, secretary to Dr. Alfred C. Kinsey at the Institute.”

Collins: “No, no, I was a research assistant.”

Jones: “Were you?”

Collins: “Yes.”

Jones: “Well, I have not got any of it right. I thought that Paul Gebhard said that you were really a private secretary. I guess you would not be.”

Collins: “No, I don’t type. I would’ve been rather miserable. I did most of the—I worked with a calculator and did computing, but my main work was statistics when I was there.”⁴⁹

On April 8, 1947, Thomas E. Bath, Secretary of State of the State of Indiana, “by virtue of the powers and duties vested in [him] by law,” certified that “the Institute for Sex Research, Inc.” is “a body politic and corporate, authorized and empowered by the laws of the State of Indiana to proceed to carry out the objects of its organization.” The Kinsey Institute for Sex Research was recognized by the state as a “corporation not for profit,” partitioning its research activities from Indiana University in order to evade the oversight of the state through its school.⁵⁰

The conditions of incorporation stipulated that the “Institute for Sex Research, Inc.” as a “body politic” consist in at least three stake-holding members at any given time, otherwise the corporation was subject to dissolution. As a preventative measure, on

⁴⁹ Dorothy Craig Collins interview by James H. Jones, December 9, 1971, CSHM Accession #71-053, “History: Kinsey Institute for Sex Research, 1971-1972,” Center for Documentary Research and Practice, Indiana University, Bloomington, p.1.

⁵⁰ Certificate of Incorporation, April 8, 1947. Kinsey Institute Archives.

the eve of the 1947 incorporation, the staff became “research assistants” overnight.

Sexological incorporation turned everyone into research assistants, making their actual labor, bureaucratic functions, and areas of expertise obscure, flattened into the gendered division of labor in general: sexological company men and women assisting research.

Kinsey Report co-author Paul Gebhard had apparently described Dorothy Collins to James Jones as “really a private secretary,” despite her insistence that she was and is a research assistant, betraying a deeper logic of the Institute’s managerial strategy. Gebhard cannot keep her title and function straight. Dorothy Collins was hired as a research assistant at the Institute in part because she was functionally a secretary to her husband at home; Ralph L. Collins was a Dean, a higher-up in university administration, making Dorothy a strategic hire. She may have been a research assistant, but she wasn’t not a secretary.

In 1966, a decade after Kinsey’s death, Gebhard, who had succeeded Kinsey as the ISR director, produced an “Informational Memorandum.” Subtitled “The Institute for Sex Research: Its structure and relationship with Indiana University,” the memo describes, for the benefit of IU administrators, why Kinsey’s charismatic administrative ethic cannot be maintained:

During the formative and early years of the Institute for Sex Research, the University administration was kept advised of Institute matters in an almost exclusively informal, verbal fashion. Dr. Kinsey frequently attended social functions where President Wells and other University officials were present, and

he often walked to work with Dean Briscoe. Mrs. Ralph Collins [i.e. Dorothy Collins], employed for some years with the Institute, was often asked to transmit information or questions to her husband, Dean Collins. [...] This informal system of personal communication has become inadequate as a result of the great growth of the University, the rise of a new group of administrative personnel who have had less contact with and consequent knowledge of the Institute, and the increasing complexity of the Institute itself. In response to the University self-survey and in recognition of the need to clarify the previous tacit and often vague relationship between the Institute and the University, the following memorandum for the information of the Indiana University administration has been prepared.⁵¹

Not only is there no longer a charismatic leader, but neither are there charismatic administrators; their ranks have swelled and the sexological project must confront the nature of its circumscription and the shape of its elaboration in the multiversity, former University of California President Clark Kerr's name for the administratively top-heavy postwar university system in which students are an afterthought of a self-obsessed bureaucratic machinery.⁵² Gebhard narrates the difficulty of water-cooler talk in a university with no hallways; as architectural historian Mark Jarzombek notes, as the twentieth century wore on, "the corridor came to be associated with the shallowness of

⁵¹ Paul Gebhard, "Introduction," "Informational Memorandum: The Institute for Sex Research: Its structure and relationship with Indiana University," 1966. Documents of Incorporation, Kinsey Institute Archives.

⁵² Clark Kerr, *The Uses of the University* (Harvard UP, 1963). See also Chapter 3 below, which engages Kerr's term more directly in terms of campus politics.

modernity rather than its grandeur” (766).⁵³ We can see the lineaments of the corporate university being threaded through the Institute for Sex Research, Inc., in the protocols it presages for authorizing minority knowledges and administering the dysfunction of their interdisciplinary elaboration. In 2016 the Board of Directors of the Kinsey Institute voted to dissolve the independent charter and hand over the Institute, its archive, and its stewardship to Indiana University. This unity is perversely underwritten by the now commonplace openness of the state university system to corporate interests but it does not resolve the original problem motivating the ISR’s incorporation in the first instance: its relatively miniscule operating budget nonetheless almost immediately became a point of contention in the 2016 gubernatorial race in Indiana where politically expedient moral panic over sex research remains nearly as intense as it was in 1947.

Jeannette Howard Foster, the Institute’s first and last librarian in Kinsey’s lifetime, explained in her letter of resignation: “I can’t be a librarian” because “you don’t want a librarian... You can get by with some sort of assistant.”⁵⁴ Seated in a corner alcove across from the duplicates (“DUPL”), Foster’s irrelevance as librarian was embodied by the redundancy of her books.

The Kinsey Institute library was a prestige project. With the substantial royalties from *Sexual Behavior in the Human Male*, Kinsey began spending liberally to enlarge the library collections, and he sought a librarian to preside over them. Jeannette Howard

⁵³ Mark Jarzombek, “Corridor Spaces,” *Critical Inquiry* 36.4 (2010): 728-770.

⁵⁴ Quoted in Joanne Passet, *Sex Variant Woman: The Life of Jeannette Howard Foster* (Da Capo Press, 2008), p. 172.

Foster was working at the Drexel Institute Library School in Philadelphia when Kinsey offered her a job in 1948. She left her position and its job security to work for Kinsey because she saw an opportunity to advance her own research on lesbians in literature, research she was hesitant to pursue openly at Drexel. Kinsey was pleased about her research and about the lesbian contacts she promised to connect him with in New York and Atlanta, but he was less pleased about the request she submitted to the housing office of Indiana University requesting accommodations for her and her female companion. At Drexel she could be a lesbian but could not study them; at the Institute she could research lesbians but could not be one.⁵⁵

⁵⁵ Donna Drucker's detailed and illuminating book-length study of the Kinsey research, *The Classification of Sex: Alfred Kinsey and the Organization of Knowledge* (University of Pittsburgh Press, 2014) takes its title and methodology from a key work in the informatic turn in library science of the 1960s, but curiously her book has very little to say about the Kinsey library itself, mentioning Jeannette Howard Foster and Kinsey's New York book buyer Gershon Legman (a major enabler of Kinsey's proliferation of duplicates) only in passing. A further discussion of Legman's relationship to the Kinsey project and to the scene of McCarthyite obscenity adjudications would take us too far afield here, but I am currently undertaking a separate study of Legman in his capacity as a kind of connective tissue between sexologists like Alfred Kinsey and Robert Latou Dickinson, homophiles like Samuel Steward and Thomas Painter, and the little magazine distribution networks pursuant to the Beats, including relationships with publisher Samuel Roth and with Jay Landesman, with whom Legman edited the short-lived but influential magazine *Neurotica* (1948-1950)—the first publishing outlet for Allen Ginsburg, which also printed Legman's screeds against Kinsey and Marshall McLuhan's early speculative theories of the media history of human civilization. Legman was a folklorist of the joke and of the vernaculars of sexual subcultures, and an auto-didactic scholar of pornography and censorship generally. Historian Susan Davis is currently writing a scholarly biography of Legman and her preliminary publications on his work have been of immense utility in reconstructing his place in the literary and scientific scenes of the 1940s and 50s.

As her biographer Joanne Passet describes, Foster's quarters at the Institute initially consisted of a large room behind Kinsey's office in Biology Hall outfitted with cases of gall wasps, in addition to books, locating her between Kinsey's early career as zoologist and his unfolding archival legacy. In order for staff and visitors to see her, they had to pass through Kinsey's office, something, as Gebhard put it, "one did not do lightly," and thus, she was "sealed off for the workday," functionally "a non-person" because of her office location until the ISR moved to Wylie Hall in 1949 (161).

But even in these new offices, Foster was basically part of the ISR furniture rather than its staff. If visitors unexpectedly came at night, "Kinsey wanted his librarian there to show off his library" and to serve refreshments. It was not uncommon for Foster to be working in her office "and all of a sudden the door would fly open and here would be Kinsey with people peering over his shoulder as he announced: 'This is Jeannette Foster, our librarian, who is the first woman to get a PhD in library science'" (170). The fact that his statement was factually inaccurate—there had been other women before her—did not seem to matter to him.

"Kinsey had his own weird method of running a library" and in Foster's professional opinion, the result "was haphazard" (163). After buying or receiving books, Kinsey would thumb through them and then toss them into one pile or another for filing under a self-made pneumonic system of approximately 25 categories. Foster fought "to persuade Kinsey to use either the LC [Library of Congress] system or the DDC [Dewey Decimal Classification] system" but "he would not budge." Foster's ability to systematize

the library holdings was further thwarted by Kinsey's haphazard acquisitions. "Kinsey was reckless about refusing to carry a list of 'library has' with him, and so acquired a number of DUPS [duplicates]" (164). Kinsey's will to a total archive—buying all available books—while refusing to introduce heterogeneous classificatory schemas like the Dewey Decimal into the sexological taxonomy project, created untenable working conditions for his librarian, who must classify the books according to his logics rather than her expertise. Jeannette Howard Foster's 1952 resignation letter cited as cause Kinsey's unwillingness to let her use either Library of Congress or Dewey Decimal Classification schemes to organize his library. But the redundancy in the sexological project that enraged her as an expert librarian enabled her researches as a professional lesbian. In 1956 Foster completed *Sex Variant Women in Literature: A Historical and Quantitative Survey*, based largely on materials from the Kinsey library. The seeds of a scholarly pursuit of lesbian literary history were sown in the Kinsey Institute, in spite of itself.

In 1949 the Kinsey Institute for Sex Research added a new member to its staff, former Kodak photographer William Dellenback, whose official title was "Research Assistant" and whose sole responsibility was to take photographs. Dellenback photographed sex acts, artifacts, and researchers; he photographed letters, diary entries, and polaroids to make duplicates for the archive; he took portraits, snapshots, and staged photographs of the scene of science; he was sent to take photographs on location, in the laboratory, and among the daily operations of the Institute in Bloomington, Indiana. At a

staff party held at the Institute in 1953, Dellenback took several photographs of the Kinsey Report on the *Female* on display on a silver platter, the featured dish in a spread of cold cuts and condiments, taking center stage at the party being held in its honor on the occasion of its publication. The Kinsey Reports circulated in many forms that were not books, and the books themselves circulated in various forms as well—in this instance, as cake. The archive does not record who made this cake, who conceived of it, nor who ate it, but one can nonetheless be certain that the answer to all of these questions is “research assistant.”

There is an irony that the staff of the Institute eagerly relate to visitors of their archive as if it were a joke, that the Kinsey Reports are the most famous American best-seller that no one has actually read. But having read a book is hardly prerequisite to having thoughts and feelings about it. Books are not perfect metonyms for the ideas they contain, and reading hardly captures the full range of practices and relations involved in bringing the contents of books into cultural consequence. It is neither a paradox nor a joke that the reports were much less read than they were talked about. In fact the provocation to a certain kind of speculative para-scientific discourse was built into the method of the reports, which were premised on anonymity, privacy, and nondisclosure. Rather than resting with the trope of American philistinism played for laughs, we might consider the various textures of the relation of nonexperts to the Reports—for instance, as its actual or prospective subject matter, its characters and types, the fodder for its representational schema, its content, its data, its blind spot, and as would-be readers who

may or may not care to see themselves so written but whose registration of the feeling of this ambivalence is itself the context into which the reports emerged and in which their meaning was consolidated.

The most widely circulated image of Alfred Kinsey during his lifetime was not a photograph, though it was based on one. The August 24, 1953, cover of *Time* magazine featured a portrait of Kinsey by prolific midcentury engraver and illustrator Boris Artzybasheff, based on a photograph by *Time* photographer Robert Lavelle.

Artzybasheff's numerous magazine covers of the period feature the realistic heads of men of note surrealistically embedded in fantastical landscapes populated with icons of their achievements. Upon the publication of the issue bearing Kinsey's visage as its cover, *Time* editor Gilbert Cant wrote Kinsey to inquire about his impression of it, noting that his curiosity on this point was piqued in part because "Your portrait attracted an unusual amount of mail: almost 100 letters concentrated on that, to the exclusion of the story, and most of these praised it, especially the motif in the bow tie." The "motif in the bow tie," an interpretive departure from Lavelle's reference photograph, consists in a pattern of "female" symbols, the symbol of Venus, from which the piece also takes its title, "Reflections in the Mirror of Venus." In its depiction of Kinsey's impassive face amongst birds and bees, Artzybasheff's image manages to cite at once sexologist Kinsey's precursive career as zoologist, and the most clichéd pictographic euphemism for the science of sex. But it is evidently not the birds and the bees floating about Kinsey's head

that caught readers' eyes "to the exclusion of the story," but rather the "motif" of the female sex that rings his neck.

Shortly after his appointment in 1949, Dellenback opens a letter to Kinsey by admiring his prose style—"so pleasantly readable and alive and yet concise"—and expresses a wish that "I can develop as excellent a style in time."⁵⁶ Dellenback's letter writing style remained a hopeless mess; his correspondence with Kinsey is a record of the latter's patience tried to the quick, prompting increasingly exasperated letters about botched rendezvous, misread photograph dimensions, recklessly changed plans, and belated missives. But Dellenback's visual style became an essential feature of the Institute's operations, uniting its knowledge production protocols with its protocols for the production of knowledge about itself. Magazine confessionals are one form of Kinsey's incited discourse. Among the Institute's own contributions to this discourse, an attempt to shape it or control its framing, are its staged photos of the scene of the interview exchange.

William Dellenback staged numerous photos of Kinsey and his research team interviewing supposed research subjects, who were in fact typically other members of the Institute's staff—"research assistants."⁵⁷ In the most widely circulated of these images, Wardell Pomeroy and Alfred Kinsey are represented as if taking the sex history of their

⁵⁶ June 18, 1949, letter Dellenback to Kinsey housed in the Institute's correspondence archive

⁵⁷ Giving one's sex history was actually a prerequisite to being hired at the Institute in any capacity, so Dellenback's staged photographs have some of the quality of reenactment.

Institute colleague, library research assistant Jean Brown. Kinsey's bowtie and Brown's dress conspicuously share a polka dot motif, calling upon both her anonymity and its verso, her style, to index Kinsey's science by referencing his signature professional accoutrement. He wears her pattern about his neck as an accessory, a prelude to the motif of the science of female sex that might just as well adorn a tie as a cake, or a book.

Sexual science becomes a cultural phenomenon not only by inciting moral outrage or offering erotic provocation, but by converting scientific methods into motifs. The name "Kinsey" becomes a synonym not just for sex but more specifically for quantification. A whole cottage industry of narrating numeracy emerged to invest quantification with both potent and unstable social significance. The Kinsey researchers themselves were perhaps the first to recognize this. The ISR saw its publicity as an integral part of its research, since the advancement of that research depended upon creating the conditions of possibility for honest disclosure of sexual details to scientific interviewers. Those conditions of possibility in turn were dependent on popular expectations about the form and content of the legitimate discourse of sex, and those expectations are shaped at least as much by popular culture as sexual science. Kinsey thus set out to make a good showing in popular culture and to use it indirectly as an instrument of sex education. Thus distinctions between genres, forms, and discourses on the basis of their prestige or proximity to science lose their footing once they make contact with the facts on the ground: the popular and expert discourses of sexual science operated in sometimes symbiotic, sometimes antagonistic, and often instrumentalist

relation to one another. Viewed synchronically, networked with other media systems and institutions, the official reports are only the tip of the iceberg in terms of documenting the social significance of the Kinsey research and the cultural diffusion of sexology.

V. I Was Kinsey-ized

We can think past the anxiety of experts about the popular interest in sexual science by attending to the reception of the Kinsey Reports and the stories told around them, about and out of their data—in particular the genre of the “I Was Interviewed by Kinsey” popular magazine article. The lay mode of negotiation between the discourses of the sciences and the humanities, and their differential apprehension of the social world, unfolded in part through the ekphrastic description of autobiography’s conversion into quantum—this is the “I was interviewed by Kinsey” genre’s signal feature. The conversion of life history into the order of the numeric made available an experience of oneself as an aesthetic object amenable to representation in the languages of narrative and number alike. In this moment of tension between an ascendant descriptive vocabulary of quantification and an increasingly dispersed repertoire of linguistic representational modes, nonexpert accounts of scientific apprehension articulated a practice of improvisation with expert knowledges and with the category of science itself. Scientism is an aesthetic category as well as an ideological one, and attending to its cultural operations as the former might tell us some more subtle things about its consolidation and operation as the latter.

The “I Was Interviewed by Kinsey” popular magazine article: rather than a displacement of attention away from the proper object of investigation, this focus is a matter of some historical fidelity. The roughly 18,000 interviews from which the Kinsey Reports drew their data were conducted between 1938 and 1963, but the (up to) 521 questions of which these interviews were composed were not made public until 1979, which is to say a crucial element of their method remained the stuff of gossip for several decades, glimpsed only in the reportage of those who had been interviewed. When journalists wrote to the Institute requesting information about the research, the response was always the same: if you want to know what the research is like, you may submit to having your sex history taken by one of the researchers. Consequently, even the most dispassionate journalistic accounts of Kinsey bore the trace of their origins in the “Kinsey-izing” of their authors. As Wardell Pomeroy describes, the Kinsey team was well aware that the public impact of their research would be measured not by their book, but rather the press coverage of it: “the majority of people, unable to afford it or not equipped to read it, would be getting their ideas about the work solely through the mass media. In other words, their reactions would be based on press releases, not the book itself” (341). So the Kinsey team made sure to keep a watchful eye over the press releases, vetting them for “factual error” before publication as a condition of access to the researchers.

The Institute installed itself as an experiential node in the network of the circulation of its knowledge production. In order to obtain information about the

scientific procedures being carried out there, knowledge seekers had to enter the scene as research subjects. Upon their reemergence as reporters, their experience of the research process was subject to correction by research assistants at the Institute, whose policy was to make publication contingent upon submission to their review. The only way to acquire expert knowledge was to submit to the role of research subject and access the research process experientially, but thus locked into the position of the researched, one was barred from the experience of unsullied expertise. The Institute positioned itself as the arbiter of expertise while seeming to invite all and sundry behind the curtain of its scientific protocols.

In the bevy of magazine articles such as the 1950 magazine piece “I Was Interviewed by Dr. Kinsey” cited above, anonymous interviewees narrate the experience of watching their stories transformed into data in notably consistent fashion: these accounts are generic, and their signal feature is a formal tension between narrative and number. As one woman put it, “I have become a statistic, number umpity-ump in the record of 100,000 men and women that will make up Dr. A. C. Kinsey’s study of human sex behavior.” She continues, “It gave me a strange feeling to look at that single piece of paper. There lay my personality, my emotions, my dreams and frustrations – my life itself. [...] No longer was I an individual; only a statistic to form a pattern along with thousands of other case histories. [...] I hadn’t expected quite this emotional reaction. [...] Statistics cut into memories like a knife.” She concludes, “The questions were done.

I was now a statistic, to Dr. Kinsey, as two-dimensional as a paper doll. But there on that single page [...] was one human life. Mine. Kaleidoscope, by Kinsey.”⁵⁸

In December of 1948 *Ebony* magazine ran a story called “What I Told Kinsey About My Sex Life” by a sociologist pseudonymously named Mary X.⁵⁹ Mary X writes of being interviewed: “My academic training in sociology was of little consequence: I was a woman now, reviewing for the first time her feelings, her reactions and her experiences with the most powerful influence in human life – sex” (46). The image that ran opposite the title captures Alfred Kinsey and Mary X, photographed by freelance magazine photographer Griffith Davis: “Behind double doors of his office which insure complete privacy, Dr. Kinsey interviews Mary X.” The opening sentence of her article announces, “My sex life now belongs to science” (45). Although the Kinsey research team conducted sex history interviews with approximately 3,000 African American men and women in preparation for *Sexual Behavior in the Human Male* and *Female*, none of that data was included in the final study, which cited lack of sufficient sample size as the rationale for its exclusions. While the reports purported to document sexual behavior in

⁵⁸ Anonymous, “I Was Interviewed by Dr. Kinsey,” *Everybody’s Digest* (March 1950): 109-112; condensed from *The Woman*.

⁵⁹ Described as a “sociologist” in the article about her in *Ebony*, Mary X was the pseudonym of the psychologist Winifred Ingram who would eventually become a liberal arts professor at Evergreen State College in Olympia, Washington. A psychology doctoral student at the time of her Kinsey interview, she published her dissertation “Prediction of Aggression from the Rorschach Test” in 1951. She aimed to solve a problem: some psychiatric patients presented with a Rorschach inkblot persist in interpreting not the amorphous black form on the page, but the negative space in its interstices. She studied the possibility that over-attention to what is referred to as the “white space” of the Rorschach might predict violent behavior in its readers.

humans, generally, the researchers imported racial categories from segregated American culture as *a priori* scientific premises. They named male and female as the master categories organizing the research, but in practice imported social distinctions like gender variance and racial identity into its parameters.⁶⁰

After the Mary X piece ran in 1948, *Ebony* continued its coverage of the Kinsey research, and in 1952 initiated a correspondence with Alfred Kinsey about a proposed article entitled “What Negro College Girls Know About Sex,” the publication of which was to be timed to coincide with the release of *Sexual Behavior in the Human Female*.⁶¹ Upon the publication of the report on the female in 1953, and the revelation of its exclusive whiteness, the piece ran with a new title: “Why Negro Women Are Not in the Kinsey Report.” This piece canvassed a range of experts for their opinion on the report’s

⁶⁰ The Kinsey Reports excluded from their analyses data collected from African Americans, and from “transsexual” and “transvestite” respondents of all races. The Reports assumed that homosexual behavior was part of the natural variation in human sexual practice generally, but gender variance remained beyond the ken of its imaginary of benign variation. Thus it was the case that the Kinsey research went some way toward laying the groundwork for an increasingly divergent understanding of sex and gender in research throughout the remainder of the century. Kinsey’s assumptions prefigured the claim that gay men were well-adjusted and psychologically indistinguishable from their heterosexual counterparts by which Evelyn Hooker would argue to depathologize homosexuality, which was removed from the American Psychiatric Association’s *Diagnostic and Statistical Manual of Mental Disorders* in 1973, and they likewise prefigured the push by researchers and clinicians like John Money and Harry Benjamin to pathologize “gender identity disorder,” included in the DSM-III for the first time in 1980. Incidentally, in an echo of Winifred “Mary X” Ingram’s dissertation research on the predictive capacity of the Rorschach in cases of violent behavior, Hooker’s research on homosexuality was based on the inability of Rorschach projective testing to enable any systematic predictions of sexual orientation.

⁶¹ Letter from *Ebony* magazine to Alfred C. Kinsey, February 19, 1952. Kinsey correspondence file, Kinsey Institute Archive.

exclusions. Answers included observations about the politics of sexual disclosure in a segregated culture—“Some Say Kinsey Should Use Colored Interviewers”—as well as speculations of research subject fatigue—“Sociologist Says Minorities Get ‘Tired of being studied.’” The article also ran with a pair of comparative images: Dellenback’s staged photo of Kinsey Report co-author Wardell Pomeroy posing as if interviewing Institute research assistant Jean Brown; and, across the fold, Griffith Davis’s image of Mary X. While the 1948 piece had presented an image of Mary X as evidence of her exemplary willingness to participate in the research as subject, its repurposing for the later 1953 article presents her as emblematic of the reluctance or fatigue of minorities, “tired of being studied,” who prevent the production of sound science.

In the 1948 photo, Mary X is viewed, the caption tells us, through the “double doors of [Dr. Kinsey’s] office which insure complete privacy.” The irony of the caption amplifies the surveillance aesthetics of the image: as viewers of the photograph we are aligned with the camera looking in from the hallway on the scene of her supposed “privacy.” Davis produced a reading of Dellenback’s house style by inhabiting it, drawing out the latent content of Dellenback’s institutional documentation and foregrounding its surveillance aesthetics. An addendum typed into Griffith Davis’s instance of the form letter that all prospective reporters on Kinsey were compelled to sign notes that the agreement to forestall publication until such time as Dr. Alfred C. Kinsey “has had an opportunity to correct factual errors in the manuscript” also “includes the use of any photographs to be used for publication.” Vetted by Kinsey himself for “factual

error” before publication, Davis’s photographs represent a deeper truth about the ISR’s self-documentary aesthetic.

The “I Was Interviewed by Kinsey” genre did not go without notice in its own time. Writing for the “These Women” column in 1950, in a snarky article titled “Haven’t YOU Been Interviewed by Dr. Kinsey?” Cynthia Lowry notes that “One certainly hopes the good doctor, seeking to pin down statistically the private life of the American woman, has not already achieved figures to prove she writes articles for magazines. As far as I’ve been able to figure out, 99 per cent of the Kinsey subjects run straight from the questioning period to their typewriters. Scarcely a magazine issue goes by without one piece by a lady with a title like ‘I was interviewed by Kinsey!’”⁶² She continues, “Being Kinseyized is to be chic comparable only to having a personal psychiatrist,” but evidently more so, for “in droves the non-literary abandoned their favorite psychologist’s couches and started looking for someone with an in with Kinsey who could fix them up.” What Lowry registers here is not just the methodological shift wherein sexuality is counted rather than narrated, but also the shifting cultural disposition towards the various self-representations enabled by the human sciences—no longer content to narrate their cases on couches, a newly “non-literary” public takes to the tabulator to see an image of itself.

Lowry also registers the gendering of this relation, noting that “When Dr. Kinsey went to work on the American male, he took great pains to assure the statistical guinea

⁶² Cynthia Lowry, “Haven’t YOU Been Interviewed By Dr. Kinsey?” *Terre Haute Tribune*, June 18, 1950.

pigs complete anonymity. My research indicates that not a single subject took quill in hand to pen a document relating his pre-interview nerves, what he wore, how the doctor looked, some of the more innocent questions and how he felt upon emerging from the questioning.” But it would seem Lowry’s “research” was conducted in the wrong archive, for there was no shortage of male commentary on being “Kinseyized,” it simply took place in pulps, novels, scholarly journals, and expert symposia. As well as in at least one newspaper—in a 1965 “Dear Helen” column of the *Kokomo Morning Times* called “Unasked, Uncounted, He’s a Nonstatistic,” reader “Mr. J (NOT X)” writes in: “I have been slighted, overlooked, ignored—in a word, unsurveyed! Thousands of men have been ‘Kinsey-ized.’ Not me! [...] I read about what I’m like, what I prefer on TV, even how I conduct my sex life. I’m the Great American Male and my every breath is recorded in some survey or other. But what I want to know is WHY DON’T THEY ASK ME!”⁶³

The genre reaches its apotheosis in the satirical inversion of its conventions. A June 1954 article, “I Lied to Kinsey,” nominally by a one “Elmira Zilch,” is exemplary.⁶⁴ The author introduces herself as “Elmira Zilch—a big, fat, lying statistic that keeps turning up over and over again from cover to cover” in the Kinsey Reports. “I’m a statistic, that’s what I am. An inaccurate statistic complete with decimal points,” and indeed, equipped with a spurious autobiography and a bracing authorial voice all her

⁶³ Helen Bottel, “Unasked, Uncounted—He’s a Nonstatistic,” *Kokomo Morning Times*, October 26, 1965.

⁶⁴ Elmira Zilch, “I Lied to Kinsey,” *Ballyhoo*, 3 June 1954, p.14. Accessed in the Media Response Collection at the Kinsey Institute Archives.

own. Zilch speculates on the prospects for her own eradication by recourse to the material text, puzzling that “they can’t just tear out Page 43, that’s for sure. Just try tearing Page 43 out of any book and then you won’t have Page 44 either. To make things worse, once Page 43 is removed, there is nothing to hold Page 29 in the binding and it will simply fall out and blow away.” Zilch spins the trope of statistical man on its head, neutralizing its horrible novelty by expropriating its vision of human subjects as numeric mosaics into the body of the scientific document responsible, in this case, not just for making people feel statistical, but also for making statistical profiles seem like people. The trouble is not that Zilch “lied to Kinsey,” but rather that the Kinsey Report conjured Zilch, decimal points and all, and thus lied to itself, personifying a numerical specter and passing her off as science with legs.

The conceit of the article is announced in the title, but its late-breaking punchline arrives with the revelation that Zilch has misrepresented her behavior to a man likewise misrepresenting himself as Alfred Kinsey—in fact a pervy salesman of radiator brushes who speaks the sexological patois with enough gusto to dupe those nullities on behalf of whom Zilch stands, token of the statistical fiction of the average woman. Zilch reports of her encounter that “there stood this baldheaded man with a cute mustache, and he honestly didn’t look like any of the pictures of Dr. Kinsey that I’ve seen in the papers since, but then some people don’t photograph well.”

While Zilch and her statistical ilk may be fictions, her account of the Kinsey poseur rings all too true. Reporting in the March 1950 issue of *Sexology: Sex Science*

Magazine, its editor warns readers of “Fake Kinsey ‘Reporters,’” announcing that “Evidence indicating widespread use of the telephone by individuals posing as Kinsey Report ‘interviewers’ was disclosed in New York City recently by Edward L. Greene, head of the National Better Business Bureau. Reports on what Mr. Greene termed ‘a plague of spurious phone calls’ have come in from such distant points as Tacoma, Wash. Other places from which local Better Business Bureaus or Chambers of Commerce have passed on complaints, are Philadelphia, Harrisburg, Pa., and the Northern New Jersey area. As far as the fake Kinsey calls are concerned, Mr. Greene emphasized that no associate of Dr. Alfred C. Kinsey, author of ‘Sexual Behavior in the Human Male,’ ever conducts interview by telephone. ‘Such phone calls,’ Mr. Greene declared, ‘could only emanate from practical jokers, or from persons needing the watchful eye of a policeman or a psychiatrist.’ ... [A] number of housewives who were at least temporarily taken in by the ruse reported they had been questioned for highly intimate information. The nature of some questions was described as extremely offensive” (483).⁶⁵

Fact, fiction, and fantasy proved highly malleable in the Kinsey report reception. In fact, the “I Was Interviewed” genre somewhat overwrites subsequent historical accounts of the interview process. For instance, when, in 1971, Kinsey biographer James Jones conducted oral histories with Institute staff and affiliates, research assistant Dorothy Collins answers the question “Could you comment on Dr. Kinsey as an

⁶⁵ Hugo Gernsback, “Fake Kinsey ‘Reporters,’” *Sexology: Sex Science Magazine, An Authoritative Guide to Sex Education* 16.8 (March 1950): 483.

interviewer?” by directing Jones to “Trial by Kinsey,” a 1950 article about being interviewed. Referring to this article, Collins tells Jones, “I would say that I consider the story by Cornelia Otis Skinner which appeared in the *New Yorker*, the account of her being interviewed by Kinsey, was fairly accurate, fairly close to the experience I had.” The enigmatic nature of this response becomes clear upon inspection of the Skinner article, which is a three-page account of its author anxiously anticipating the interview—and contains no account of the interview itself. Skinner ends her piece by quipping, “If you think I’m going to tell you what he asked, you’re as crazy as you would be if you thought I was going to tell you what I answered!”⁶⁶

VI. O.R.G.Y.: Obtaining Research Grants for Yours-truly

The “I was Interviewed” magazine reports on being Kinsey-ized dramatized a conversion at once delightful and disconcerting from narration to numeration, and erotic paperbacks wasted little time seizing upon the excitement of this novel vocabulary for sexuality and harnessing it toward their own ends. Kinsey Report co-author Wardell Pomeroy, in his history of the Institute, notes “we were afflicted by a rash of fiction about sex researchers, which only served to confirm bigotries and fears about what we were doing. Needless to say, none of them bore the slightest resemblance to reality, and fortunately for Kinsey most were published after his death. The Institute library has a shelf full of them, fifteen all told, ranging from Irving Wallace’s *The Chapman Report*,

⁶⁶ Cornelia Otis Skinner, “Trial by Kinsey,” 27 May 1950, *The New Yorker*, pp. 29-31.

which was a best seller, to such transparent deceptions as *The Love Investigator*, by Ernest Gebler; *Bucks County Report*, by Stuart James; and *The Sex Probers*, by Hilton Smyth” (340-341).⁶⁷ My own research has turned up several more direct novelizations, as well as a much broader network of citations, spurious prefaces, and dedications that implicate Kinsey in the popular culture of erotic representation far into the 1970s, as I explore further in the next chapter.⁶⁸

The Sex Probers (1961) by Joseph Hilton Smythe tells the story of a sociologist pressed into service as an ersatz Kinsey by a scheming paperback publisher. The author’s name (across different editions of the novel also credited “Hilton Smith” or “Hilton Smythe”—but not, to my knowledge, Pomeroy’s favored “Smyth”) is surely a pseudonym, and one that, like Wylie’s novel quoted above, cites the Smyth report—obliquely signaling its interest in transferring some of the new largesse of the quantitative

⁶⁷ Wardell Pomeroy, *Dr. Kinsey and the Institute for Sex Research* (Yale UP, 1982). Pomeroy continues: “While the authors of these books nearly always disclaimed any comparison with the Institute—the ‘any resemblance is coincidental’ ploy—thus avoiding a libel action, the inevitable parallels with our research were made. I cannot think of another research project in any area which was subjected to this kind of misrepresentation and harassment. Masters and Johnson, whose books are also controversial, have virtually escaped” (341). In fact, *pace* Pomeroy, Ted Mark’s *The Man from O.R.G.Y.* series, which began with the Kinsey research as its galvanizing premise, ultimately gave Masters and Johnson a similar treatment in the guise of Dr. Margaret Peerloin and Prof. Basil Woodcheck of the Venus Bio-Erotic Research Observatory in *The Square Root of Sex* (1967).

⁶⁸ What I call pulp sexology includes novels that thematize sexology or otherwise exploit its popularity as erotic premise or marketing ploy, as well as nominally scholarly studies that sensationalize their sexological topics under cover of professional scrutiny. I have been maintaining a working bibliography of titles, included as an appendix at the end of this chapter.

project to the literary realm. The allusion may also double as a commentary on the explosive quality of the Kinsey Report, which, like the Smyth Report on the atomic bomb, set out to defuse a morally provocative subject with a deliberately dry quantitative treatment.⁶⁹ In *The Sex Probers*, assistant professor of sociology James Blakely angles to jumpstart his career and secure tenure by writing *Sexual Problems of Modern Women*, an ersatz Kinsey report on the female covering the sex lives of the women in his own northeastern college town. He is prompted in this pursuit by Harris Ames, an enterprising literary agent peddling salacious mass market paperbacks. Harris pitches the project to Blakely:

“I have a publisher—a good one—hot after a sex survey book. One focused on the women of a typical middle-income suburban town, just like the one where you live. A sort of female Middletown, U.S.A., with the emphasis on sexual mores.”

⁶⁹ The Smyth Report is the common name of an administrative history about the Manhattan Project commissioned by the project director, Major General Leslie Groves, Jr., and written by the physicist Henry DeWolf Smyth. It was the first official American account of the development of the atomic bombs and represented the first official public dispatch of declassified information about the Manhattan Project. To avoid becoming a how-to manual, its content deliberately skewed toward the inertly informational and flatly numerical. It was published with the formal title *A General Account of the Development of Methods of Using Atomic Energy for Military Purposes* on August 12, 1945, following immediately upon the atomic bombings of Hiroshima and Nagasaki on August 6 and 9. The journalistic titling convention in which stuffy scientific publishing titles were forsaken in favor of the author’s surname—the Smyth Report, the Kinsey Report—helped draw a common thread in the popular imagination between otherwise quite divergent research programs. Thickening the superficial connection was also the convention rampant among sensationalizing commentators referring to the Kinsey Report as the “K-Bomb” and its publication date as “K-Day.”

“But that’s been done,” Blakely protested. “Kinsey, and Hamilton before him, not to mention a raft of others.”

With a quick wave of the hand Harris brushed aside all that had gone before.

“Kinsey just whetted the public’s appetite. We give them something more. We humanize the book with a batch of case histories. We let the readers not only peer into the bedroom—but get right into bed with our subjects.”

“But why me? I’m no expert on sex.”

“You’re a sociologist, and that’s even better.”⁷⁰

From Harris’s perspective a sociologist may as well be a sex expert, since he is a practiced hand in blending the genres of statistical generalization and humanizing case history. But the sociological skill of observation that Blakely has cultivated in his professional life has left him alienated from the primal energies in whose domain he imagines sex to exclusively belong. Blakely is depressed because he feels himself to be living a “second-hand life” (60), and the drama of his protagonism is his struggle to access first-hand experience that would puncture his sociological remove from the world around him. He tries to secure this for himself first by restoring biographies to the data of his female research subjects. “Blakely found himself unable to regard the answers as merely meat for objective statistical charts, merely data to be coldly evaluated with scientific detachment,” and he feels himself compelled to humanize. “He selected an interview folder at random, glanced at the code number on the cover. He hesitated before

⁷⁰ Joseph Hilton Smythe, *The Sex Probers* (Beacon Envoy, 1961), p. 19.

reaching for the small memoranda book he kept locked in the bottom drawer of his work desk. Here the code numbers ceased being mere statistical tabulations and became living identities. For this book gave him the name of each woman who had made an answer” (34).

This act of biographical restoration fails to solve Blakely’s problem. Correcting sociological remove with novelistic intimacy, making “living identities” out of what had been “merely meat for objective statistical charts,” proves to be an over-correction, producing a false and potentially lascivious sense of intimacy with women who are functionally strangers, despite being neighbors. This conversion produces second-order trouble because Blakely feels *too* close to these women: “*Undersexed. Aggressive. Homosexual*. In Blakely’s mind the labels found identities, became living persons stripped of social pretenses, without the moral masks they wore in public. Emotionally naked” (71). Blakely is plagued by a nightmare in which his “emotionally naked” subjects are literally naked, wearing signs about their necks labeled with their sexological category, and shouting at Blakely: “Give us back our clothes! Give us back our clothes!” (68).

Once Blakely’s book is a success, the technocratic college president Wheaton offers him a full professorship, and offers its readers the novel’s most soul-bearing moment of self-reflexivity about its own aesthetic project: “Kinsey, you may remember, was subjected to a vast amount of cheap and tawdry exploitation. It is the lot of every serious scholar who explores new avenues” (146). Not least among Kinsey’s cheap and

tawdry exploiters, *The Sex Probers* thus announces its own opportunistic uptake of Kinsey as—far from exploitative—the surest sign of the seriousness of Kinsey’s contribution to science. Talcott Parsons should perhaps likewise be flattered that Wheaton sees the popular success of Blakely’s book as an occasion “to launch a Department of Human Relations” that would “bring sociology out of the classroom into”—Blakely finishes his sentence: “Into the bedroom, right?” (147). Wheaton becomes an ersatz Talcott Parsons to Blakely’s Kinsey, riffing on the department of Social Relations at Harvard that Parsons founded in 1946 and that Stanley Milgram, John Money, Dick Price, and many other catalytic figures of interdisciplinary postwar social theory later attended.

While the professional accolades are cheering to Blakely, they do not resolve his feeling of living at “second-hand.” Blakely ultimately secures perfect middle-distance social agency by transcending the loneliness of the writer and the alienation of the sociologist and becoming, instead, a reader. Somewhere along the way his publisher has secured an excerpt deal with “one of the women’s magazines” (89). Blakey achieves a workable relation to his own life by transcending the sociological and novelistic regimes of representing sexuality and entering into the magazine’s. Magazine journalism can claim some of the empiricist immediacy of sociological analysis that nonetheless brings along some of the biographical or psychological integrity of the novelistic narrator. But magazines achieve what the novel cannot yet, by avowing the special character of numeric representation, resolving the tension between narration and numeration with

more ambivalent concessions to the beguiling novelty of the latter than the novel could accommodate, even in its most Borgesian contortions. *The Sex Probers* concludes mid-sentence as Blakely begins reading his book aloud to an assembled audience of fawning women from his town: his research subjects sit to hear a reading of statistical generalization about themselves. The novel does not so much end as it breaks off, mid-sentence, where the magazine begins.

Novelizations and adaptations of the Kinsey research carried on for years, sometimes across so many years indeed that their sexological premises come to seem but a distant and distorted memory. Ted Mark's *The Man from O.R.G.Y.* series (1965-1981) chronicles the globe-trotting exploits of sex researcher turned secret agent, Steve Victor.⁷¹ In a mash-up of spy thriller and erotic satire, and mobilizing plenty of extraneous generic conventions besides, Steve Victor proclaims, "I see myself as carrying on the traditions of Dr. Kinsey. The difference is that I've cut out the paperwork and substituted a personalized methodology."⁷² While explicitly announcing its relation to sexology, the "personalized methodology" Steve Victor innovates seems derived as much from James Bond as Alfred Kinsey, and invests little in the distinction between them.

⁷¹ Ted Mark was one of several pseudonyms of Theodore Mark Gottfried (1928-2004), who, under his given name, published numerous works of educational non-fiction about historical events aimed at a student audience. Under another of his pseudonyms, Blakely Saint James, Gottfried penned a series of erotic novels for the Playboy Paperbacks imprint.

⁷² Ted Mark, *Here's Your Orgy* (Berkley Medallion, 1969).

In another erotic novelization of the Kinsey research, *Miss Kinsey's Report* (1967) by Ray Train, the eponymous protagonist is compelled to conduct a sexological survey of her home town by her recently deceased uncle's will, as prerequisite to her inheritance. This turns out to be an elaborate ploy, paving the road to marital bliss with pseudo-science, as Miss Kinsey's participant-observer sexological methods bring her into intimate contact with the homegrown suitor her uncle had secretly selected for her future husband. Miss Kinsey stands to be rewarded with a loving husband and a family fortune in return for her sexological labors. These are quaint compensations, literally avuncular, and their perversion into exotic atavisms in the erotic novel in which they appear speaks to the moment in which the institution charged with authorizing polite sexual discourse is not the church or family but the academy. In *The Sex Probers* (1961), the Kinsey-esque Blakely is offered tenure in exchange for sensationalizing his scientific research for a mass readership. By the time of the Ted Mark series, this institutional aegis is even more starkly drawn: the primary referent of "orgy" is not group sex but foundation funding. The cover copy of the inaugural installment of the series, *The Man from O.R.G.Y.* (1965), ventriloquizes its protagonist: "I'm a sex expert—among other things. If you're squeamish, I'd better not tell you what O.R.G.Y stands for..." The novel opens: "My name is Steve Victor and sex is my profession. I have a Ph.D from a bona fide U.S. college that labels me an expert in the field. I also have a juicy research grant from one of those dollar-dripping American foundations. This means that I can play Kinsey, and they'll pick up the tab. The foundation doesn't hand out research grants to individuals,

naturally. To qualify for one, I had to set myself up as an organization. But the organization is me, and I'm it" (5). The following pages reveal the titular joke: O.R.G.Y. is an acronym for "Obtaining Research Grants for Yours-Truly," spelling out the cynical erotics of sex research in a foundation funded scene that valorizes wanton scientism. "Group sex" is not about the orgy but rather about the O.R.G.Y.: the "group" in question is the research team, and sex is not what they are having but what they are studying—though in the end, these novels suggest, those may amount to the same activity.

This chapter has chronicled a newly numerate mainstream American public attempting to grapple with the meaning of sex in the novel language of quantification in the Kinsey epoch. In the following chapter, I turn to the "future of the gay novel," as one writer put it at the time, in the 1950s-70s, when possibilities for literary representation of sexuality generally, and homosexuality in particular, were haltingly transformed under changing obscenity law. While the erotic paperbacks discussed in this chapter spuriously cite Kinsey as titillating conceit, the next chapter examines the legal expedience of spurious sexological citation as means of evading censorship by asserting the redeeming social value of the scientific study of sex. And, as obscenity laws relaxed, homophile authors carried Kinsey's project into the literary realm in earnest, reconciling the demographic logics of quantifiable social actors with the humanist imperatives of literary characterization to forge a forthrightly homosexual aesthetic. Exploiting the statistical margin of error in enumerating the social world, the incipient homophile novel staked its

future on an aesthetics of the indeterminate, trading in the counted world for an algebraic formalism that enlivened the statistical imaginary with an attention to its numeric poetics.

CHAPTER 2: PULP SEXOLOGY: SEX BY THE NUMBERS

I. Gay Science⁷³

“The Dim Past,” the first chapter of Roger Austen’s *Playing the Game: The Homosexual Novel in America* (1977), begins by recounting the advice Dr. William A. Hammond gave to a patient who came to him looking for a cure for his homosexual desires. The doctor prescribed the man “bromide of sodium, cold baths every morning, a liberal diet and plenty of outdoor exercise,” as well as “the study of mathematics” (1). This was in 1918; the dim past indeed, for by the time of Austen’s writing in 1977, mathematics, far from being a prophylactic against unbidden homosexual urges, provided the very impersonal form within which they could be imagined, if not enacted. In the intervening decades between Hammond and Austen, sexology had emerged to offer a

⁷³ Walter Kaufmann’s “Translator’s Introduction” to Friedrich Nietzsche’s *The Gay Science* (Vintage Books, 1974) notes that he first settled on this English translation of the title in 1950; “Meanwhile, the word ‘gay’ has acquired a new meaning, and people are beginning to assume that it has always suggested homosexuality. [...] If homosexuality is what now comes to mind first when the word ‘gay’ is heard or read, the decisive change was brought about only in 1969 by the establishment of the ‘Gay Liberation Front.’ [...] It is no accident that the homosexuals as well as Nietzsche opted for ‘gay’ rather than ‘cheerful.’ ‘Gay science,’ unlike ‘cheerful science,’ has overtones of a light-hearted defiance of convention” (4-5). He notes Nietzsche’s adoption of the term from the Provençal *gai saber*: “the art of poetry” (6). The point of inflection between the literary arts and the sciences of man that would produce a “gay science” that populates the (it should be noted—manifestly American) catachresis of *fröhlich* and *gay* with concrete content circa the 1969 establishment of the Gay Liberation Front is precisely the point of entry for the present investigation.

quantitative master discourse of homosexuality, and “the study of mathematics” passed from the stuff of homophobic prescription to a form of homophilic expression.

This chapter traces a line from the death of the novel into the paperback revolution by describing the way a shift from qualitative to quantitative methods in midcentury American sexology played out in the literary aesthetics of the emergent homophile collectivities that were the objects of study and interlocutors of that scientific project.⁷⁴ Austen’s 1977 study of the “homosexual novel” purports to be the first account of homosexuality as genre, not just a sexual subculture but an aesthetic subculture with a discrete literary history; but the eponymous “game” in question is one whose main players are sexual scientists. As the incipient homophile movement cleaved homosexuality from sexological pathologization and asserted its viability as social identity, not just object of scientific scrutiny, the political utility narrative of quantification was re-scripted. Quantification was a resource for disidentifying with the scientific circumscription of the social meaning of sexuality for the emergent homophile movement and, as I will show, continued to animate the counter-discourse of sexuality in the moment when queerness itself became an analytic in the form of queer theory.

⁷⁴ The “death of the novel” was pronounced and prophesied repeatedly throughout the twentieth century. Obviously this prognosis was overstated, and the form was and remains far from dead. What was variously described as a “death” or an “exhaustion” of the novel can be read rather as an elite discourse fearfully registering the transformation of the novel into a popular form for general consumption, the aesthetics of which were being rearticulated around an emergent postwar genre system and mass reading public. Lionel Trilling’s “The Kinsey Report,” discussed in Chapter 1, addresses Kinsey’s hand in this specifically.

There are plenty of reasons to be wary of a proposal for number as an instrument of sexual liberation, so often has it been deployed as a tool of empiricist capture and wielded as a weapon of epistemological violence.⁷⁵ In this chapter I adduce a history that suggests that number is not (only) reductive, flattening out singularity and emptying out the specificity of queer lives to tally up the quotient of deviance metastasizing in the social body. We cannot know in advance that social transformation wrought in the register of number will be for the worse. Deciding as much may, among other things, blind us to a crucial moment of minoritarian sexual aesthetics and emergent queerness articulated with respect to the quantitative constraints of sexual science. I trace the drift of the trope of “number” from sexual science into sexological aesthetic, reading Gore Vidal’s *The City and the Pillar* (1948) with his erotic murder mystery trilogy (1952-1954) pseudonymously authored as Edgar Box, and John Rechy’s two Grove Press best-sellers *City of Night* (1963) and *Numbers* (1967), in the context of the emergent homophile movement’s discourse on the politics of literary representation. Through two case-study careers—Vidal’s and Rechy’s—I show how number has proven not to have a deterministic hold on gay aesthetics so much as it has provided a productive constraint on their elaboration. The examples of Vidal and Rechy point to the ways queer writers and

⁷⁵ The literature documenting such abuses is vast. For a few key accounts, see for instance Petra L. Doan, “To Count or Not to Count: Queering Measurement and the Transgender Community,” *WSQ* 44.3-4 (2016): 89-110; C. Riley Snorton, *Black on Both Sides: A Racial History of Trans Identity* (Minnesota UP, 2017); Jennifer Terry, *An American Obsession: Science, Medicine, and Homosexuality in Modern Society* (Chicago UP, 1999); Siobhan Somerville, “Scientific Racism and the Emergence of the Homosexual Body,” *Journal of the History of Sexuality* 5.2 (1994): 243-266.

readers imagined themselves as inhabiting a discourse of seriality and statistics, in opposition to a popular, liberal, and implicitly heteronormative discourse of individuality and anti-numeracy. Liberal recognition operates by counting, and its compensatory narratives of abstract individualism everywhere labor to obscure this fact. Vidal and Rechy call this bluff and put the mechanism of counting to queer ends.⁷⁶ Confronting censorship and censure, and their attendant economic consequences, Vidal turns out the literary excess of melodrama, and Rechy carves down a pulp portrait of mathematical reduction.⁷⁷ What they share is a queer obsession with two overlapping and interacting numbers games toying with the quantitative sciences of sex: serial killers and sexual sequence.

In what follows I investigate the trope of number as it passes out of the professional sexological lexicon and into the diffuse discourse network of postwar sexuality. As I discussed in Chapter 1, *Sexual Behavior in the Human Male* (1948) and *Female* (1953), the first data-driven quantitative studies of American sexual practices of their kind and scope, commonly known as the Kinsey Reports, influentially labored to depathologize sex generally (and homosexuality in particular) by scientific

⁷⁶ It's not for nothing that both Vidal and Rechy, two of the most lauded "gay novelists" in America, at all points in their long careers express extreme ambivalence about identifying as gay, and also, in Rechy's case, as a "Chicano writer." Their resistance to identitarian uptake signals their queer attempts at evasion of the liberal politics of recognition and underwrites the logic of their pairing in this chapter.

⁷⁷ For a reading of Rechy and the field of queer studies that troubles any easy dismissal of "the reductive" as unequivocally problematic, see Ben Nichols, "Reductive: John Rechy, Queer Theory, and the Idea of Limitation," *GLQ* 22.3 (2016): 409-435.

recontextualization, setting aside questions of morality in favor of frequency, prevalence, and distribution. Speaking sex in the numerical language of the quantitative sciences, Kinsey furnished homophiles with a vocabulary to multiply.

Authors like Vidal and Rechy offered a resolution to the antipathy of narrative and number that the popularity of the Kinsey Reports made so salient, marrying the distribution logics of demography and the humanist psychology of character in the literary form of serial sex. I follow the sexual aesthetics of number through these works as far as it will go, to the brink at which it begs its own negation in the figure of the variable, x . X marks the spot of historical transformation from the political economy of deviant precarity to the identitarian regime of social difference, registered in a figure potent with the imprint of quantitative sexology on the history of homosexuality. In conclusion, I follow this figure into its final form as the *sine qua non* of queer theory's queer capacity, to ask anew "what does queer theory teach us about x ?" and perhaps more significantly, what does x teach us about queer theory?⁷⁸

II. Pulp Sexology

Among the reasons numbers proved symbolically useful both politically and aesthetically for midcentury homophiles were these: (1) The Kinsey statistics on the

⁷⁸ I borrow the phrasing of this inquiry from the title of an influential 1995 guest column of *PMLA* by Lauren Berlant and Michael Warner, to which I return at length in closing. Berlant and Warner, "What Does Queer Theory Teach Us about X ?" *PMLA* 110 (1995): 343-349.

incidence of homosexual contacts among American men suggested that the atomizing discourse of antisocial sexual pathology might be eroded through sheer force of demographic quantity—it was cheering to find you weren't the only one, and that even those who *weren't* at least statistically speaking probably still *had*, at one point or several.

(2) As historian of sexuality Jonathan Ned Katz puts it in the first sentence of *The Invention of Heterosexuality*: “In the early 1970s numbers of homosexuals began an exuberant move out of our old secret lives.” These numbers made movements that are to credit with the “coming out of the closet” formulation of gay politics, and the impetus for this mandate—“come out!”—rested on the premise that one would be in quantifiably good company. (3) The masculinist sexual aesthetics of this emergent demographic category—the consolidation of homosexuality as identity above pathology, from the “stud file” to the “clone” look—were serial.⁷⁹

The sexual politics of quantity took shape in a broader post-WWII American context of newly quantifiable social aggregates in which the discourse of number suggested an emergent aesthetic mode seeming to rival the affective power of narrative

⁷⁹ On seriality and sameness with respect to the so-called “gay clone” see Tim Dean, “Sameness without Identity,” *Umbr(a)* (2002): 25-41. On the logics of seriality underwriting the field of sexual identity itself, see Annamarie Jagose, *Inconsequence: Lesbian Representation and the Logic of Sexual Sequence* (Cornell UP, 2002). Jagose concludes that book with a chapter on “pulp sexology,” by which she means sexological studies published in paperback for a mass readership. My own use of that term encompasses the genre to which Jagose refers, but also intends a looser constellation of modes and genres including the pulp and paperback fiction on which sexology made an indelible imprint, and the substantial gray area between fact and fiction, sexology and literature, instigated by the saturation of postwar popular culture by both sex and science.

fiction. The Gallup Polls and the Kinsey Reports delivered wounding blows to the perceived primacy of narrative as a technology for representing human experience, recasting their subjects' most privately held personal narratives—their political philosophies and their sexual histories, respectively—into mere checks, marks, and stats. As Flannery O'Connor put it, "The storyteller is concerned with what is; but if what is, is what can be determined by survey, then the disciples of Dr. Kinsey and Dr. Gallup are sufficient for the day thereof."⁸⁰ Newspaper reviewers sounded similar notes of alarm, one observing that "the prevailing influence" on American novelists, "seems to be Kinsey rather than the now outmoded Freud," and another asserting that the Kinsey Report's "effect on American novel writing has been traumatic. In the first decade A.K. (After Kinsey), millions of words of fiction have spilled out that read like appendices to the Reports."⁸¹ If intimate stories could be better told with survey data and statistics, what then of narrative? Story as a technology of human meaning making seemed to have met its match, if not its end.

In his autopsy of the form that others would call "the living novel," masquerading as a joint review of contemporary literature and its theories, Gore Vidal speculated that "so many of today's academic critics [resort] to formulas, diagrams; the result, no doubt, of teaching in classrooms equipped with blackboards and chalk. Envious of the half-

⁸⁰ Flannery O'Connor, "The Fiction Writer and His Country," *The Living Novel: A Symposium*, ed. Granville Hicks (1957), p.161.

⁸¹ The first quotation is from David George's contribution to *The Saturday Book* (Hutchinson, 1955) and the second is from David Holloway, "Another Appendix to Kinsey," *The Daily Telegraph*, January 6, 1961.

erased theorems—the prestigious *signs*—of the physicists, English teachers now compete by chalking up theorems and theories of their own, words having failed them yet again.”⁸² What Vidal lamented—though he too would ultimately reap its rewards and exploit its affordances—others celebrated, finding in this state of affairs new possibilities for aesthetic innovation of a specifically masculinist kind, as we saw in Philip Wylie’s homage to Kinsey in Chapter 1.

Others found Kinsey’s imprint on the world of arts and letters an unwelcome and unseemly incursion. In 1951, one Ruth Edgar Malone of Pasadena, California, moved by “the desperation born of fatigue” after reading a review by Gore Vidal in the *Saturday Review of Literature*, wrote a pleading letter to the editor of that publication entreating him “from now on to corral the ever more recurrent reviews of books by, for, of, and about homosexuals to some department set aside under the heading of—let us say—‘Sweet Are the Uses of Perversity’ [...] The rest of us, benighted souls that we are, would be thus warned away from yet one more notice that here again the Kinsey Report has been rewritten in terms of ‘the young explorers.’”⁸³

The representational power of narrative seemed to be giving way to the ascendancy of the quantitative as a master-language for describing contemporary life, and the status of sexuality, absent the stories that served as signatories of its moral

⁸² Gore Vidal, “American Plastic: The Matter of Fiction,” *New York Review of Books*, July 15, 1976.

⁸³ Ruth Edgar Malone, “Homosexual Department,” Letter to the Editor of *Saturday Review of Literature*, March 24, 1951.

circumscription, acquired a new uncertainty as well. The name Kinsey became a byword for this state of affairs, shorthand for the cultural anxieties provoked by the general rise in prestige of postwar statistics. The high literary novel seemed inadequate to the task of reconciling its weddedness to bourgeois individualism with the aggregated masses of the quantitative postwar period. This cleared ground for the increasingly popular and deliciously formulaic paperback fictions of the postwar era to pick up some of the slack let drop by the properly literary novel. The amenability of pulpy paperbacks to the seedy and serial made them significant players in the postwar print culture of sexual dissidence.⁸⁴

Pulps take their name from the cheap wood pulp paper on which they were printed starting just before the turn of the century. Pulp magazines dominated the market before WWII, and during the war the distribution to servicemen of Armed Services Editions of a carefully curated set of nationalistic novels with masculine themes primed the postwar reading public for the paperback explosion to come.⁸⁵ The war itself was a popular theme in gay pulp reprints published in the 1940s and early 1950s. Titles like

⁸⁴ There is a substantial bibliography of work on the role of the pulps in postwar sexual minority cultures. See for instance Michael Bronski, *Pulp Friction* (St. Martin's Griffin, 2003); David Bergman, "The Cultural Work of Sixties Gay Pulp Fiction," *The Queer Sixties*, ed. Patricia Juliana Smith (Routledge, 1999): 26-42; Susan Stryker, *Queer Pulp: Perverted Passions from the Golden Age of the Paperback* (Chronicle Books, 2001).

⁸⁵ See Paula Rabinowitz, *American Pulp: How Paperbacks brought Modernism to Main Street* (Chicago UP, 2014) for a broad ranging history of pulp in the US, including the Armed Services Editions and the postwar reading habits of the American public. On the Armed Services Editions specifically, see John Hench, *Books as Weapons: Propaganda, Publishing, and the Battle for Global Markets in the Era of World War II* (Cornell UP, 2010).

Tereska Torres' lesbian war story *Women's Barracks* (1950) and George Viereck's gay-themed *Men into Beasts* (1952) exploit the sex-segregated setting of army life for sensationalistic scenes of homoeroticism that are intended to arouse even as they are decried by the novels in which they appear as abominably perverse. In the ensuing decade covertly gay-themed "physique magazines" purporting to be admiring catalogues of the classical male form were joined on the shelves by pulpy reprints of earlier literary fiction with gay themes, such as Radclyffe Hall's *The Well of Loneliness*, which had first been published in hardcover in 1928. The first forthrightly homoerotic "paper-back originals," or PBO's as they were called in the trade, arrived in the early 1950s, but the boom in their production would not come until the laws governing obscenity shifted later in the decade. This shift enabled less abashed representations of homosexuality. It also emboldened gay writers to compose happier endings for their characters, whose fates had hitherto been decided in advance by the imperative to denounce any sexualities that strayed from the norms of heterosexuality as morally perverse and socially damaging.

Throughout the 1950s and '60s, homophile organizations took interest in pulps as politically consequential representations of sexually marginalized lives. The Daughters of Bilitis's newsletter *The Ladder* (1956-1972), the Mattachine Society's *Mattachine Review* (1955-1967), and its affiliate *ONE* (1953-1969), featured book reviews and running bibliographies of titles past and contemporary. The pulps themselves took interest in these organizations in turn, including advertisements for events and newsletters in the backs of books. Blueboy publishers strove to create an elaborate community

around its pulp publications, expanding its operation in the late 1960s to include the gay magazine *Numbers*—itself a reference to Rechy’s eponymous 1967 novel.

In the changing legal landscape of the early 1960s that saw a relaxation of censorship laws as applied to literature, in large part due to the strategic efforts of Grove Press’s Barney Rosset and legal team, many gay pulps became cannily self-reflexive about their ambiguous relation to that safeguard against the classification of obscenity: “redeeming social value.” Taking cover in a spurious inhabitation of the genre of sexological and scientific writings about the “social ill” of homosexuality, pulps that had in the 1950s earnestly insisted on their scientific merits over their more obvious erotic ones began to toy with the convention. For instance, the prefatory note to *The Half-World of the American Homosexual* (1966)—“This book is not a scientific treatise or an encyclopedia of data and statistics. Rather, it is an excursion to a few of the fog-draped ports along the seas of homophilia...” — coyly assures its readers that it is a work intended not to engorge the mind so much as the loins, however much its quasi-sociological title may suggest otherwise.

Inspired by the ground-clearing work of the Kinsey Reports, pulps took up the theme of sexology and the genre of the case history. As discussed in Chapter 1, *The Sex Probers* (1961) and *Miss Kinsey’s Report* (1967) are explicit Kinsey satires, narrating the stories of ersatz Alfred Kinsey & co. traveling around suburbia “researching” sex by having it. Many pulps riffed more loosely on this theme of the erotic potentials of sexual science, some carrying spurious citations and dedications to Kinsey. W.D. Sprague’s

many salacious studies of American nurses and housewives all bore dedications to Alfred C. Kinsey. Pulp novels like Arthur Adlon's *Lesbos is for Lonnie* (1963) sported blurbs lifted from the Kinsey Reports on their covers. These citations were cheeky, as well as strategic. They drew on Kinsey's scientific bona fides to assert "redeeming social value" while at once invoking his prurient cultural capital to pique interest and court sales. That is, both Kinsey's scientificity and his suspect credibility were resources for a burgeoning mass literary market capitalizing on the salability of sex.

The fact that Kinsey was himself routinely subject to censorship suggests how limited the legal protections secured by invoking his name surely were. Rather than serving as legal strategy, citations of Kinsey in racy literature were not evading censorship but invoking it, and its aura of forbidden intrigue. This cross-over ran the other way as well, with social scientific studies courting sales by approaching a degree of salaciousness hardly distinguishable from the most baldly provocative pulp fictions. This last genre incited sympathetic (though scarcely less sensational) rejoinders in its turn, such as Jess Stearn's influential study of lesbianism, *The Grapevine* (1965), homophile writer Edward Sagarin writing as Donald Webster Cory in *The Homosexual in America: A Subjective Approach* (1951) and *The Lesbian in America* (1964), and the numerous insider accounts of lesbian life by Marijane Meaker writing as Ann Aldrich.

The increasingly dialogic relation between sexology and the pulps was not just shaped by the law, but directly interfaced with it. The supreme court decisions in *ONE, Inc. v. Otto K. Olesen, Postmaster of the City of Los Angeles* (1958) and *MANUAL*

Enterprises, Inc. v. J. Edward Day, United States Postmaster General (1962)—both of which hinged on homophile magazines confiscated by the post office—specified the definition of obscenity such that representations of homosexuality were not to be determined inherently obscene, but rather on a case-by-case basis like heterosexual representations were. These rulings modified the definition of obscenity put forth in the 1957 decision in *Roth v. United States* that had in its turn narrowed the definition of obscenity from any material seemingly intended to “deprave and corrupt” to only material deemed “prurient” by “the average person, applying contemporary community standards.”⁸⁶ Bringing homosexual representation into the ken of this obscenity definition implied that homosexuality was not monolithically detestable, but rather subject to

⁸⁶ The Comstock Act (1873) made it illegal to distribute obscene materials by mail, establishing the conditions for the long and litigious relationship between publishers and postmasters that played out over the better part of the twentieth-century. Defining what constitutes obscene material has always been a sticky matter, and it has been defined in a variety of ways. The “Hicklin test,” established in 1868, held that any material tending “to deprave and corrupt those whose minds are open to such immoral influences” was obscene. *Roth v. United States* narrowed the definition of obscenity and established a new test to determine “whether to the average person, applying contemporary community standards, the dominant theme of the material, taken as a whole, appeals to the prurient interest.” *Roth* also significantly established that obscenity was to be defined against protected speech, such that the First Amendment rather than the common law was the relevant basis for its definition. *Jacobellis v. Ohio* (1964) established that the “community” whose standards were in question under the Roth test was the national community, not state or local; it also elicited Justice Potter Stewart’s infamous “I know it when I see it” test, and contributed to the fragmentation of judicial opinion on matters of obscenity. The bibliography of scholarship on sexuality and censorship law is too vast to cite comprehensively here. On the cultural mechanics and political legacy of these legal proceedings with respect to sexuality, see Whitney Strub, “The Clearly Obscene and the Queerly Obscene: Heteronormativity and Obscenity in Cold War Los Angeles,” *American Quarterly* 60.2 (2008): 373-398.

consideration by “the average person” under advisement to contemplate the work in which it was represented “as a whole.” Homosexuality was articulated with “community” through the apperception of the “average.”

This highly reflexive set of relationships across genres and discursive domains has significant methodological implications. If one sets out to understand the cultural diffusion of sexual science it is difficult to distinguish professional sexology from reportage and literature, and not just because journalistic commentators on Kinsey were systematically strong-armed by Institute policy into becoming research subjects themselves.⁸⁷ As Jeffrey Escoffier has noted, unlike Freud, Kinsey did not propose a theory of sexuality, only a method for describing it. In a narrowly constrained history of sexology this might consign Kinsey to the status of historical digression, failing to amount to a paradigm shift or even a very deep conceptual rejoinder to psychopathological precursors and successors in the field of sexual science.⁸⁸ But the cultural diffusion of Kinsey makes a different case. The sexual scientific paradigm of a given moment consists in an uneven network of genres and representational modalities

⁸⁷ As discussed in Chapter 1, press inquiries about the research and its publication were met across the board with the quasi-extortive rejoinder from the Institute that if one wanted information about the sex history interview process, one could gain it by submitting to an interview oneself.

⁸⁸ Escoffier, “The Kinsey Effect: How the Kinsey Reports Killed Off Psychoanalytic Theories of Sexuality and Prepared the Ground for Social Construction,” paper delivered at the *Social Science History Association* annual meeting in Chicago, IL, Nov. 17-20, 2016. Escoffier has written on the cultural politics of the Kinsey Reports with respect to the gay liberation movement in *American Homo: Community and Perversity* (University of California Press, 1998).

whose transformations are poorly captured by a strict focus on professional sexological tracts.⁸⁹

In the crucible of sexological counting were forged the demographic logics of the homophile movement whose avant-garde was the gay liberation front. The “cult of statistics” also had its culture.⁹⁰ The next two sections are about two of its key elaborators: Gore Vidal and John Rechy.

III. Cold Blood

American obscenity law governed the kinds of plotlines sexually “deviant” characters could live, the language authors could use to narrate those lives, and the distribution of pulps, pamphlets, and paperbacks to their readers by mail. The postal service was the bottleneck in which “obscene” materials were confiscated, and their publishers held to account. These parameters, as well as more general social censure, made writing under pseudonyms the norm for the profession. Famous homosexual

⁸⁹ John H. Gagnon and William Simon put it this way in “Perspectives on the Sexual Scene,” *The Sexual Scene* (Transaction Books, 1970), eds. Simon and Gagnon: “The Kinsey volumes are evidence for the nonlinear and open-ended quality of social change. Conceived and presented as science, they became major components of popular culture during the decade 1948-1958. At the same time the presentation of sex in this essentially statistical landscape sufficiently decreased the affect normally attendant upon discussion of sex, so that nonerotic conversations could take place about sex. It was exactly the qualities that intellectuals disliked about the Kinsey volumes that allowed them to have consequence for larger segments of the population” (6-8).

⁹⁰ See Sarah Igo, *The Averaged American: Surveys, Citizens, and the Making of a Mass Public* (Harvard UP, 2007) on the “cult of statistics” that transformed American social science and culture generally at midcentury through the methodological innovations of studies like *Middletown*, polls like Gallup’s, and surveys like Kinsey’s.

authors of literary fiction like Gore Vidal took cover under *noms de plume* to pen their own gay plots. Vidal's work was given short shrift by *The New York Times* and other press outlets that refused to review or advertise his works after he sympathetically rendered the psychology of the homosexual protagonist of *The City and the Pillar* (1948) under his own name.

The City and the Pillar was published in two different versions in short succession. It is worth noting that neither version ends particularly well for any of its characters, least of all the gay ones, but especially not the 1948 original that got Vidal snubbed. In that version of the novel, as Vidal would later describe, the homosexual protagonist "Jim strangles Bob [the object of his nostalgic obsession] after an unsuccessful sexual encounter" (xvi). Vidal envisioned *The City and the Pillar* as a "romantic tragedy," the "nature of [which is] to end in death," but was told by a skeptical critic "that so sordid a story about fags could never be considered tragic" (xiv).⁹¹ Vidal had wanted a tragic end, but feared he had instead produced a "melodramatic" one, "so for a new edition of the book published in 1965 I altered the last chapter considerably" (xiv). In the 1965 version, to which all subsequent editions are faithful, the novel ends with Jim depressed, drunk, alone, and verbally assaulting a "little fag" (206) in a bar before wandering down to the docks of the river to stare out speculatively onto an

⁹¹ On the inevitable failure of gay tragedy as it buckles under the representational burden of its own clichés, see Heather Love, "Spectacular Failure: The Figure of the Lesbian in 'Mulholland Drive,'" *New Literary History* 35.1 (2004): 117- 132.

uncertain future, but rhetorically embedded in the same backward-looking reverie that landed him there in the first place (207).

In the interval between his 1948 melodrama and his amended 1965 tragedy, Vidal took a detour into pulp. In his paperback fictions of the 1950s Vidal multiplied the doubling logic of the pseudonym into a sequence, taking on three different pen names in an extended shell game of publicity and identity.⁹² Rather than retreating into the closet or refusing to do so, Vidal played coy with its epistemology. He felt snubbed by the homophobic literary market, but instead of recanting and writing “respectable” fiction, or, conversely, going all-in on gay lit, he decided to make a joke of the whole scenario, taking on a series of pen names that quietly allude to gay bathhouses, and writing nominally straight fiction that is packed full of gay jokes. Thus he neither came out nor closeted himself, but rather thematized the epistemology of the closet itself as the stuff of a cheap mystery plot. Intuiting a literary historical opening he would later pronounce as truism—“death has become the new pornography”—Vidal continued to earn a living after *The City and the Pillar* left him snubbed by the mainstream literary establishment by writing an erotic murder mystery trilogy (1952-4) under cover as Edgar Box.⁹³ Vidal, neither a fan nor, hitherto, an author of mystery novels, credits publisher Victor

⁹² In addition to the Edgar Box trilogy, to which Vidal would, later in his career, profess the most fidelity, Vidal also wrote *Cry Shame!* (1950, originally published in hardcover as *A Star's Progress*) as Katherine Everard, whose surname was borrowed from a favored New York bathhouse, and *Thieves Fall Out* (1953) as Cameron Kay. He also wrote an unpublished pulp novel in the early 1950s called *Some Desperate Adventure*.

⁹³ The quotation is from Gore Vidal, “The Novel in the Age of Science,” *The Quarterly Journal of the Library of Congress* 22.4 (1965): 288-299.

Weybright with the idea for the Edgar Box series.⁹⁴ When Vidal inquired what he might base the plots of such a series on, Weybright purportedly quipped, with an irony redoubled in Vidal's retelling, that Vidal should simply "write what you know."⁹⁵

The Edgar Box series follows the foibles of public relations consultant Peter Sargeant, whose services are habitually solicited for public relations disasters so egregious they resemble nothing more than crime scenes—and often literally are. His drive to spin stories puts him in a race with police for information, making his job nearly indistinguishable from that of a detective, and making the novels in which he appears nearly indistinguishable from murder mysteries. But we are not dealing with the novel and the police here so much as the novel and the publicist. Publicity lets Vidal experiment with an aesthetics of surveillance as an alternative to an epistemology of the closet, and the spin-doctors of bureaucratic dysfunction rather than double-speaking closet queens are the real persons of interest. Peter Sargeant, the protagonist and narrator of the trilogy, is not a P.I. but rather a P.R. man. The collapse between private investigation and public relations is one that converts murder into media, prefiguring the

⁹⁴ On the origins and history of the Edgar Box series, see Curtis Evans, "'Elegant stuff... of its sort': Gore Vidal's Edgar Box Detective Novels," *Murder in the Closet: Essays on Queer Clues in Crime Fiction before Stonewall*, ed. Curtis Evans (McFarland, 2017): 225-240.

⁹⁵ "Introduction to *Death Before Bedtime*," (Vintage Books, 2011), p.5.

“pathological public sphere” not as symptom but rather strategy, linked directly to the politics of homosexual representation.⁹⁶

Serial murder is the motor for the plots that enable the multiplication of their author’s public facing persona. For it is Vidal’s attempt to manage his image that sends him under cover as Box, who writes Peter not as a private dick, but a public one, making him the public face of Vidal’s privately held sexual “pathology.” We learn Peter’s name in *Death in the Fifth Position* (1952), the first book of the trilogy, only after another character mistakenly calls him Jim—the name of Vidal’s offending protagonist in *The City and the Pillar*—and Peter doesn’t bother correcting him. But he does correct the reader, narrating “my name is Peter Cutler Sargeant II, but what the hell” (13). Thus Vidal, blacklisted into dissimulation as Box for having written Jim, creates a novelistic world in which Peter might as well be Jim if it will facilitate his management of public relations. “Peter Cutler Sargeant II” is already flagged as a double, but his name stands in for so many others, and vice versa, that he becomes a kind of public relation himself, narrating opaquely in the first person—“master that I am of the worn cliché,” as Peter self-describes in one of his first of many acts of self-cancelling self-disclosure (10).

The first sentences of *Death before Bedtime* (1953), second in the trilogy, find Peter with a stranger on a train: ““You know, I’ve never gone to bed with a man on a train

⁹⁶ On the “pathological public sphere,” and its relation to “statistical personhood,” see Mark Seltzer’s tour de force readings of the mass mediated scene of the crime in reflexive modernity in *Serial Killers: Death and Life in America’s Wound Culture* (Routledge, 1998) and *True Crime: Observations on Violence and Modernity* (Routledge, 2006).

before,' she said, taking off her blouse. 'Neither have I,' I said, and I made sure that the door to the compartment was securely locked" (9). Behind closed doors with his latest assignation, Peter offers gratuitous verbal affirmation of the heterosexuality he is in the process of enacting—seducing a woman by jokingly invoking his virginal innocence of men. He locks the door to keep out strangers on the train, who he knows from Patricia Highsmith are often as not a nuisance to the hetero status quo. Box writes a closet into his train and locks the homophobic word play of straight seduction inside of it. Box's *Bedtime* doubles down on the homophobic logic impelling its doubles, wringing a hollow laugh out of their irony and bringing out Highsmith in the process.⁹⁷ This is less a

⁹⁷ On "bringing out," see D.A. Miller, *Bringing Out Roland Barthes* (University of California Press, 1992): "In a culture that without ever ceasing to proliferate homosexual meaning knows how to confine it to a kind of false unconscious, as well in collectivities as in individuals, there is hardly a procedure for bringing out this meaning that doesn't itself look or feel just like more police entrapment. (Unless such, perhaps, were a *folie à deux*—where 'two' stands for the possibility of community—that would bring it out in as subtle and flattering a fashion as, say, the color of a garment is said to bring out a complexion.)" (18). Patricia Highsmith published *Strangers on a Train* in 1950, and it was famously adapted for the screen by Alfred Hitchcock the following year. In it, two men, whose successful evasion of the consequences of the crimes they commit each on the other's behalf depends upon their status as strangers to one another, become increasingly entangled as one breeches anonymity, obsessively interjecting himself into the private life of the other in a way that positions him somewhere between serial killer and homosexual, and in fact may constitute an assertion of the non-distinction between the two. The novel suggests that being strangers on a train is itself enough to incite criminality—a hotwiring of the impersonality of mass mediated anonymity to the interchangeability of any given members of the masses on mass transit. Contemporaneously with Vidal's Edgar Box novels, Highsmith, for her part, donned the pen name Claire Morgan to publish her novel of lesbian love, *The Price of Salt* (1952)—its own kind of public relations mystery plot.

symptom of the epistemology of the closet than it is a moment of its stylized animation.⁹⁸ Vidal capitalized on it; for a 1964 paperback reprint of the Edgar Box trilogy—before he had outed himself as Box—Vidal supplied a blurb for the book’s cover, proclaiming of his own literary achievement: “The work that Dr. Kinsey began with statistics, Edgar Box has completed with wit in the mystery novel.”⁹⁹

Part of “the work that Dr. Kinsey began with statistics” had been to convert the shadowy sexual recesses of the mind into a numerically coded data set, dousing the Freudian excavation of the unconscious with the cold water of quantification. “‘Gore is a man without an unconscious,’ his friend the Italian writer Italo Calvino once said. Mr. Vidal said of himself: ‘I’m exactly as I appear. There is no warm, lovable person inside. Beneath my cold exterior, once you break the ice, you find cold water.’”¹⁰⁰ The serial killer may be the form of appearance of the generalized criminological-actuarial quantification of the social field of reflexive modernity—the “mass in person” as Mark Seltzer has put it—but he is also the form in which serially deviant sexual actors are

⁹⁸ See Barbara Johnson, “Bringing Out D.A. Miller,” *Narrative* 10.1 (2002): 3-8, in which she clarifies that “‘bringing out’ is not exactly the same as ‘outing.’ [...] In fact, if ‘outing’ means revealing what was previously concealed, ‘bringing out’ cannot be such a simple (logically, anyway) one-shot process. One can never be sure something has been sufficiently ‘brought out.’ In other words, it has everything to do with style” (3).

⁹⁹ Alfred Kinsey initiated a correspondence with Vidal in 1949, writing to him on April 4 of his admiration for *The City and the Pillar*. Shortly thereafter Vidal and Kinsey arranged to meet, and Kinsey took Vidal’s sex history. Vidal writes of the experience briefly in his memoir, *Palimpsest* (Random House, 1995), and his account is corroborated by the Kinsey correspondence archive.

¹⁰⁰ Charles McGrath, “Gore Vidal Dies at 86; Prolific, Elegant, Acerbic Writer,” *New York Times*, August 1, 2012.

compelled to give themselves appearance, under conditions of legal, social, and economic censure for representation of such a character as anything but pathological. That is, Seltzer proposes that the serial killer is characterized by his “abnormal normality”—“but what the hell,” as Peter puts it; for a deviant with aspirations for any other form of recognition, that may be as close to normal as he is likely to get.

But as “the sexual scene” changed over the course of the 1960s, with it the aspirations for gay representation.¹⁰¹ Wrung dry of their irony, the impersonal seriality of the pulps that had made them a safe-haven turned them into a straightjacket as gay liberation raised expectations for representation. As pulp novelist Larry Townsend reported in *The Advocate* in 1970, Phil Andros (one of the many pen names of Samuel Steward) and a small collective of other gay writers made a stand at a late 1969 rally against the impoverishment of gay representation resulting from the formulaic constraints of the paperback publishing houses, which dictated the proportion each book should contain of characterization and plot versus sex scenes—in great favor of the latter:

On June 15, 1970, a meeting took place in the quarters of the Society for Individual Rights (SIR) which may herald the beginning of a new era for homosexual writers. [...] Under discussion was the future of the gay novel. [...] Because of the difficulties in persuading standard publishers to produce books with frankly homosexual themes, most of us have been forced into the ‘adult’ or

¹⁰¹ Gagnon and Simon use “sexual scene” to describe the saturation of mainstream and minority cultures alike with a “nonerotic” sensibility about sex post-Kinsey & co. across the long 1960s.

‘porno’ market. None of us are overly pleased with this, as it restricts our range of expression. [...] We are limited to an exposition of 50,000 to 65,000 words—too short for proper development of characters and plot, especially when it is necessary to devote approximately 20 per cent of our text to ‘hots’ (sex).¹⁰²

The logic of number pervaded not just theme but form, dictating compositional proportion in a way that decided the priorities and potentials of the representable world in advance. The pulps proved a frustrating consolation prize for the foreclosed “future of the gay novel”—pliable fictional forms to a point, but short of an expressive literature by a long shot.¹⁰³

IV. Body Count

The *New York Times* review of John Rechy’s breakout Grove Press debut *City of Night* (1963) proposes that “the book should be regarded more as sociology than as a novel,” withholding endorsement of Rechy’s literary bona fides while hailing him “the Kinsey of the homosexuals.”¹⁰⁴ Aside from a mention of Kinsey embedded in Rechy’s

¹⁰² Larry Townsend, “Plight of Gay Novelists: Who Gauges Market Correctly, Publishers or Writers?” *The Advocate*, August 19, 1970, p.19.

¹⁰³ Pulp authors also self-reflexively took up this constraint itself as a provocative formal principle. Consider Samuel Delany’s erotic novel *Equinox* (originally called *Tides of Lust* [1973] at the behest of the publisher, but restored to Delany’s preferred title in subsequent editions): “One of the self-imposed constraints on the writing of *Equinox* was that I would write none of it unless I was actually in a state of arousal, even for the nonsexual parts” (295). “Pornography and Censorship,” *Shorter Views: Queer Thoughts and the Politics of the Paraliterary* (Wesleyan UP, 2000): 292-297.

¹⁰⁴ Peter Buitenhuis, “Nightmares In the Mirror,” *New York Times*, June 30, 1963.

fictional portrait of Thomas Painter in one of the novel's vignettes, there is little in *City of Night* to sustain such a title.¹⁰⁵ Naming Rechy "the Kinsey of the homosexuals" says much more about the signifying power of "Kinsey" as a metonym for sex than it does about any particular qualities of either Rechy or the literary aesthetic of *City of Night*. Far from tabulating sex histories, *City of Night* maps a network of urban scenes, describing the bars, theaters, beach fronts, sidewalks, and parks where drag queens, hustlers, and scores met up, hung out, and did business.

The becoming-sociological of the avant-garde in the face of the obscenity strictures of the American legal system generated a relation that can cut both ways. It enabled the truly sociological to look avant-garde, which is to say a popular sociologist like David Riesman as much as Rechy can become composer of the Great American Novel whether either are writing novels or not, just because even more importantly they are writing sociology. When the *New York Times* reviewer called Rechy "the Kinsey of the homosexuals" he meant to be discrediting his literary merit, but the ground beneath literary merit itself was shifting such that he rather enshrined it. Sociology had become a

¹⁰⁵ Painter was an amateur sexologist and key Kinsey informant on matters of homosexuality. For a historicist reading of Painter's appearance in Rechy's fiction, see Yuriy Zikratyy, "Interviewing Hustlers: Cross-Class Relations, Sexual Self-Documentation, and the Erotics of Queer Archives," *Out of the Closet, Into the Archives: Researching Sexual Histories*, eds. Amy L. Stone and Jaime Cantrell (SUNY Press, 2015): 287-310. On Painter and Kinsey, see Henry L. Minton, *Departing from Deviance: A History of Homosexual Rights and Emancipatory Science in America* (Chicago UP, 2002). Minton notes that Painter kept his diaries in longing anticipation of one "Mr. X," the hypothetical biographer from a sexually liberated future who would return to the record of his life with an understanding denied him in his own time.

literary genre. This is not to fall prey to the critique of post-45 criticism, leveled insightfully by Stephen Schryer, that it has too often allowed the popular narrative sociology of people like Riesman, on the strength of the mainstream popularity of his *The Lonely Crowd* (1950), to stand in for postwar sociology as such, effacing in the process the much more governmentally consequential structural functionalist sociological tradition exemplified by Talcott Parsons.¹⁰⁶ Rather, these two senses of the sociological are operative immanent to the period, and in Rechy we see a moment of fraught interaction between, on the one hand, the cultural value of a conflated literary-sociology, and, on the other, the “new class” fantasy of an anti-technocratic humanist critical elite who would be endowed with the power to adjudicate such value claims.

It is my contention that Rechy would make good on his title, “the Kinsey of the homosexuals,” with his 1967 follow-up, *Numbers*, which chronicles two weeks in the life of Johnny Rio, a one-time hustler now older, wiser, and off the streets, but briefly back at it to make sure he’s still got it. Relating his two most famous novels in a 1995 interview, Rechy notes, “The structure of the last portrait section [of *City of Night*] (“White Sheets”) is borrowed from my fascination with mathematics. I saw the relationship between the two characters in that chapter in terms similar to those involved plotting an algebraic equation on a graph; given several factors, locating the intersection of two lines to determine the exact point of revelation. In *Numbers*, I was writing about a series of

¹⁰⁶ Stephen Schryer, *Fantasies of the New Class: Ideologies of Professionalism in Post-World War II American Fiction* (Columbia UP, 2011).

sexual encounters, but the central metaphor is death, dying” (119).¹⁰⁷ The troping of sexual math towards death finds disturbing concretion in the AIDS epidemic in the context of which Rechy delivered these remarks. But at the time of the novel’s composition, the metaphorical conflation animating *Numbers* bespoke an anxiety about the salutary closure seemingly foreclosed by seriality, the conclusion of which would have to be mortally final if it was to conclude at all. In other words, the impersonal relation enabled by the abstracting mathematical conceit underwriting character contact in *City of Night* had, by the time of *Numbers*, become personal, as personal as life and death.

Rechy diegetically introjects himself and *City of Night* into the opening scenes of *Numbers*, the protagonist of which is greeted upon his return to Los Angeles with:

Oh, Johnny Rio, you *should* have been here few years ago—when that *stir* happened! (I think you had *just* left.) *Well!* You probably remember him—this young number that used to hang around the *bars* and *Pershing Square*? *Well!* He wrote a *book* about *Main Street* and *hustling* and *Pershing Square* and *queens*, and tourists came down looking for Miss *So-and-So* that he’d written about! And that trashy big picture magazine did an article with photographs of *Main Street* [...] Now *every* time I pick up a hustler, I wonder if I’m going to end up between the sheets of a *bed* or the sheets of a *book!* (25-26)

¹⁰⁷ Debra Castillo and John Rechy, “Interview: John Rechy,” *Diacritics* 25.1 (1995): 113-125.

With this Rechy warns against the facile conflation of paraliteratures and paraphilias in a criticism shored up by a naïve reading of the strategic claims to the sociological that would find a mimetic relation between them. He periodizes this misreading to his debut, *City of Night*, and makes it a cliché in the mouth of a gossip in *Numbers*. The scene converts the catachrestic conflation of bedsheets and book-sheets into a self-reflexive formal principle. Paraliteratures and paraphilias need not be read in mimetic relation because—the sociological premise sustaining such a reading now situated literally as backstory—the whole complex of their conflation comes into view as an algebraic symptom of a much more elaborate social geometry.

Johnny Rio “had made straight A’s in math” (32) and “was always good at numbers” (35), as adept at handling “inventory” at his uncle’s store in Laredo as at tallying “numbers” cruising him in Griffith Park. *City of Night* had played into the hands of the sociological identification of these two forms of inventory as but so many forms of economic activity generally. If there is a meaningful distinction between them, it is only that while the one may be a hustle, the other makes one a hustler, but both effect an effacement of particularity in the logic of equivalencies and exchange registered in the protagonist’s namelessness. In *Numbers* the protagonist can keep his name, because Johnny Rio isn’t in it for the money anymore. His sexual tally is slowly transformed into “a vague game, emerging, vaguely” (126), rather than a job, though this is a hardwon and

protean distinction: “I don’t need money, Johnny reminds himself,” and must remind himself repeatedly (95).

This reminder is grounded in a new ontology in which Moses appears as a precursor to Kinsey’s statistical instruments as much as an instrument of God’s will. Johnny “imagines a roster, with everyone in the world—past, present, future—numbered (as in that book of the Bible in which Moses is commanded by God to take a census of his people): all listed neatly in long, thin, tight columns” (13). He is looking for “reasons” but can find only “numbers”—this is the battle waged to convert the political economy of gay precarity into a bona fide formalism of aesthetic expressivity rather than economic necessity. As Rechy describes it, “The hustler-narrator of *City of Night* learns poses, adopts them, to mask vulnerability. On the street, he’s paid for the role he’s playing, like an actor; the artist, the sensitive child, looks on in surprise. In *Numbers* the protagonist is an extension of the earlier narrator. Here, the narcissism has become even more overt, more consuming: Johnny Rio’s creation of himself is more perfect and so, paradoxically, that renders him even more vulnerable; there’s more to break.”¹⁰⁸ In *City of Night*, being a hustler externalized the threats to the narrator’s subjective coherence by locating them in the vicissitudes of the sexual marketplace, rather than the sexual subject; in *Numbers*, by contrast, “partly from the fact that he’s long fled self-examination—Johnny has always relied strongly on symbols to externalize whatever bewilders or troubles him” (191). Lacking the externalization of “role,” Johnny has recourse to “symbols,” such as

¹⁰⁸ “Interview: John Rechy,” p.122.

numbers, but any irruption of the “self-examination” that “he’s long fled” threatens to reveal these symbols as psychic symptoms, not externalities at all but expressive signs of his self’s “bewilder[ment].” What Rechy names as the narrator’s “narcissism” in *Numbers* we might as easily read as a sign of his sexuality’s condensation into a sexual identity. Introjecting “the role he’s playing” into a “more consuming [...] creation of himself,” the narrator loses the socio-economic space of alienation from the role he has been hired to play and acquires the vulnerability of a belief in his own self-identity.

The narrator of *Numbers* manages his vulnerability by making of it a “game” in the form of a hustle, though he can no longer conceive of himself as a hustler. Johnny generates the rules of the game by extrapolating a mathematical theory of his sexual future. He has come “to Los Angeles for a reason he does not know: knowing only that he’s returning for ten days. Exactly ten days” (10)—he doesn’t know the reason, only the number; this becomes a recurring refrain. He iteratively feels his way into a form, and a game: ten days, 30 men. He strains to insist that this ratio is anything but arbitrary:

Thirty... Where did it come from? Lurking... waiting to be spoken. Unconscious calculations now becoming conscious: Feverishly: I’ve been away three years... If I hadn’t left, I would have made it with, say, 300 people in one year... In three years 900... I’m behind 900... How long would it take to catch up? ... The least I’ve made it with in one day in the park is three... At least three a day... into 900... that’s 300... I could catch up in 300 days... But I came back for only 10

days, and that's exactly how long I'll stay. Ten into 300—... Thirty. That's it!
Thirty! That's the goal! (190)

The math puts him at ease: “He was battling against chaos, and all that matters is that a symbolic ‘reason’ has again emerged to save him from disintegration” (191).

Rechy narrativizes hustling, sublating its economic logic into a narrative form within which to tell the story of Johnny's post-hustling life. When “symbolic ‘reason’” fails to satisfy, what steps into the breach is story. Johnny transcodes the urban landscape of public sex into the allegorical vocabulary of “The Myth of the Streets,” the fairytale that vouchsafes hustlers against conflation with fairies. (The Myth, in short: *I only do it for the money.*) The public toilet with a mirror in it in Griffith Park becomes “The Observatory” in this new urban geography: the place he goes to gaze at himself, sometimes even wink at himself, in the mirror. If counting is the method, observation is the mode, not least self-observation, which stands in for the self-reflection Johnny conspicuously lacks. The closest he comes to self-reflection might be gazing at himself in the reflective sunglasses lenses of a mysterious butch number whose concealed eyes beguile Johnny for pages before he understands that their mystery is his own mirrored image. Reduced to surfaces, Johnny makes the most of them until he begins to suspect that they may bespeak depths he cannot bear to plumb.

While the man with the mirrored lenses is enticing, his opposite number is supremely disturbing. “The man with the two X's,” or, sometimes, “the scary man with the two X's,” seems to be waiting for Johnny everywhere. The “two reddish X's, about

six inches long, on his back” recall the shuttered doors of the “gypsy woman” prophetic upon whose presence Johnny had come to rely as a sign that the future remained sequentially in place insofar as there was someone there to guess at it, whose beachfront booth is “sealed, boards crisscrossed in stark X’s,” destabilizing his worldview entirely (57). The X’s on the man are similarly unnerving in their ontological instability: “They’re either tattooed or drawn on—Johnny can’t tell—or they could be relatively fresh scars,” or “painted on (but why?)” (135, 200). In any case, “there’s something sinister about them,” and they leave Johnny “vaguely repelled” (135). When he gets to the bottom of things he realizes the provenance of the two X’s, but they do not for all that make any more sense to him—and in fact, less. They are abrasions acquired through the masochistic submission to a lashing leather belt, which the man entreats Johnny to wield.

Dumbfounded that he could be mistaken for the prospective author of the mark, and “to his annoyance (though he doesn’t know exactly *why* he’s annoyed),” Johnny “feels cold. ‘I’m not *anybody*’s executioner!’” he shouts at the man, drawing the line on the reductive logic of number at the brink of its randomization of body count into “*anybody*’s” execution (191, 200). Masochism makes no sense to Johnny, for he cannot conceive of a self-possessed self, let alone one actively desirous of its own interruption. “For every action, a reason. One without the other can topple Johnny’s whole world. Like a row of dominoes. Although he can function for a time in a state of suspension [...] inevitably a questioning takes place” (177-8). The prompt and placeholder for the question is *X*. “The man with the two red X’s branded on his back, slowing his car when

he noticed Johnny, would have clearly stopped if Johnny hadn't driven away hurriedly. That guy's still after me and he thinks eventually I'll make his weird scene. The thought lashes at Johnny," as if a belt inscribing X's in his consciousness (254-5).

Number is not a lasting solution for Johnny Rio but rather conjures its dialectical twin, the variable, x , simultaneously a figure for number abstractly and a negation of numerical specificity. X literally haunts the protagonist as the nagging undertow of the novel's numbers, the site where it attempts to quarantine its anxiety about narrative's nag on number and number's drag on narrative, reducing people to their serial itemization and thereby dehumanizing them and likewise the protagonist who is their tabulator—"Count"? The word, looming large in his consciousness, startled Johnny. Oh, it's not that I'm 'counting' for chrissakes; it's just that soon I'll have enough ('have'?) and then I can stay away from the parks and everything ('enough?'). It's not that I'm *counting!*" until eventually "the horror that he *is* counting, accumulating numbers aimlessly, strikes his consciousness like a sniper's bullet" and "the numbers are losing even their few vestiges of identity" (151, 190, 250). Johnny has to spin stories for himself about why it is permissible for him to count.

X marks the spot in which a world made in the image of the political economy of gay precarity is being despecified into social form where people don't have a price. The variable marks the return of a repressed pluripotent personhood eroding the discrete naming of number, but it operates still in the reference world of the quantitative: it is not number's aversive opposite so much as its opposite number in negation. The threat of the

X suggests that the far side of hustling is the homo with his legs thrown up, who never knows quite how much he's worth.¹⁰⁹ Rechy's sexual math in *Numbers* tries to be probabilistic and predictive, but it runs aground against the psychic imperatives for narrative and biographical closure both formally and thematically. The protagonist isn't satisfied by his math, wants something more, desires more than anything an "end" instead of chasing eternally the numerical specter of his past projected out as predictive future. He finds sequence unbearable as a form of life, however compelling it may prove as a form for literature.

Rechy made a mark; *Numbers* became a brand. Advertising on tear-out order forms in the back pages of the gay pulp novels published under the Numbers imprint of Blueboy Press in the early 1970s, *Numbers* magazine enticed prospective readers: "Tired of cruising? Try *Numbers*"; "We've got your *Numbers*."

V. Queer Calculus

In their early anti-state of the field essay, "What Does Queer Theory Teach Us About *X*?" Lauren Berlant and Michael Warner end with the "deferred" question, "what does queer theory teach us about sex?" Ending their essay this way, they give the lie to the staid professionalism conjured by their title, which apostrophizes the invitation they received from the *PMLA* to author this "guest column" explicating queer theory for the

¹⁰⁹ On this figure of the cliché of feminized homosexual receptivity see Leo Bersani, "Is the Rectum a Grave?" *October* 43 (1987): 197-222.

profession, ventriloquizing its prudish prurience while continuing to defer satisfaction of its curiosity and its demand. Rhyming the deferred question of sex with their title question of x , they also give the lie to the apparent arbitrariness of the variable's sign, as "x" seems to trope inevitably towards "sex," an echo that swallows its first letters but does not lose their phantom phoneme. "Sex" seems to have been waiting in the wings all along as the deferred syllabic context for "x." But it likewise suggests that sex itself shares some of the volatility or indeterminacy of the variable, making good on their assertion that the queer power of the variable query is its capacity to "wrench frames" (348). The prurient inquiry and the queer work of questioning: the difference between them is a matter of style.

Writing in a 1974 special issue of *College English* on "The Homosexual Imagination," Dolores Noll likewise ends her essay with a bang: "Let me end simply by quoting a sign consisting of letters pasted on a *PMLA* cover which appeared in an office window in May of 1970, when those of us who taught at Kent were trying to grasp what the slaughter of our students meant or should mean to us. It read: 'We publish while our students perish.' I like to think that those words explain most fully why I am a gay feminist activist at Kent State today" (315).¹¹⁰ Noll is describing the *PMLA* as the raw material for a ransom note, where professional recognition of academic expertise comes at the price of life itself. Institutionally legible expertise is politically quietist, or worse—

¹¹⁰ Dolores Noll, "A Gay Feminist in Academia," *College English* 36.3 (1974): 312-315.

efficacious in all the wrong ways, enabling the violent disciplining force of repressive state power in direct proportion to its commitments to publishing disciplinarily legible descriptions of it.

In juxtaposing these two examples I mean to suggest that the queer style of commentary described, proposed, and performed by Berlant and Warner's essay—a “queer commentary” among whose chief practitioners they nominate “not faculty members but graduate students” (343)—is no mere language game. The stakes are high, and they are informed by a long history of justified skepticism and principled opposition to the professionalizing protocols that would discipline the politics of sexual knowledge production into docility. Among the things *X* marks is queer theory's refusal to be self-identical, to claim an identity politics, to generate professional protocols for self-replicating recognizable rigor. As Kandice Chuh has argued in her critique of the “aboutness” imperative of identity-affiliated field formations to self-reduce to topicality in order to become legible to the neoliberal university as productive fields, a critique that she describes as an extension of her “refusal of identitarianism,” the drive to replicate rigor is “otherwise known as *discipline*,” and it entails a reproductive logic that is manifestly “unqueer” (127).¹¹¹

Berlant and Warner articulate a queer rejection of this disciplinary reduction in the language of number, an algebraic figuration of “resistance to being an apparatus for

¹¹¹ “It's Not About Anything,” *Social Text* 32.4 (2014): 125-134. Consider also “Notes on Aboutness,” paper presented at “Queer Method,” University of Pennsylvania, Philadelphia, November 1, 2013.

falsely translating systemic and random violences into normal states, administrative problems, or minor constituencies” (348). “Systemic and random”—*x* captures both while staving off their normalizing congelation into “social problem.” Berlant and Warner don’t have science envy, they have rhetorical savvy—this is how to take their *x*. Posing the “question of *x*” is not a symptom of scientism so much as a parodic invocation of it, for it is a question they voice only to put in the mouth of the profession whose reductive utility imperative it mockingly invokes. Far from Vidal’s vision of English professors, “envious of the half-erased theorems—the prestigious *signs*—of the physicists,” symptomatically “chalking up theorems and theories of their own,” *x* invokes the problematique of scientism in the academy as it interfaces with publics and politics.

Berlant and Warner propose that this queer resistance to systematicity is not “a commitment to irrelevance” so much as a reflection of queer commentary’s “vital precedents and collaborations in aesthetic genres and journalism” (348). Berlant and Warner gesture toward the uneven network of genres out of which emerges what they propose calling “queer commentary,” rather than queer theory. As they put it, “the metadiscourse of ‘queer theory’ intends an academic object, but queer commentary... cannot be assimilated to a single discourse, let alone a propositional program” (343). And yet it is difficult to hold onto incoherence after some nearly thirty years of academic elaboration. While the field remains productively varied and non-self-identical, many of those “vital precedents and collaborations in aesthetic genres and journalism” have been sidelined as focus shifts to the crisis context of the university itself. Among the “vital

precedents” that Berlant and Warner are citing we might list pulp sexology—the uneven network of “aesthetic genres and journalism” and sexual science that underwrote a historically transformative reconception of the social significance of sexual behavior, and with it of homosexual subjectivity. Queer commentary is a laterally emergent genre committed to posing questions that torque discourses. I contend this claim is reinforced by the history of pulp sexology I’ve adduced, though it may seem at odds with the post-empiricist antipathy to the sciences of sexuality that is the prevailing wisdom of contemporary queer studies.

As we learned from Roger Austen and Alfred Kinsey as much as from Vidal and Rechy, number as a modality of social registration and self-representation does not have a predeterminate political efficacy. Quantification has, among other things, historically underwritten what we might call a version of queer commentary *avant la lettre*, the uneven network of postwar literary, scientific, and legal genres, expert and lay discourses, that I have been calling pulp sexology. Pulp sexology highlights the historical interaction between censorship, publishing history, popular taste cultures, minority identity formation, political novel, sexological empiricism, quantitative and qualitative social science, that comprises the discourse network of postwar sexuality and the context for the emergent movements for sexual liberation and civil rights. Reading this network’s thematization in the novels of Gore Vidal, we located among its applications of a numeric imaginary an aesthetics of the pseudonym as multiplication of identity, plot as public relation, an interaction between number and publicity that proposes the multiplication of

identity as survival strategy. Following the gay novel out of the pulps and PBOs and into the incorporated avant-garde, we found in Rechy an emergent queer auto-critique as he self-historicizes the sociological hustler aesthetics of *City of Night* and emplots them into the mathematical formalism of *Numbers*.¹¹² Rechy intuits the logical extreme of the sexual aesthetics of number in the algebraic upending of *Number*'s headcounts.

Turning with Rechy from hustler to homo and the non-self-identical desire that is the undoing of both, we found that on the far side of quantity lies the vertigo of indeterminacy.¹¹³ This is the psychic toll of homosexuality's depathologization: freed from the inventories of deviant taxonomy, the homosexual must confront the prospect of queer dissolution in the face of his own desires. The name for this chiasmic undoing in theory has early and often been *x*.¹¹⁴ Homosexuality and number reach an impasse that

¹¹² The phrase "the incorporated avant-garde" is a reference to the title of Loren Glass's *Counter-Culture Colophon: Grove Press, the Evergreen Review, and the Incorporation of the Avant-Garde* (Stanford UP, 2013).

¹¹³ On the "vertigo" generated by the disavowal of a proper object of queer critique, see Robyn Wiegman, *Object Lessons* (Duke UP, 2012), esp. "The Vertigo of Critique: Rethinking Heteronormativity," pp. 301-344.

¹¹⁴ Toward an archive of queer calculus, consider the operations of *X* in: Barbara Johnson, "Melville's Fist: The Execution of *Billy Budd*," *Studies in Romanticism* 18.4 (1979): 567-599; Eve Kosofsky Sedgwick, "Some Binarisms (I), *Billy Budd: After the Homosexual*," *Epistemology of the Closet* (University of California Press, 1990), pp. 91-130; Heather Love, "What Does Lauren Berlant Teach Us About X?" *Communication and Critical/Cultural Studies* 9.4 (2012): 320-336. That is not even to broach the lateral reach to coalitional and connected histories of interdisciplinary minority knowledges and civil rights movements that might entail thinking through the *X* of queer theory with that of Latinx Studies, for instance, or Malcolm X's chosen surname, or the epiphanic *X* of Sun Ra's cosmic poetry, or the African American research psychologist "Mary X" who pseudonymously recounted the experience of being interviewed by Kinsey in 1948 for *Ebony* magazine—discussed in Chapter 1, above.

necessitates arithmetic's becoming algebraic, integer superseded by variable in the transformation of gay identity into queer insurgency. Vidal's multiplication of public faces and Rechy's body counts in sexual series, shading into the vertiginously iterative identity of homosexuality: both reach an impasse inside of which x stands as the negation of numerical specificity and the resolution of infinite sequence. Queer studies harnesses the unsettling indeterminacy of identitarian desire by condensing it into a figure for critical capacity, the "question of x ," the posing of which has the power to "wrench frames." Rechy warns of the disturbing queerness of X , which draws quantification and classification into uncomfortable contact. Their chimera is queer commentary.

CHAPTER 3: INNER SPACE IN COSMIC VIEW: UNIVERSE/UNIVERSITY

I. Quonset Classroom

Experimental psychologist B.F. Skinner's novel of educational utopia *Walden Two* (1948)—a literary way-station between his scientific study of rats, *The Behavior of Organisms* (1938), and his scientific study of humans, *The Science of Human Behavior* (1951)—opens with a professor of utopian social design confronted with a newly constructed utopian community by his former students, now veterans, in a former Quonset barracks, now classroom. When Skinner set out to extrapolate his social engineering theories, developed through behavioral experiments conducted on rats and pigeons, into the humanist realm of literary utopia and utopian education, he centered the Quonset classroom as the shared ground for a tweedy ivory tower dweller and his former students, now freshly discharged from military service in the Philippines. Professor Burriss greets them with “the usual questions. Had they seen the new emergency housing arrangements—the trailer camps and the reconstructed barracks? What did they think of the Quonset classrooms? And so on” (1). They've come to give him the news that his utopian whims have been actualized by his old friend, Frazier, in the form of a behaviorist community named Walden Two (Walden One is Henry David Thoreau's). With this news, Professor Burriss reluctantly recognizes that the Quonset hut may be the site of utopian pontification, but it remains as remote from an actualized utopian project as the ivory tower. *Walden Two* is the story of a professor's utopian wish encountering its

own frightful concretion in a counter-cultural madman's utopian program.¹¹⁵ A narrative of the Quonset classroom's swords to ploughshares simplicity is laid plain as fantasy, as it begs rather than resolves the question of the imbrication of welfare and warfare state. Setting out from Professor Burris's dissatisfaction with his classroom as a proxy for the model community realized by Frazier, Skinner's novel implicitly asks, what is the architecture of a utopian education? This question prompts others: What is the relationship between the campus and the idea of a model community? In the post-WWII period particularly, how does the architecture of social reproduction scale, along with its growing student body? How does a discourse of the temporary serve as a permanent solution to the problem of articulating a plausible relation between campus and world?¹¹⁶

Quonset huts were developed in and named for Quonset Point, Rhode Island, where their production commenced in 1941. Quonset Point was itself named in the sloppily appropriative vernacular of colonization, and its namesake architectural product became a potent component of the conversion of settler lands into land grants. Quonset Point had been built into a naval air station and production yard in response to Franklin Delano Roosevelt's 1937 initiative to increase defense measures in preparation for

¹¹⁵ On the distinction between utopian "wish" and "program" see Fredric Jameson, *Archaeologies of the Future*.

¹¹⁶ This chapter pitches its inquiry in terms of the material architectures of educational institutions as symbolic sites formalizing their logics of social reproduction, and it begins from the conditions under which "temporary" classrooms have endured for decades as permanent deferrals of a resolved relationship between architecture and education. But the inquiry could be pitched as easily in terms of the material conditions of labor that likewise obey a logic of the permanently temporary, the university supported by adjunct labor imagined as temp work, lived full-time.

WWII. Quonset structures were based on an upgrade of the WWI British design for the Nissen Hut, but redesigned to include a layer of masonite insulation that would make them suitable for the variable climates of the global outposts of American military hegemony. Approximately 170,000 Quonset huts were manufactured during World War II to house soldiers and military facilities at home and abroad.¹¹⁷ Roosevelt's 1942 Executive Order 9066 authorized the incarceration of Japanese Americans in internment camps, which introduced the barracks as a domestic architecture, confirming "temporary housing" and its logics of relocation as the architecture of permanent disavowal and materializing the etymological affinities between college campus, prison camp, and military encampment in the form of a dystopic planned community.

The Public Housing Authority sought to intervene on the post-WWII housing shortage by encouraging the rapid erection of Quonset hut subdivisions on the outskirts of major metropolitan areas, like New York and Los Angeles. Standard huts were converted to small homes, which sold for \$2,700 (\$1000 for the hut and \$1700 for the home conversion). Public schools, especially colleges and universities, were the biggest beneficiaries of surplus Quonset Huts; government projects were given first dibs on the surplus before it was auctioned off to the public.¹¹⁸ The large number of returning servicemen, combined with urban reordering by the federal government for defense

¹¹⁷ Sean Paul Milligan, *Quonset Point Naval Air Station* (Arcadia, 1996) and *Quonset Point Naval Air Station, Volume II* (Arcadia, 1998).

¹¹⁸ Julie Decker and Chris Chiel, *Quonset Hut: Metal Living for a Modern Age* (Princeton Architectural Press, 2005).

infrastructure optimization, caused a housing shortage; with the incentives of the GI Bill it also stimulated the unprecedented postwar increase in college enrollments.

Quonset structures served as offices, classrooms, and housing, establishing total continuity between work, life, school, and service. Shipped from war-effort work yards to land grant university campuses where they were reconstructed and multi-purposed, the Quonset classroom was a total environment in its portability and ubiquity, rather than its domineering institutionality.¹¹⁹ As Hugh Kenner noted, considering the poetry of Ezra Pound, “Self-similarity in general confers the liberty to stop without incompleteness,” making the repetition of nominally temporary forms as good a strategy as any for constructing an environment both mundane and total.¹²⁰ These temporary structures persisted in numbers until the 1990s (the original war surplus, that is—proxies are still being manufactured today by private contractors), in the meantime phased in and out for double-wide trailers and all other manner of modernized ephemeral architectures, austerity ready-mades for turning out credentialed graduates with a strong sense of scale invariance and structural self-similarity: made if not born ready for the fractalized world of self-referential administrative discourse.¹²¹

¹¹⁹ On “total institutions” in their domineering form see Erving Goffman, “On the Characteristics of Total Institutions” in *Asylums: Essays on the Social Situation of Mental Patients and Other Inmates* (Anchor Books, 1961); and the collection *Total Institutions* edited by Samuel E. Wallace (Transaction Books, 1971).

¹²⁰ Hugh Kenner, “Self-Similarity, Fractals, Cantos,” *ELH* 55.3 (1988): 721-730.

¹²¹ The self-referentiality of administrative discourse is the major insight of Jennifer Doyle’s *Campus Sex, Campus Security* (MIT Press, 2015) as a work of literary criticism reading the bureaucratic texts of the university. Self-reference as the predominating

The temporary classroom becomes the template for the master plan, representing respectively the competing half-lives of administrative fantasies of the built environment as the locus of student thriving, discipline, education, and containment. How does the temporary Quonset classroom interface with the speculative master plan? Quonset huts exist but are not supposed to last; master plans are speculative but they are meant to be realized. These are not opposites, they are adjacent ephemeralitys, and they have a history of chafing at one another. Together they map the arc of war surplus turned speculative future under the guiding hand of the administratively top-heavy postwar multiversity.

“Multiversity” is former University of California President Clark Kerr’s periodizing term for the model bureaucracy of American higher education to come, coined in his Godkin Lecture on the Essentials of Free Government and the Duties of the Citizen delivered at Harvard University in 1963.¹²² Kerr periodizes the history of the modern university, placing himself at the forefront of its unfolding present. According to Kerr’s history, the research university finds its roots in the seventeenth century with Francis Bacon, who championed utilitarian and empirical knowledge; in the mid-

modality of representation and bureaucratic process in complex “reflexively modern” institutions in general—including but in no way limited to or privileging the university—is an idea that has been elaborated in detail and at length across a number of works of systems theoretical sociology. See Niklas Luhmann, *Social Systems* (Stanford UP, 1996) and Ulrich Beck, *Risk Society* (Sage, 1992), and their main promoters in the discipline of English to date, Cary Wolfe (ed.), *Observing Complexity: Systems Theory and Postmodernity* (University of Minnesota Press, 2000), and Mark Seltzer, *The Official World* (Duke UP, 2016).

¹²² Clark Kerr, *The Uses of the University* (Harvard UP, 1963).

nineteenth century Cardinal Newman's "The Idea of the University" proposed a liberal education trained to produce universal men with rounded knowledge, cultivated tastes, and strong national character; in the 1930s, Abraham Flexner's "The Idea of the Modern University" saw specialists replacing generalists, entailing a multiplication of university departments and institutes as philosopher becomes researcher and focus moves away from teaching and towards scientific knowledge production. Clark Kerr's "The Idea of the Multiversity" follows upon this tradition, naming the administrative university in which students in extension courses far outnumber full-time enrolled students, and the university itself has "more employees than IBM" (7). But vestiges of all these stages carry on into the present, creating conflicting senses of the university's purpose: "These several competing visions of true purpose, each relating to a different layer of history, a different web of forces, cause much of the malaise in the university communities of today. The university is so many things to so many different people that it must, of necessity, be partially at war with itself" (8-9).

The multiversity is "an inconsistent institution," "not one community but several" (18), a "name" and a "reputation" for "institutional character" (19-20) which operates primarily as a brand, rather than a culture. Abraham Flexner had compared the university to an "organism," implying integral relations between parts and whole; Kerr proposes that the multiversity is instead a "mechanism," "a series of processes producing a series of results—a mechanism held together by administrative rules and powered by money" (20). Kerr notes that "there are several competitors for this power," and thus the

multiversity must also function as “a system of governance like a city, or a city state: the city state of the multiversity” (20). Interested parties vying for power include students, faculty, administration, “public authority,” and “influences—external and semi-external,” including the “informal influence” of “particular publics,” like donors, unions, local communities, alumni, foundations, and federal agencies (20). In Kerr’s estimation, the system of governance demanded by the multiversity is analogous to the United Nations, and, like the UN, the multiversity finds that “peace” and “progress” are aims often at odds with one another (36). The multiversity embodies this contradiction, and is organized on its premise; as Kerr puts it, “a multiversity is inherently a conservative institution but with radical functions” (37). It must ensure social reproduction while at every turn opening itself inevitably to the possibility of social transformation. That is, “the university must serve a knowledge explosion and a population explosion simultaneously” (37).

Kerr periodizes not only the institutional organization of the university, but likewise its spatial analogues. The liberal arts university was akin to a “village,” while the modern university is more like a one-industry town. The multiversity, however, is like a “city”: “The ‘city’ is more like the totality of civilization as it has evolved and more an integral part of it,” underwriting the multiversity’s unique affinity with “the totality of civilization” and its special microcosmic affordances as a model society (41). In Kerr’s estimation, the multiversity is as alienating for its inhabitants as the modern city, but precisely because of this it is uniquely capable of replicating the conditions of alienation

that pertain to modern life in general, making it a site of hands-on education of a different order. Kerr writes that “the multiversity is a confusing place for the student. He has problems of establishing his identity and sense of security within it. But it offers him a vast range of choices,” and “in this range of choices he encounters the opportunities and the dilemmas of freedom” itself (42).

Kerr charts the trajectory of the university according to the successive models of the space of the campus, from cloistered village to industry town to urban agglomeration, and finds in each phase of its development that the campus operates as a model of the world outside. But as the 1960s progressed, Kerr learned the hard way that the relationship between campus and world is not so straightforward. Kerr was ultimately relieved of his position as UC President by Ronald Reagan, Governor of California, who compelled Kerr’s resignation in the fallout of the Free Speech Movement confrontations between students and administrators at UC Berkeley beginning in 1964, which hinged on the campus prohibition against outside political groups advertising on campus. The problem, in other words, was precisely that the campus was supposed to be prevented at all costs from modelling the world beyond it. Mario Savio, speaking on behalf of the FSM, attacked Kerr for treating the university as an impersonal “factory” churning out atomized conformists, and in a famous speech Savio urged the crowd to repudiate the machine—“put your bodies upon the gears and upon the wheels, upon the levers, upon all

the apparatus, and you've got to make it stop."¹²³ Kerr's resignation effectively eliminated internal resistance to Reagan's plan to implement tuition in the University of California system, laying the groundwork for an even more extensive elaboration of the administrative ranks of the multiversity bank-rolled by student debt.

Is the campus a model for utopian communities generally, or a special case of spatialized social form? Today the word "campus" describes tech headquarters as much as school grounds. Does this generalize its power as social form, or pervert it along the same trajectory by which counter-culture has become techno-culture, and the communitarian utopian ideals of the 1960s have become the hypertrophied individualism of libertarian techno-futurists who now wield more power than the state under whose auspices they nominally articulate their venture capitalist visions of progress as speculation, data aggregation, and surveillance.¹²⁴ How do temporary structures of education become semi-permanent architectures of social reproduction? Architecture is in this sense an applied science; how is it deployed to remodel the military industrial complex as the pastoral urban renewal conglomerate?

Skinner turned to literature to explore scientific propositions about social form, leaving behind rats, pigeons, and humans provisionally to investigate the problem of the model community in the medium of the word. In the next section, I offer an example of

¹²³ Mario Savio, speech at Sproul Hall, University of California, Berkeley, December 2, 1964.

¹²⁴ Fred Turner, *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism* (University of Chicago Press, 2006).

architecture conceived as speech, and its consequences. The University of Oregon administration tried to shut down the question of campus's relation to society at large by employing an architect with a utopian rhetoric of design. The Center for Environmental Structure, employed by the university, proposed that architecture is a language. What it discovered is that, as a language, building constitutes a form of speech and confronts the same problems of free speech and its suppression by the university administration as language on campus in general.

II. Oregon Experiment

Christopher Alexander's *A Pattern Language* (1977), a manual for "towns, buildings, construction," takes as its premise that space is structured like a language, and thus can be either poetic or prosaic. This theory of the built environment was born of a strange engagement: in the early 1970s the University of Oregon hired Alexander, an architectural theorist with counter cultural leanings and professor at UC Berkeley, and his architectural group The Center for Environmental Structure. They were charged with helping the university reconceptualize its planning and development protocols after students protesting the Vietnam War took the university's plans for logging industry motivated on-campus renovation and ROTC expansion as their immediate sites of action. Alexander helped devise "The Oregon Experiment," intervening on student protest with palliative architecture and revising the Master Plan for campus development into a nominally collaborative community document, overlaying the authoritative decree of

university administration bellowing from the heart of the military-industrial complex with the dulcet tones of California zen. In the Master Plan state reason and university administration speak in one voice to elaborate a speculative fiction expressing the dystopian wish for a campus porous to real estate speculation and military intervention.

Alexander was invited to intervene on the tentacular expansion of the administrative ranks of the multiversity through architectural redesign, but this invitation was extended by the administration itself. He has faith that poetic buildings will foster a vital politics of place, while the university knows that poetry is no match for its own prosaic control of the campus space. Skinner appealed to literature to resolve a scientific inquiry; Alexander proposes a certain identity between architecture and literature, both formally structured by pattern languages the poetics of which activate a utopian potential in the everyday. Language after semiotics could be an applied science; after informatics, it could likewise be a building material.

The collaboration between the University of Oregon and the Center for Environmental Structure resulted in a new draft of the campus master plan, published in 1975 as *The Oregon Experiment*.¹²⁵ It begins with an overview of the most alienating campuses in the world, and culminates in a list of corrective patterns that might be submitted to new combinations to produce a salutary space of student thriving and administrative optimization, and it proposes that these aims need not be at cross purposes.

¹²⁵ Christopher Alexander, Murray Silverstein, Shlomo Angel, Sara Ishikawa, and Denny Abrams, *The Oregon Experiment* (Oxford UP, 1975).

Its guiding principle is that “organic form” achieved through small scale, small budget “piecemeal growth” is superior to large scale, big budget, donor-named architectural show pieces—that in the long run, the former does more to sustain the university as institution. In the figure above, the two columns on the left present the subset of a master list of standard patterns that apply to universities. University campuses, like all institutional spaces, many city spaces, and some domestic spaces, are composed of variable combinations of “looped local roads,” “wings of light,” “main gateways,” “connected buildings,” and “south facing outdoors,” among other things. Many kinds of spaces could be generated using those components. As Alexander notes, “This list of 37 patterns is extremely general: It deals with problems of density, buildings, open space, roads, and paths. It does not deal with the specific problems that a university confronts.” The column on the right presents a supplementary list of university-specific patterns developed through the Oregon Experiment, including “small student unions,” “classroom distribution,” and “department hearth.”

Alexander and his colleagues at the Center for Environmental Structure published *The Oregon Experiment* in 1975 as book three in a series, the preceding two volumes of which would not be published until 1977 and 1979, respectively. Thus while *The Oregon Experiment* purports to present a subset of a more comprehensive list of general patterns to fit the special case of the university, in fact the university precedes the general building patterns and the philosophical speculations on their most salutary combinations, which

would subsequently appear in *A Pattern Language: Towns, Building, Construction* (1977) and *The Timeless Way of Building* (1979).

The Oregon Experiment, like the other two volumes in the series, presupposes that human thriving depends upon the homology between architectural dynamism and organismic dynamism. The differentiation of social forms and spaces would ideally proceed according to biological principles like mitosis, as the figure above illustrating “the growth of a new department” indicates. One of the more extreme instances of the formal restructuring of university life is the proposal that optimal academic department size can be determined in advance based on the principles of organic form, and that the structure of academic departments should be prescribed on this basis. Alexander writes, “when a department is too large, students and faculty become alienated... Therefore: Limit the size of any university department. Our current best estimate for the tolerable maximum is 400 students plus faculty. When departments grow beyond this size, they must be split to form new departments.” The presumption that departments are differentiated on the basis of their epistemologies or objects of concern is supplanted by the premise that they are differentiated primarily on the basis of their sense of community, or their office space. This premise holds that academic departments take as their organizational mandate the elimination of “alienation,” and the converse: that they architecturally compel identification.

The Oregon Experiment uses captions and illustrations to cajole its readers into perspectival alignment with its own design imperatives: “The University of California,

Irvine Campus. Can the people of the community identify with this master plan?” “A typical master plan. Can you understand what is going on here?” If the answer to these rhetorical inquiries is presumably “no,” that may have as much to do with the fact that these are a specialized genre of image, and if the reader—let alone “the people of the community”—is anything but an architect or planner there would be no reason at all for them to know in advance how to decode such an image. This, of course, is precisely Alexander’s point—that architecture should be legible, from inception to construction, to the people who inhabit it—but part of the reason his plan never took off is that “the people of the community” are more concerned with attending classes at UC Irvine than with erecting its classrooms. Concern for the classrooms over and above the learning that is supposed to happen within them is a sign of something gone terribly awry, and compelling that concern requires that the classroom itself be disturbing—like a barracks.

In 1947 war-time pre-fab temporary housing structures were purchased by the University of Oregon and erected in a development called Amazon Family Housing for married students, who at the time were mainly veterans and their families attending Oregon on the GI Bill. The nominally temporary structures composing the Amazon housing development in fact persisted for nearly half a century, and by the 1990s they had deteriorated to such an extent that the university decided to address their decay. By that time students with families were a demographically different prospect than they had been in 1947, and what had been married student housing had been reclassified as low-

cost housing.¹²⁶ Responding to state fiscal imperatives that incentivized demolishing and rebuilding rather than retrofitting, UO decided to raze the Amazon housing. The plan became an issue. UO assembled a safety review board to produce a report in 1992 which determined that, though the buildings posed no immediate threat to safety or health, they would likely begin to present a fire hazard starting in 1996; and in 1996 they would be demolished.

In the meantime Pat Hadley-Saisi, a graduate student in the master's program in Planning, Public Policy, and Management at the University of Oregon, entered a bid for Amazon Family Housing to be recognized as a National Register Historic Site. Put otherwise, as the *Register-Guard* reported at the time, "a graduate student uses the skills she's learned at UO to force the university to preserve a housing complex."¹²⁷ She set out to use her master's tools to preserve the houses the university was in the process of dismantling. Hadley-Saisi argued for the preservation of the complex on the basis of its link to the 1944 G.I. Bill, which she argued had wrought a historically unprecedented reconfiguration of American housing design, of which the Amazon housing was an exceptionally unaltered example—due to decades of neglect, its 1940s design had been preserved. Over the course of 1994 the bid was approved, first by the city of Eugene,

¹²⁶ When Alfred Kinsey began offering his "Marriage Course" at Indiana University in 1938, students rushed to wed—as a prerequisite for enrolling. There is a longer story to tell here, perhaps a prehistory of Jennifer Doyle's *Campus Sex, Campus Security*, about the university administration of sexuality.

¹²⁷ "Preserving the Past: The Fight to Save Amazon: A graduate student uses the skills she's learned at UO to force the university to preserve a housing complex," *Register Guard*, May 5, 1994, pp. 1A, 4A.

which caused delays and paperwork for campus admin, and then by the state of Oregon, which caused more delays and more paper work and perversely self-satisfied administrative annoyance that you might call ambivalence if it were not so brazenly just self-congratulatory cognitive dissonance: ““She did complicate things for us a lot,’ said Dan Williams, UO vice president of administration. ‘But you can’t help but have some sense of pride that what she has achieved has been the result of her education at the UO.’”¹²⁸ They were of two minds about their student’s learning.

In fact, the only thing that the National Register designation entailed materially was that federal funds could not be used for demolition. UO proceeded as planned. The National Register rescinded its designation once the site ceased to exist. Christopher Alexander and the Center for Environmental Structure were brought in for the rebuild—luxury dorms—and then fired in showy fashion when public relations got ugly. Four units were spared, purchased by St. Vincent de Paul and spliced, relocated, reconfigured, and bordered with a historically faithful WWII era white picket fence per the specs of the National Register, whence they became low-cost housing once more.¹²⁹

¹²⁸ “Amazon fits criteria for federal listing: The threatened complex qualifies for the National Register of Historic Places,” *Register Guard*, October 18, 1994, pp. 1B, 5B.

¹²⁹ “Ruling fuels Amazon skirmish: Housing: The land use board has asked the city to file a report before demolition of the buildings can proceed,” *Register Guard*, May 6, 1995, pp. 1B, 4B; “Low-cost housing plan detailed: Amazon: A charity wants to cut four buildings in half, then move them to a new site as part of a 30-unit complex: New home for Amazon?” *Register Guard*, February 15, 1995, pp. 1D, 3D; “Four units moved from Amazon site: Relocation: St. Vincent de Paul will use the former student residences for low-cost housing,” *Register Guard*, May 7, 1995, pp. 1C, 2C.

The Amazon project was of course not the first time Oregon had appealed to Alexander to resolve a thorny public relations problem with the palliative vocabularies of participatory design. Oregon's employment of Alexander in the 1990s represents the extent of their tone-deafness, imagining that a strategy that proved effective in the 1970s could be merely redeployed decades later without taking stock of the circumstances at hand, and of their closed system of self-similar jargon: they had, by the 1990s, basically abandoned in all but name the processes Alexander had earlier implemented, and so invited him back to repopulate the shell of his idea hollowed out by its irrelevance to university administration. It also demonstrates the fungibility of vocabularies of architectural "vitality" and those of "urban revitalization," where intentional community may mean separatist commune until it means eminent domain, and the distinction hinges upon whose intention is meant to be the organizing one.

The most recent version of The University of Oregon Campus Plan (Third Edition) states, in peculiar passive voice, that:

By 1973 the need for a new plan was acknowledged, and the Center for Environmental Structure, headed by Christopher Alexander, was retained for that purpose. The result of this collaboration between the Center for Environmental Structure and the university was The Oregon Experiment. Instead of creating a static fixed-image master plan The Oregon Experiment established a process by which development decisions could be made on an ongoing basis. This concept acknowledges the fact that the exact nature and magnitude of future changes

cannot be predicted with any degree of certainty, and that object-oriented plans based on explicit assumptions about the future become outdated as the ‘future’ becomes known.¹³⁰

“By 1973 the need for a new plan” was indeed “acknowledged,” but forcibly: student protesters took action on two glaring emblems of the campus’s openness to industrial and military interests—a logging road that ran through campus frequented by trucks and machinery, and the ROTC building, which students occupied and variously attempted to dismantle. And thus Alexander’s first engagement with Oregon began in 1970, when the university, floundering between the cautionary tale of Kent State and the intolerable interruption to university business as usual that its own brewing student movement threatened, sought an aesthetic solution to its material impasse. The answer was participatory. Process is all.

Alexander’s commitment to participatory planning of architectures to maximize vitality and aliveness demands an abstract identification with one’s institutional role, function, and habitus as life-force: what space will make you feel most alive, where “you” is understood to mean that version or aspect of you that is a secretary, department chair, student worker, janitor, professor, lab technician, or what have you.

It is not always the case that universities construct deliberately obstructionist architectures to thwart student organizing—though they certainly have done so, as the supposedly “riot-proof” brutalist campuses of UC Irvine and elsewhere readily attest.

¹³⁰ *Campus Plan, Third Edition* (University of Oregon, 2014), p.3.

Rather, universities as often enlist students in the planning of their own palliative environments to so busy them with reshaping the university that they have no time or incentive to organize within its walls. Alexander's implicit demand that "the people of the community identify with the master plan" may have been intended as an invitation to reconceive of master planning, but in effect registers equally as an insistence on the assimilation of the university's speculative fantasy of its form into the identity of its inhabitants. The fractalization of university self-registration in which reports generate more reports, rather than resolutions, obeys a similar logic: the bureaucratization of architectural development that converts subjects of the institution into its ceaselessly engaged commentators and elaborators.

Alexander adjudicates the success or failure of the built environment on the basis of its "vitality," which he "diagnosed" according to a multifactorial analysis of its poetic interface with its inhabitants. The current Oregon Campus Planning Office translates Alexander's principle of "diagnosis" into the vocabularies of actuarial state planning: "existing conditions": "The purpose of diagnosis studies is to record the existing conditions of the campus as they relate to the university Campus Plan's policies and patterns. [...] The principle of diagnosis is one of the six basic principles of the planning process adopted by the university in 1974, known as 'The Oregon Experiment', and elaborated upon in the Campus Plan." Elaborated upon—which may as well mean overwritten. The product of Alexander's collaboration with Oregon was not a building but a book. And the "experiment" named in that book's title was not an experiment in

architecture, but an experiment in the university's infrastructural vocabulary, an opening of that vocabulary to the concept of the "future" in scare-quotes, an "experimental" disposition towards its own "development decisions" that converts a "static fixed-image master plan" into an ongoing "process." At least one Quonset hut remains on the Oregon campus: it houses the Campus Planning office.

III. Science Fiction / Science Fact

Reflecting in 1976 on the reception of *Walden Two* (1948), Skinner notes that upon its initial publication the book went virtually unnoticed for "a dozen years. Then it began to sell." He attributes this late "awakened interest" to the closing in of reality on what "was, at the time, little more than science fiction." Skinner "had thought that an experimental analysis of behavior could be applied to practical problems, but [he] had not proved it. The 1950's, however, saw the beginnings of what the public has come to know as behavior modification" (vi). And by the 1960s, "a technology of behavior was no longer a figment of the imagination. Indeed, to many people it was altogether too real" (vii).¹³¹ Skinner attributes the success of his novel to the incidental realism it acquired as reality changed around it. Passing from "little more than science fiction" to the "altogether too real," his utopian novel finally found its dystopian audience. What his account misrecognizes is that between 1948 and 1976, it is not the genre of his novel that

¹³¹ B.F. Skinner, "Walden Two Revisited," *Walden Two* (Macmillan, 1976 [1948]): v-xvi.

changed, but rather the meaning of genre. In 1948, a speculative fiction of behavioral modification was not “little more than science fiction,” it was simply bad science fiction. Skinner’s novel did not pass from science fiction to realism, but rather from un compelling to exceedingly relevant science fiction. In the intervening dozen years, his conceit became not so much “real” as eminently science fictional, as the domain of science fictional engagement with the world shifted towards the near-future, the soft sciences, and the realm of human behavior—newly captivating to both science and science fiction.

In the moment between *Walden Two*’s 1948 publication and its 1970s acclaim, science fiction became as interested in the terrestrial world as it had been in extraterrestrial life. The title of Isaac Asimov’s 1957 short story collection, *Earth Is Room Enough*, might as well be the motto of this movement, signaling a larger shift underway that finds its full realization in the new wave science fiction of the 1970s. But, in fact, earth was not room enough—the population crisis of the late 60s, which is the central focus of Chapter 4, changed the tenor of the idea of “space” such that space age science fictions found new material in the limited space on Earth. Science fiction became as interested in the so-called “population bomb” as it had been in the atomic bomb, and it set to work imagining the mechanisms of social reproduction that would be necessary to sustain a culture forged on the premise of ever-increasing numbers of people living in finite space. Science fiction encountered a scale problem: how to construct a model community for growing numbers.

Exemplary of this shifting focus was Robert Silverberg, who, around 1970, transformed his writing style by transforming his working style.¹³² Silverberg had been publishing science fiction stories and novels regularly since the 1950s on a strict schedule, producing roughly “twenty to thirty pages a day of publishable copy,” five days a week—fifteen or so pages before lunch, and another fifteen after, sometimes producing as much as a complete 7,500-word short story in a single day. “During the late sixties” Silverberg ceased writing “like a machine” and struggled to articulate a different relationship between his writing and ideas (214, 213). Symptomizing the shift in the science fiction field from pulp periodicals to proper literary production, Silverberg notes that his “years as a high-volume producer had given me skills to say what I wanted to say clearly and effectively in a single try. What I wanted to say, though, became ever more complex and difficult to express, [and] writing novels, once a job of two or three weeks, has become an endless procedure” (214-215). The first novel he wrote in this new style was *The World Inside* (1970).

The World Inside sets out from the population crisis of the late 1960s and extrapolates a dystopian resolution to the crisis in the form of a radical reconfiguration of the infrastructures of the planet to sustain ever-increasing numbers of human beings. Rather than colonizing a distant planet with greener pastures, Silverberg plots an inward turn: the whole world is indoors, within the confines of towering skyscrapers called

¹³² Robert Silverberg, “How We Work,” *Hell’s Cartographers: Some Personal Histories of Science Fiction Writers*, eds. Brian Aldiss and Harry Harrison (1975): 213-216.

Urban Monads, or Urbmons. Set in 2381 in Urban Monad 116 in the Chipitts constellation, the novel imagines a world that has resolved the population crisis of the 1950s by “verticalizing.” The name “Chipitts” gestures towards the discourse of megalopolis emergent in the 1960s that predicted the future of American social form recast in urban agglomerations whose new names would be portmanteaus of their constituent cities—Chipitts (Chicago to Pittsburgh), Boswash (Boston to Washington, D.C.), Sansan (San Diego to San Francisco).¹³³ The residents of the Urbmons in *The World Inside* have outlived this era of urban sprawl and reconfigured its horizontal extension into vertical stacks. They have forsaken the natural world as well as the

¹³³ The discourse of megalopolis is a fascinating chapter in the interlocking histories of scale, social form, and urban form in the cold war imaginary, and one that ranges too far afield to discuss comprehensively here. Megalopolis was a topic introduced into the discourse of American urbanists by geographer Jean Gottmann in *Megalopolis: The Urbanized Northeastern Seaboard of the United States* (The Twentieth Century Fund, 1961), who had proposed it as a category of economic analysis. Megalopolis was discussed at the time by many urbanists and critics including Lewis Mumford, Jane Jacobs, and Kenneth Boulding. But the portmanteaus designating the projected megalopolises of the twenty-first century were the invention of defense strategist and Hudson Institute futurist Herman Kahn. In *The Year 2000: A Framework for Speculation on the Next 33 Years* (Macmillan, 1967), Herman Kahn and Anthony Wiener speculated that the millennial population of the United States would be reconsolidated into sprawling megalopolises composed of the concatenated urban centers of their own 1967: “The United States in the year 2000 will probably see at least three gargantuan megalopolises. We have labeled these—only half-frivolously—‘Boswash,’ ‘Chipitts,’ and ‘Sansan’” (719). These names perform spatial condensation, matching language to the anticipated world by making human speech as absurd as its referent. These are portmanteaus barely worthy of the name for both how little they hold and how inadequately they signify on behalf of any of the city spaces their names are meant to incorporate. Making speech as ugly and meaningless as the world it is marshaled to name: this is precisely the tendency against which Christopher Alexander was laboring. He wanted buildings to be as poetic as language; what he had not quite counted on was the possibility that language might be deformed to match the world it describes.

historical world of human civilization and reconsolidated the Earth's population into a network of thousand-storey skyscrapers. Each floor of these skyscrapers has been assigned the name of a now-uninhabitable city of the "ancient" world outside: Paris, Rome, Shanghai, London, Prague, and so on; Pittsburgh houses the archives, Louisville hosts the administrative offices. Each chapter inhabits the real-time, present-tense consciousness of a different resident: a sociologist, a historian, an urban planner, a housewife, and a rock star, all experiencing slow-burning existential crises reaching fever pitch at the moment the narration enters their heads. Each of these characters is differently struggling to achieve perspective in a world with no outside.

Here is the historian, Jason Quevedo, mid-crisis: "He must perform a double act of imagination: it is necessary for him to see that vanished world from within, as though he lived in it, and then he must try to see the urbmon society as it might seem to someone wafted forward from the twentieth century. The magnitude of the task dismays him" (69-70).¹³⁴ Quevedo is at work on a historical-sociological tract called *The Urban Monad as Social Evolution: Parameters of the Spirit Defined by Community Structure*. He is obsessed with trying to understand how spaces shape their inhabitants over time, a question that is not only unanswerable but nearly unaskable in his monadic cultural context. His method is to inhabit the subjectivity of a citizen of the twentieth century, to speak to himself "the sort of words an intelligent liberal American of, say, 1958 would use" (70). His devil's advocate offers him this rejoinder to the dream of the Urbmon's

¹³⁴ Robert Silverberg, *The World Inside* (Doubleday, 1971).

unchecked proliferation of human lives: “But what good is letting them exist, if the best they can hope for is a box inside a box inside a box? What about the quality of life?” (71).

The Matroyshka doll figure (“a box inside a box inside a box”) that empowers the human sciences to make bold leaps of scale is literalized in the architecture and infrastructure of the Urban Monad as dystopian cell, self-similarity recast as totalitarian suppression. If it is accepted as premise that changes in scale do not—cannot—amount to changes in form, then the prospect of collective organizing is evacuated of its transformative potential, and obedience and conformity cannot help but follow. This amounts in the novel to a self-reproductive ecstasy that forms the major premise of this dystopia of 2381: everyone’s highest aim is to reproduce wantonly, literalizing again the principle of self-similarity at the scale of the individual. Their children are uniformly referred to as “littles,” a byword for their world’s self-similar replicative logic of reproduction. It is a novel written in the present tense for a people who have eugenically eliminated discontinuity from their epistemological toolkit—urbmon society is so thoroughly self-similar that there is no opportunity for, and nothing to be gained from, historical reflection.

In *The World Inside*, there is no history, and there is no outside; there is only the inner space of institutional interiors and the lonely depths of human interiority. Rather than abandoning the despoiled Earth for another planet, *The World Inside* rewrites the space age as the age of inner space. This is exemplary of a larger trend in science fiction

based on the sense that history had caught up to, or even outpaced, its predictive fictional speculations. Sociologist Yole G. Sills, writing in 1968 about the utility of science fiction to the social sciences, noted that “with the closing of the gap between imaginative pseudo science and almost prosaic reality, with the advent of atomic power plants, satellite traffic jams, and space walks, popular interest in the fictionalized potential of the physical sciences has become jaded. There is mounting evidence that it is being superseded by a fascination with the potential applications of the social sciences” (474).¹³⁵

Beginning at least as early as the Gernsback era of the 1920s, science fiction had been defined as fundamentally future-oriented, a genre of prediction. Samuel Delany offers a typical schema by which to differentiate science fiction from other genres: science fiction consists in “events that have not happened,” as distinct from literary fiction generally, or what he calls “naturalistic fiction,” which is about “events that could have happened,” and fantasy, which is about “events that could not have happened” (34).¹³⁶ Delany defines science fiction as fundamentally future-oriented, not necessarily prescriptive but definitively predictive. In his speech to the Science Fiction Writers of America in 1971, Jack Williamson proposed that its predictive power made science fiction “good medicine for future shock,” the disorientation bred by rapid technological

¹³⁵ Yole G. Sills, “Social Science Fiction,” *International Encyclopedia of the Social Sciences*, vol. 14, ed. David L. Sills (MacMillan, 1968): 473-481.

¹³⁶ Samuel Delany, “About 5,750 Words,” *The Jewel-Hinged Jaw: Notes on the Language of Science Fiction* (Wesleyan UP, 2011 [1977]).

and social change roiling mainstream Americans entering the 1960s.¹³⁷ But as science fiction's predicted futures were realized in the present, the genre's social function seemed less clear. When history seemed to have caught up to the most expansive predictions of science fiction, how did the genre redefine itself and its capacities around a new set of relations to historical circumstance?

Writing in 1953, Ray Bradbury described the strange discovery that a short novel he had written, "intended as science fiction," seemed to have become all too real.¹³⁸ "I thought I was writing a story of prediction, describing a world that might evolve in four or five decades. But only a month ago, in Beverly Hills one night," he saw the premise of his story being played out by his neighbors. "This was *not* science fiction. This was a new fact in our changing society. As you can see, I must start writing very fast indeed about our future world in order to stand still. I thought I had raced ahead of science... In the long haul, science pulled abreast, tipped its hat, and fed me the dust [because of] my

¹³⁷ Williamson is quoted in Jay Kay Klein, "The East Coast Banquet," *Bulletin of the Science Fiction Writers of America*, 1972. Alvin Toffler's *Future Shock* (Random House, 1970) popularized the phrase. Toffler reports: "Our ideas came together in 1965 in an article called 'The Future As a Way of Life,' [*Horizon* 7.3 (1965)] which argued that change was going to accelerate and that the speed of change could induce disorientation in lots of people. We coined the phrase 'future shock' as an analogy to the concept of culture shock. With future shock you stay in one place but your own culture changes so rapidly that it has the same disorienting effect as going to another culture" (23); "Alvin Toffler: still shocking after all these years: New Scientist meets the controversial futurologist," *New Scientist*, March 19, 1994, pp. 22–25. As a prophylactic against "future shock" analogous to "culture shock," science fiction might be considered a speculative branch of home anthropology, converting cultural alterity into the register of historical self-reflexivity.

¹³⁸ Ray Bradbury, "Day After Tomorrow: Why Science Fiction?" *The Nation*, May 2, 1953, pp. 364-367.

failure to count on certain psychological needs which demanded satisfaction earlier than I supposed” (364). Bradbury offers a re-definition of science fiction for these new historical circumstances: it is “the fiction of ideas, the fiction where philosophy can be tinkered with, torn apart, and put back together again, it is the fiction of sociology and psychology and history compounded and squared by time.” He differentiates science fiction from other genres on the basis of its special capacity to address these issues, only recently alien to its concerns but now in its purview alone: “If you try to cram philosophical and sociological theories into the non-science-fiction tale, you more often than not wind up with more crust than filling. It takes a very agile writer indeed to keep a book together under such conditions” (365). In Bradbury’s estimation, science fiction is the privileged genre for philosophical, sociological, psychological, and historical investigation—no longer just predictive, now engaged.

Bradbury notes that a failure to account for the pressing significance of “psychological needs” prevented his predictive science fiction from outpacing his reality. The science fictional turn to inner life that would follow in the next decades centered psychological concerns to embolden its predictive scope. Science fiction needed a further frontier for its extrapolative imaginations and found it even deeper within.

In 1953, for a volume on *Modern Science Fiction: Its Meaning and Its Future*, Isaac Asimov wrote “Social Science Fiction,” entreating his fellow authors to train their speculative gaze upon pressing social problems, and to train their creative energies on extrapolating possible transformations of them. In 1962 J.G. Ballard wrote “Which Way

to Inner Space?” in which he argued, like Asimov, that reality has caught up to the wildest galactic and ballistic imaginations of science fiction and so the genre must get serious and undertake an exploration of the real final frontier: the human mind. These are two way-stations mapping out respectively the incipient and fully-realized articulation of the position usually associated with “New Wave” science fiction and its turn to the “soft” sciences and to character, psychology, and interiority.

The New Wave is the name for the school of sci-fi authors affiliated with Michael Moorcock’s magazine *New Worlds*. Moorcock and his affiliates were based in the UK, including a core of British authors and some Americans living in London. Samuel Delany has vocally protested his conscription into that school in the historiography of science fiction (as well as the conscription of his fellow American social science fictionists, particularly Ursula Le Guin who is often made into a kind of poster child of American New Wave), insisting that developments in a literary field as demotic as science fiction are poorly captured by models borrowed from literary history (“schools,” networks of affiliation around key publications, celebrities, or institutions, etc.), and that in any case he had never published in *New Worlds* anyway.¹³⁹ But a better distinction might be drawn along the lines of divergence between Britain and America as world powers. Moorcock’s New Wave science fiction was activating a decolonial imaginary, taking up themes like lost worlds regained, cultures reconstituted and transformed, infrastructures of

¹³⁹ Samuel Delany, “Reflections on Historical Models in Modern English Language Science Fiction,” *Science Fiction Studies* 7.2 (1980): 135-149.

connectivity—a kind of reparative anthropology. The American equivalent instead nominated the campus as its final frontier of experimental interiority. (And not just in science fiction. As scholarship on cold war era student exchange programs; the rise of inter-disciplines, area studies, and minority fields; and foundation funded research and foreign policy has made clear, the campus is a crucial testing ground for and site of American imperialism.)¹⁴⁰ As a literary project to harness campus unrest into novelistic form, this sci-fi was largely conservative even when it thought itself sympathetic to the student protests whose energies and imaginaries it aimed to extrapolate. Skinner’s science fictional campus novel was just a little ahead of its time. But the questions Skinner’s novel raised about utopian education and the role of fiction as variously propaganda, education, advertisement, and entertainment remained major concerns of science fiction throughout the ensuing decades and up through especially the early 1970s.

The perception that empirical history had caught up to the wildest imaginations of science fiction eroded its claim on the speculative in a way that, rather than threatening the genre’s most fundamental definition, emboldened it to claim a new social relevance. As Isaac Asimov put it in “Social Science Fiction,” “until 1945 it was only too easy to dismiss science fiction as ‘weird stuff’ [...] And then a weapon right out of science

¹⁴⁰ See for example Jodi Melamed, *Represent and Destroy: Rationalizing Violence in the New Racial Capitalism* (University of Minnesota Press, 2011); Inderjeet Parmar, *Foundations of the American Century: The Ford, Carnegie, and Rockefeller Foundations in the Rise of American Power* (Columbia UP, 2012); Robyn Wiegman, *Object Lessons* (Duke UP, 2012); Roderick Ferguson, *The Reorder of Things: The University and Its Pedagogies of Minority Difference* (University of Minnesota Press, 2012).

fiction ends WWII and changes the balance of power on Earth” (176). Asimov proposes that authors should capitalize on this shifting ground of realism to assert and exploit the relevance of their fictions to “accustom the reader to the notion of change” (189), a task for which the genre is uniquely suited insofar as it amounts to “social experimentation on paper” (192). Asimov offers “social science fiction” as the name for this engaged science fiction, and defines it as “that branch of literature which is concerned with the impact of scientific advance upon human beings” (158), in which “scientific advance” is broadly construed to refer to modernity itself. Asimov further stipulates that “social science fiction is the only branch of science fiction that is sociologically significant, and that those stories, which are generally accepted as science fiction... but do not fall within the definition I have given above, are *not* significant, however amusing they may be and however excellent as pieces of fiction” (159). Asimov proposes that in its sociologically significant form, “science fiction is the literature of social change” (189), and that “the contribution science fiction can make to society is that of accustoming its readers to the thought of the inevitability of continuing change and the necessity of directing and shaping that change rather than opposing it blindly or blindly permitting it to overwhelm us” (196).

Robert Heinlein echoed Asimov’s assessment, writing in 1959: “By means of science fiction one can (as one does in mathematics) examine the extremes of a social problem, search it for inflexures, feel out its changing slopes... Science fiction joyously tackles the real and pressing problems of our race, wrestles with them, never ignores

them—problems which other forms of fiction cannot challenge. For this reason I assert that science fiction is the most realistic, the most serious, the most significant, the most sane and healthy and human fiction being published today” (44-45).¹⁴¹

In his address to the Science Fiction Writers of America convention in 1971, Frederik Pohl cast skepticism on the idea that the predictive capacity of science fiction was its signal social contribution, proposing that “the whole study of the future is misconceived,” and offering instead that “there is no real value in *predicting* the future... The real reason for looking into the future is to decide what kind of world you want to live in and to try to make it become reality.”¹⁴² Science fiction was not predictive, that is, but prescriptive—a tool for shaping collective aspirations for a transformed world—a utopian literature.

Robert Silverberg followed *The World Inside* with *Dying Inside* (1972), deepening the theme of inner space by recasting the dystopian vitality festering in the domestic interior of the urban monad as the necrotic interiority of a telepathic misanthrope slowly losing his powers. *Dying Inside* tells the story of Columbia University alum David Selig, now middle-aged, under-employed, and completely unremarkable except for the fact that he was born in possession of a penetrating telepathic insight into the minds of others. Davis has spent his life skating by, and he has,

¹⁴¹ Robert Heinlein, “Science Fiction: Its Nature, Faults and Virtues,” *The Science Fiction Novel: Imagination and Social Criticism*, ed. Basil Davenport (Advent, 1959): 14-48.

¹⁴² Frederik Pohl quoted in Jay Kay Klein, “The East Coast Banquet,” *Bulletin of the Science Fiction Writers of America*, 1972.

in a sense, never left college. He makes a living by cruising the Columbia campus for undergraduates looking for someone to ghost-write their term papers, a task for which he is exceptionally skilled on account of his telepathic capacity to inhabit his clients' authorial voices. He can write papers that read as if sprung from their own minds. But David's powers are on the wane for reasons he cannot explain, receding like his hairline as he ages into his otherwise perfect mediocrity.

In 1973 *Dying Inside* was awarded the inaugural John Campbell "special award for excellence in writing," introducing a new criterion for evaluating science fiction: good writing. *Dying Inside* is somewhat aberrant as an instance of science fiction in that it is a character study, bucking against one of the signal tenets of the genre that holds that even seemingly individualized protagonists of science fiction are always fundamentally personifications of an idea or stand-ins for a collectivity. For instance, one of Joanna Russ's propositions about the genre in "Towards an Aesthetics of Science Fiction" holds that "despite superficial similarities to naturalistic (or other) modern fiction, the protagonists of science fiction are always collective, never individual persons (although individuals often appear as exemplary or representative figures)," and further that "science fiction's emphasis is always on *phenomena*—to the point where reviewers and critics can commonly use such phrases as 'the idea as hero.'"¹⁴³ But *Dying Inside* is a very peculiar kind of character study—it grows into the form as it prunes the telepathic

¹⁴³ Joanna Russ, "Towards an Aesthetic of Science Fiction," *Science Fiction Studies* 2.2 (1975): 112-119.

synapses of its central character, stepwise singularizing his psychology by slowly eliminating its most singular characteristic. As the novel progresses and David's telepathy dissipates, he must develop for the first time a theory of mind to replace his telepathic technique. The question of inter-subjectivity—the problem of other people—arises anew for David as his mind erodes his ability to stand in for others himself.

David is turned in to campus authorities by a disgruntled client whose paper he has botched, unable to summon sufficient telepathic insight to write it convincingly, but needing the money enough to try to fake it. Processed through the system of university administration that oversees his infraction against school policy, which lands him ultimately in the office of the Dean—also a Columbia University alum, and David's former classmate—David confronts what justice means within the university as total institution. In that climactic moment he realizes that the campus, inside of which he has spent the better part of his life, is not a model of America but rather its most dystopian parody. David is losing his power to connect to other people, and his last chance at social integration is to seize the opportunity for re-education that the Dean, pitying his arrested development, offers to him in lieu of a penalty. But David is so repelled by the inward-facing smugness of the university administration that he sees the Dean's invitation to become a “research assistant” not as a rehabilitation program, but as an extra-legal ruse to entrap him in the internecine workings of the university.

David begs to be turned in to the authorities. The idea that his fate will be adjudicated internally by college deans is a worse prospect than imprisonment, for in the

university, unlike the prison, there really is no outside. As the Dean narrates to David a speculative trajectory for his rehabilitation, beginning as a research assistant and working up the para-academic ranks of the university hierarchy, David convulses with the thought; his consciousness flags and he experiences visions of himself cut loose from Columbia, Manhattan, the planet itself, losing not just his telepathic powers but his entire identity—the subsequent chapters of the novel unfold in a placeless discursive reverie, a patchwork of fragmented dreams and memories issuing from we know not whose consciousness. The university as universe collapses scales, and with its alignment of campus with cosmos makes of the former: everything. This is the campus novel in the age of the multiversity. Administration itself takes on the quality of the monstrously science fictional, and the campus is an alien heterotopia as disorienting as a distant planet.

The World Inside is about architectural interiors, and its privileged form is the skyscraper; *Dying Inside* digs even deeper into interiority as a problem for collectivity and locates its privileged form in the campus. In this respect, *Dying Inside* is exemplary—the inward turn of science fiction ends up more often than not on campus, a site where architecture, infrastructure, and interiority are ideally fused in a special symbiotic relation in the scene of education and site of the alchemy of social reproduction. The campus poses the problem of the relation between interior space and interiority, how to change minds inside institutional forms that are meant to endure.

Readings of the campus novel as spiteful satire highlighting the insularity of academic culture in the confines of a cloistered campus neglect the significant science fictional manipulations of the genre that play with scale and animate the literary historical collapse between the literary marketplace and the literary critical field that has sometimes been called “the program era.”¹⁴⁴ The campus in the imaginary conjured by the campus novels of the 1940s was an insular and petty place, whose smallness of mind and grounds alike condemned it to self-aggrandizing irrelevance. But in the 1950s it seemed a plausible “model of America,” and by the early 1970s it seemed positively futuristic, roiled by student activism and patrolled by modern military, and a spate of science fictions became increasingly interested in the campus as setting and social problem.¹⁴⁵ What did campus fiction become in the age of the multiversity? One answer is: science fiction.

¹⁴⁴ Mark McGurl, *The Program Era: Postwar Fiction and the Rise of Creative Writing* (Harvard UP, 2011). The final chapter of McGurl’s book, “Miniature America; or the Program in Transplanetary Perspective,” offers a science fictional example of the creative writing seminar imagined as intergalactic space pod, but without pursuing any further the more general relationship between science fiction and campus program. Other recent work on the pettiness of the campus novel exemplified by authors like Mary McCarthy, see Michael Trask, *Camp Sites: Sex, Politics, and Academic Style in Postwar America* (Stanford UP, 2013); Stephen Schryer, *Fantasies of the New Class: Ideologies of Professionalism in Post-World War II American Fiction* (Columbia UP, 2011).

¹⁴⁵ “Academy as model America” is Jamie Cohen-Cole’s phrasing for the prevalent idea in cold war America that social forms cultivated in the university could serve microcosmically as models for national cultural and international relations.

IV. Model Thinking

This chapter is about the campus as a site of articulation of science fiction and campus novel in the postwar era as genres of education and national extrapolation, that is, as genres of institutional critique and imagination uniquely poised for this task by a convergence between literary history and world history that positions “scale” as the organizing rubric of the period. Scale is implicated alike in questions of cultural value, disciplinary epistemology, infrastructure, and demography—not least the infrastructure and demography of education. The immediate postwar period sees an unprecedented boost in college enrollments, and a vast expansion of the American system of institutions of higher education exemplified by Clark Kerr’s tripartite California model of community college, state college, and research university.

The concerns of the science fiction field were well matched to the epochal transformations contemporaneously remaking the social function of the American university system. If Kerr’s nomination of this new educational-bureaucratic form as the “multiversity” did not already resound as eminently science fictional, widespread nominations of the campus as science fictional setting drove the point home more directly. Consider, for example, Ursula Le Guin’s heterotopic imagination of a mathematician space traveling into a Visiting Assistant Professorship at the university of a neighboring planet in *The Dispossessed* (1974)—which I will discuss further below. Likewise Kurt Vonnegut’s *Slaughterhouse Five* (1969), which offers a speculative recasting of Chicago-school anthropology through Billy Pilgrim’s alien abduction into

captivity in a human zoo where he is held for observation by extraterrestrial investigators of the human condition. John Barth's epic extrapolation of the punning conflation of universe and university in *Giles Goat-Boy, or the Revised New Syllabus* (1966) imagines the campus as a world unto itself made in the image of the cybernetic deity who likewise spawned its prophet, the Grand Tutor. The scale shift aggrandizing the campus in the cultural imaginary seemed a ready-made science fictional premise begging for literary extrapolation.

The recasting of higher education as mass education was part of a broader effort to ensure that aggregated Americans operated as Leviathanic constituents of a democratic body politic rather than radicalized masses of an impending revolution or the conformist adherents to a repressive communism. Chapter 2 touched on the state-engineered democratization of cultural production, what Loren Glass has called "vulgar modernism," or the becoming-sociological of the literary avant-garde under pressure of McCarthyist obscenity law.¹⁴⁶ The "cold war modernist" reading of abstract expressionism and affiliated aesthetic movements of the post-WWII period as CIA endorsed prophylaxis against communist conformism is instructive here.¹⁴⁷ The state-curated novels of the Armed Services Editions sent to WWII servicemen overseas that planted the seeds of the postwar "paperback revolution," mentioned in Chapter 2, laid some of the early

¹⁴⁶ See Loren Glass, "Redeeming Value: Obscenity and Anglo-American Modernism," *Critical Inquiry* 32.2 (Winter 2006): 341-361. See also Erik L. Bachman, *Literary Obscenities: U.S. Case Law and Naturalism after Modernism* (Penn State UP, 2018).

¹⁴⁷ See Greg Barnhisel, *Cold War Modernists: Art, Literature, and American Cultural Diplomacy* (Columbia UP, 2015).

groundwork for these developments.¹⁴⁸ This democratization or vulgarization of literary culture conspires with world historical developments in science and warfare to generate a skepticism about the continued relevance of high literary forms as well as about the ability of language per se to withstand the assault on its descriptive power being waged by ascendant vocabularies of science in general and number in particular. Other representational modalities and logics of social description were nominated, and narrative was submitted to iterative extrapolation in defense strategy scenario planning, simulation, and modeling.¹⁴⁹

Contemporary scholarship attempting to articulate a political program for the humanities in crisis has proposed, among other things, a style of “model thinking” that sees the germ of utopian community incubating in the bureaucratic recesses of the academic department as social form.¹⁵⁰ This idea has an under-acknowledged history,

¹⁴⁸ See John Hench, *Books as Weapons: Propaganda, Publishing, and the Battle for Global Markets in the Era of World War II* (Cornell UP, 2010).

¹⁴⁹ On modelling, scenario planning, and simulation as the predominating aesthetic modalities of cold war American statecraft and popular culture, see Mark Seltzer, *The Official World* (Duke UP, 2016); Mark Seltzer, *True Crime: Observations on Violence and Modernity* (Routledge, 2007); Sharon Ghamari-Tabrizi, “Simulating the Unthinkable: Gaming Future War in the 1950s and 1960s,” *Social Studies of Science* 30.2 (2000): 163-223; Stephanie Dick, “Of Models and Machines: Implementing Bounded Rationality,” *Isis* 106.3 (2015): 623-634; Daniel Grausam, “Games People Play: Metafiction, Defense Strategy, and the Cultures of Simulation,” *ELH* 78.3 (2011): 507-532.

¹⁵⁰ See, for instance, Caroline Levine, “Model Thinking: Generalization, Political Form, and the Common Good,” *New Literary History* 48.4 (2017): 633-653, for a general elaboration of a politics premised on scale invariant models of forms literary and social; and “Still Polemicizing After All These Years,” *Critical Inquiry* 44 (Autumn 2017): 129-

experiencing the height of its popularity in the cold war when an ideology of free thinking individualism seemed the best bulwark against communist conformism, and in turn seemed best embodied by the expressive arts and interpretive humanities.¹⁵¹ Contemporary nostalgia for the welfare state, the privileged role of the campus, and of the humanities in particular, neglects the historical conditions of possibility for this privileging of university as “model community”: the identity of welfare state and warfare state that finds in the humanities a mechanism for generating human capital and a deep cover for its imperatives to anti-communist totalitarian governance.

Clark Kerr proposed that the governance of the multiversity was akin to the United Nations; far from a merely convenient analogy, this was in fact a proposition that had been taken quite seriously. The International Social Science Council (ISSC), founded in 1948 as one of several academic councils constituting a new research arm of the United Nations, funded studies into, among other things, academic forms as models for international politics. In 1968 the ISSC published the results of a decade-long collaborative study of “the small conference” conducted by anthropologist Margaret Mead and photographer of human behavior Paul Byers. In the resulting book, *The Small Conference: An Innovation in Communication*, Mead wrote Part I, “The Conference

135, in which Levine makes an explicit model of her approach to institutional form as department chair.

¹⁵¹ The bibliography documenting this history is vast. Of particular relevance here is Jamie Cohen-Cole, *The Open Mind: Cold War Politics and the Science of Human Nature* (University of Chicago Press, 2014), especially chapter 4, “The Academy as Model of America.”

Process,” beginning with an account of the historical emergence of the conference as a new post-WWII communications form developed out of a confluence of research on group dynamics in professional, therapeutic, and other settings. Byers presented his photographs of “many to many communication” at three different types of conference with an analytical discussion in Part II, “Still Photography as a Method of Conference Analysis.”¹⁵² *The Small Conference* relies on its own kind of model thinking, offering photographic documentation of a few minutes of conference proceedings as indicative of larger social dynamics and communication principles—“this conference lasted four days. I shall examine in detail a segment lasting about four minutes” (65).

The kind of model thinking underwriting the small conference study depends on the premise of scale invariance, the idea that changes in scale do not entail changes in form, and that premises established at small scales will remain true at large ones. This was a premise of much postwar social theory, enthralled with the self-similarity of fractal mathematics that finds, the deeper it looks, only ever more of the same.¹⁵³ This logic underwrites imperialism as an expression of democratic freedom, premising a global

¹⁵² Margaret Mead and Paul Byers, *The Small Conference: An Innovation in Communication*, Publications of the International Social Science Council (Mouton & Co., 1968). The three conferences documented remain unnamed in the analysis, but the acknowledgments reveal that the photographs were taken at a meeting of the Braun-Crystal Manufacturing Company, a conference convened by the Temple University Research Unit at the Eastern Pennsylvania Psychiatric Unit and funded by a National Institutes of Health grant to an American Museum of Natural History project on mental health, and a Fulbright Conference (vii).

¹⁵³ A major proponent of fractal logics in the period was Benoît Mandelbrot, “How Long Is the Coast of Britain? Statistical Self-Similarity and Fractional Dimension,” *Science* 156 (1967): 636-638.

monoculture cultivated by a single world power as an extension of the model community of social contract at scale, to the world at large. The academy might be a “model America,” and America, in turn, a model nation. This idea was subtended not by a sense of homology between national forms, but rather by the premise that American exceptionalism could be generalized: the exception proves the rule—model thinking.

Recent returns to form and formalism in literary studies have taken up that idea in its most capacious sense, insisting on a formalism that would bridge seamlessly between literary forms and architectural ones, and extend to abstract social forms like patriarchy as well as concrete institutional forms, like schools. This is a provocative premise, and a seductive one: it radically extends the remit of literary studies, not by capitulating to the expansive prestige of quantitative methods like those of the digital humanities nor by insisting that, *il n'y a pas de hors-texte*, everything is a species of literature. Rather, it suggests a ubiquity not of the literary object but that literary methods have a special ability to identify forms that shape not just works of literature but also the worlds in which they circulate and the people who read them.

Christopher Alexander and the Center for Environmental Structure helped the University of Oregon take what could have been an unsettling reconfiguration of their institution of social reproduction into an architecture of social transformation, and convert it instead into an endlessly self-referential process. This is exemplary of model thinking generally, which in the last instance can imagine nothing but more of itself. Echoing Alexander's premises about the vital politics of architectural pattern languages,

recent criticism on the politics of form takes it for granted that a poetics of the built environment will enhance its humanity, that forms structured like language are better forms for collective life. But words are the raw materials of poems as well as propaganda. Insisting on formal continuity between word and world invites this loophole of design: forms have affordances for those in power, too.¹⁵⁴

Samuel Delany and Marilyn Hacker, in the introduction to the final issue of *QUARK*, their short-lived “quarterly of speculative fiction,” caution that “fiction makes models of reality. But often we need models for observations of an accuracy and sophistication beyond that of the country school house” (9).¹⁵⁵ Delany and Hacker draw attention to the margins of error of modeling, which are not to be ignored but rather exploited for their illustrative power. They begin their discussion by emphasizing that “even a statement like $2+3=5$ is only a *model* of ‘the real world.’ As a model it represents the world only more or less accurately” (7). Ideally, model thinking emphasizes not scale invariance but rather the discontinuities between forms literary or mathematical and the world they are meant to model, in order to question again the logic of modeling itself as representational strategy for understanding how to change the world for the better.

Other writers at the time saw in the logic of university as model America not an opportunity for transformative politics but rather a claustrophobic constraint on literary

¹⁵⁴ For an optimistic investigation of the “affordances” of form, see Caroline Levine, *Forms: Whole, Rhythm, Hierarchy, Network* (Princeton UP, 2015).

¹⁵⁵ Samuel R. Delany and Marilyn Hacker, “On Speculative Fiction,” *QUARK/4* (Paperback Library, 1971): 7-9.

art. This era was decried by the likes of Gore Vidal as one beset by a pandemic of “U-novels” written by teachers merely to be taught, confirming the self-similar logics of university administration. Vidal prognosticates that according to this logic, already pervasive, “eventually the novel will simply be an academic exercise, written by academics to be used in classrooms in order to test the ingenuity of students. A combination of Rorschach test and anagram. Hence, the popularity of John Barth, a perfect U-novelist whose books are written to be taught, not to be read.”¹⁵⁶ Mark McGurl’s *The Program Era* substantiates Vidal’s suspicions with literary historical context, “track[ing] a period in which institutions, not individuals, have come to the fore as the sine qua non of postwar literary production” (368). McGurl’s study reveals the interaction between literary market and literary critical field through the creative writing program, wherein the university becomes an active participant in structuring the literary market by credentialing writers with a particular style of literary critical expertise and a particular inward-facing reverence for the campus. Science fiction shows this interaction between market and criticism in a different way—the interaction between the genre system and the professionalizing humanities and human sciences. Chapter 1 examined the conditions by which quantification acquired the authority to tell society who and what it is; this chapter is about who and what has the authority to tell society what it *should* be. The claustrophobic closed-system that nominated the university as model community

¹⁵⁶ Gore Vidal, interviewed by Gerald Clarke, “Gore Vidal, The Art of Fiction, No. 50,” *The Paris Review* 59 (Fall 1974).

demanded a reconception of utopianism in the university. This charge was led by a confluence of social theory and science fiction in the form of *social science fiction*—the “sociology of the possible.”

V. Sociology of the Possible

In 1969 Professor Thomas Clareson of the Wooster College Department of English transcribed a tape-recording of the 1968 MLA Forum on Science Fiction for circulation to his university colleagues, not unlike John Barth who framed his cybernetic campus novel *Giles Goat-Boy, or The Revised New Syllabus* as a transcription of the mythology of the university recorded on two reels of tape. Clareson’s transcription was published in the May 1969 issue of *Extrapolation*, the science fiction journal he founded a decade earlier.¹⁵⁷ The theme of the Forum was “Science Fiction: The New Mythology,” a revised new syllabus indeed, and it featured presentations by preeminent sci-fi scholar Darko Suvin, and author-critics Isaac Asimov and Frederik Pohl. The preliminary remarks of the panel moderator Bruce Franklin address the resistance with which the study of science fiction has been met in the academy. He notes that as the “Seminar has developed and we have moved toward something like this Forum, it has been necessary to present many arguments about the legitimacy of this area in our field” (70). But he

¹⁵⁷ “The MLA Forum: Science Fiction: The New Mythology (Franklin, Suvin, Asimov, Pohl),” edited by Thomas D. Clareson, *Extrapolation* 10.2 (May 1969): 69-115. Judith Merrill is listed in the MLA program but missed the convention due to some hitch in her travel plans. The four panelists had pre-assigned topics, and hers was meant to be “Science Fiction and Contemporary Literature.”

frames these battles in terms of curricular revisions rankling his colleagues in departments of English generally, citing suspicions of science fiction as one piece of a larger skepticism “about the relevancy of literature to life, and the whole question of what kind of literature is appropriate to be taught in colleges and universities” (70).

When the Q&A was opened to the audience, Robert Silverberg—commenting, as the transcription reads, “off-mike”—was the first to intervene: “My name is Robert Silverberg, and I have no academic affiliation, but I do write science fiction. I’d like to take issue with every word that has been spoken” (94). Silverberg is given the microphone and elaborates his point, “I really must deplore the unanimity of opinion that came from this platform, because it seems to me you gentlemen were all expressing a utilitarian and not a literary view of science fiction that is rather dreary to a practicing writer. You were speaking almost entirely of the predictive role of science fiction” (94). He continues by specifying that “prediction, though of course an important part of science fiction, is nevertheless never a very successful part of science fiction... I wonder if there could be some discussion of that role of science fiction: science fiction as literature” (95). Science fiction as “prediction,” as we saw above, was by 1968 an outmoded way of describing the central aims of the genre. Silverberg intervened on the academic “unanimity” being consolidated at the MLA to aerate the critical discourse with a sense of the new designs for science fiction as literature.

Science fiction author-critic Joanna Russ began her 1975 article “Towards an Aesthetic of Science Fiction” by addressing the question of science fiction as literature

head-on: “Is science fiction literature? Yes. Can it be judged by the usual literary criteria? No” (112).¹⁵⁸ She elaborates that

the access of academic interest in science fiction that has occurred during the last few years has led to considerable difficulty. Not only do academic critics find themselves imprisoned by habitual (and unreflecting) condescension in dealing with this particular genre; quite often their critical tools, however finely honed, are simply not applicable to a body of work that—despite its superficial resemblance to realistic or naturalistic twentieth-century fiction—is fundamentally a drastically different form of literary art.

Its distinguishing feature is, Russ proposes, “that science fiction... is *didactic*.” While this might seem to make it perfectly suited to the English classroom, it is precisely the criterion of its didacticism that condemns it as juvenilia and prohibits its valorization as legitimate literary art. Russ observes that many professionals “take easily and kindly to science fiction,” counting among them “city planners, architects, archaeologists, engineers, rock musicians, anthropologists, and nearly everybody except most English professors.” By Russ’s estimation, English professors need to catch up with the subculture—“rock musicians”—and the applied and social sciences of the day that find in science fiction their most imaginative elaboration as practices of world-making.

¹⁵⁸ Joanna Russ, “Towards an Aesthetic of Science Fiction,” *Science Fiction Studies* 2.2 (1975): 112-119.

Theodore Sturgeon, writing in 1972 for the *New York Times* Book Review, where he had a weekly column starting in the mid-1960s, noted that “We are in the midst of a science fiction boom. Unhappily, however, it seems to be most marketable when it isn’t called science fiction and when it is written by people who never appeared in *Analog* or *Galaxy* or *The Magazine of Fantasy and Science Fiction*.” He concurs with Kingsley Amis, who “once mordantly described the general public’s attitude toward science fiction thus: ‘This is good! It can’t be science fiction!’ and ‘This is science fiction! It can’t be good!’” Sturgeon perversely attributes the derogation of science fiction to an outsized cultural scientism that provokes a desire to destroy its idols: “Do we worship science? You can bet your holy tithe we do. And do we jump at the chance of scorning something with ‘science’ as part of its name? I submit to you that this is the source of the effort to make of science fiction [an escapist juvenile pastime] which it simply refuses to be. I believe that with any other name—‘extrapolative,’ ‘speculative,’ ‘knowledge-fiction’—it would not have been so snobbishly, shabbily treated.” With that Sturgeon bids “farewell to science fiction as genre, and to the larger chore of defining the field.”¹⁵⁹

Sturgeon may have been ready to say goodbye, but the chore of defining the field had only just gotten underway. The tides were shifting, and Amis’s definition was already giving way to a subtler sensibility about science fiction’s aesthetic merits and

¹⁵⁹ Theodore Sturgeon, “Not Science Fiction But ‘If’ Fiction,” *New York Times*, January 9, 1972, p. 24. The fact that Sturgeon was a regular contributor to the *New York Times* Book Review is itself a major sign of the shifting prestige and cultural value attaching to science fiction entering the 1970s.

serious-minded provocations. The 1973 conference on “The Writer and Science Fiction” at Penn State was a watershed moment in the consolidation of science fiction’s cultural prestige, ratified by academic interest. Its line-up of participants mixed writers and critics to consider the place of science fiction in the academy and in culture. A newspaper article reporting on the conference summed up its consequences for the field in its title: “‘Weirdo’ Writers of Sci-Fi Okay Now.”¹⁶⁰ The fact of the conference being reported in newspapers at all was itself indicative of its significance as harbinger of a sea change in the field’s relevance. The conference was not merely a respectability bid, but reflected the larger networks of interaction between writers and critics being consolidated in the university in the early 1970s.

The conference was convened by the Science Fiction Research Association, founded in 1970, and it was attended by approximately 200 people. The *New York Times* coverage of the conference, “Science Fiction Getting Serious Study on Campuses,” adopted the tone of science fiction to report on the event: “A strange, mutant species of literary man has been romping here [at Penn State]... and if they have been emitting odd and raucous cries, it is because they are science fiction writers, experts and fans, and they are celebrating the fact that science fiction is becoming a subject of serious scholarly study. After light years of travel aboard the pulp magazines and paperbacks, it has come

¹⁶⁰ “‘Weirdo’ Writers of Sci-Fi Okay Now,” *Daytona Beach Sunday News-Journal*, September 20, 1973.

in out of the inter-galactic cold.”¹⁶¹ Professor Philip Klass (under the name William Tenn, a notable science fiction author) is quoted as saying, “Suddenly, we’re respectable.” Leslie Fiedler addressed the convention in a speech titled “Science Fiction and the University Community”:

Slowly at first, then faster and faster, reaching maximum velocity in the past couple of years, science fiction has passed from being an occasional and distrusted intruder in the university to being a standard part of the academic scene... God knows how many science fiction courses for credit are being given in universities in the U.S.; nobody can keep track of them... dissertations are being written in the field of science fiction, and the visiting lecturer in science fiction has become as standard on campuses as the touring poet.¹⁶²

¹⁶¹ Eric Pace, “Science Fiction Getting Serious Study on Campuses,” *New York Times*, September 18, 1973, p. 36.

¹⁶² As for the visiting lecturer in science fiction, it was Leslie Fiedler who, in 1975, offered Samuel Delany his first academic gig, a visiting Edward S. Butler Chair Professorship at SUNY Buffalo. (Incidentally, that chair had been made vacant by the departure of its previous visitor, John Barth, who had occupied the position from 1965-1973.) Delany’s influential 1972 essay “Letter to a Critic: Popular Culture, High Art, and the S-F Landscape,” though it does not explicitly name him, was addressed to one critic in particular: Leslie Fiedler, in response to Fiedler’s evidently condescending remarks at the Science Fiction Writers of America convention in 1971, which were never published. While Delany’s essay would suggest an antipathy between them, in fact it is their shared investment in cultivating an academic discourse of science fiction that underwrites Delany’s subsequent career as author-critic. Indeed, Delany has come to embody singularly among science fiction writers the figure of the author-critic bridging the worlds and discourses of academic criticism and science fiction subculture. The condition of possibility for his exemplarity on this count is the historical moment in which literary critics in relative positions of institutional power became interested in popular culture and the demotic arts as instrumentalities to university life, and the program era opened onto

Officers of the Science Fiction Research Association “estimated that 500 science fiction courses would be given at universities and colleges around the country this academic year, mostly English departments,” at institutions including Cornell, Colgate, Stanford, Notre Dame, University of Illinois, and Penn State. Of the thirty-seven papers presented at the conference, notable titles included Beverly Friend’s “The Classroom in Orbit,” Jerry Pournelle’s “The Writer and the Academic,” and Jack Williamson’s panel on “Teaching Science Fiction—Methods and Goals.”¹⁶³

the academicization of genre fiction. Delany’s “Letter to a Critic” was published in *The Jewel-Hinged Jaw: Notes on the Language of Science Fiction* (1977). On Delany’s relationship to Fiedler, see *Conversations with Samuel Delany*, ed. Carl Freedman (University Press of Mississippi, 2009), pp. 43, 49, 167, 191.

¹⁶³ Thirty-seven hours of the conference proceedings were tape-recorded for posterity, archived at Penn State’s Pattee library. Several publications emerged from the conference proceedings, including one, “Special Issue: The Writer and Science Fiction,” edited by the conference co-organizer, Arthur O. Lewis, which was notably published in the *Journal of General Education*, confirming the significant quotient of academic interest in science fiction that recognized the genre primarily as teaching tool. Lewis reported in his introduction that: “The significance of the Penn State Conference lies largely in the fact that for the first time substantial numbers of academics were brought together with substantial numbers of practicing science fiction writers so that contacts between the two major groups concerned with science fiction could become firmer, and individual members of the two groups could better understand what each group has been trying to do. Much of the success in bringing together the two groups results from the happenstance that one co-chairman, Philip Klass (‘William Tenn’), now a professor of English, is a widely-recognized writer and critic of science fiction, while the other co-chairman, myself, is a professor of English and academic administrator who has been long and deeply involved in science fiction scholarship. This fortunate combination meant that one co-chairman had wide acquaintance with academic scholars and one had wide acquaintance with writers” (x). Arthur O. Lewis, “Editorial Comment,” *The Journal of General Education* 28.1 (1976): ix-xiv.

Theodore Sturgeon's comments on the Penn State conference are revealing of the scope of interdisciplinary interest in science fiction as the field gained a critical mass of scholarly legitimacy in the early 1970s:

A handsome offer to become Distinguished Professor in Residence came to me from a West Coast university—at the invitation of its Sociology Department. The English Department at Penn State, host to the Science Fiction Research Association, had me attend a four-day symposium attended by scholars from all over the country, and some from Canada, Israel, Australia and others. I then went to Cornell for an all-University address under the aegis of the Astronomy Department, and next to M.I.T. for a talk at the behest of the Artificial Intelligence Laboratory. Prof. Philip Klass of Penn State, who writes under the name of William Tenn, spoke recently in Delaware to their History Department. Academia, then, has opened its doors — its front doors—to science fiction, a development which could have profound effects on the field. A glance at the list of papers read at the Penn State affair makes it clear that the 'legitimization' of s-f is not sudden nor shallow nor narrow. It might be said (it has been said!) that s-f provides to the university a new mother lode of thesis and dissertation material and a new chance to gain those Brownie points so essential to promotion and tenure. This may be a factor, but, judging by the quality and care of the papers submitted, and the wide interest demonstrated by so many different segments of the college community, one must conclude that the virtually undefinable literary

area called ‘science fiction’ has found a podium; and judging by the number of segments of the university which have extended serious and respectable welcome, s-f will be rammed into no one’s cubby-hole; one will have to be built for it. [...] maybe, just maybe, I will begin to get review copies of Pynchon and Nabokov and the mainstream critics will see Aldiss and Pangbom and Silverberg.¹⁶⁴

Science fiction was being institutionalized in and through the academy, as a legitimate modality of artistic production, a serious field of study, and a curricular tool. One commentator advised that “readers who still think of science fiction as escapist pap for the semiliterate may be chastened to learn that science fiction scholarship has become something of an industry. Hardly a month goes by without the publication of another collection of historical, bibliographical and critical essays about s.f. aimed at an ever-expanding high-school and college market.”¹⁶⁵

The shifting relationship between science fiction and the academy did not happen overnight, nor did it happen in a vacuum. Mass cultural forms were having their moment as academic discourse resolved its alienation from contemporary politics in a convulsion of curricular crises that nominated “popular culture” as a field of study, and science fiction along with it.¹⁶⁶ As Leslie Fiedler put it, the science fiction boom comes within

¹⁶⁴ Theodore Sturgeon, “If...?” *New York Times*, November 4, 1973, p. 510.

¹⁶⁵ Gerald Jonas, “Science Fiction,” *New York Times*, April 24, 1977, p. 11.

¹⁶⁶ The *Journal of Popular Culture* was founded in 1968. On pop culture studies and its relationship to the crises of cultural value precipitating the canon and culture wars in the academic humanities, see Stephen Schryer, *Fantasies of the New Class: Ideologies of Professionalism in Post-World War II American Fiction* (Columbia UP, 2011) and John

“the larger context of the relationship between universities and popular culture in general. A crisis in pedagogy and criticism” had arisen, undermining “the old-fashioned, elitist theories—that there is a serious literature on one hand and trash on the other.”¹⁶⁷ Cultural value was being reconfigured in relation to the mass cultural genre system and the new social movements. The academicization of science fiction was subtended by this historical circumstance, and by a huge amount of institutional labor towards generating the pathways to intelligibility for science fiction in the worlds of scholarly criticism and university curriculum. In 1958 the Modern Language Association approved a Seminar on Science Fiction for the annual convention; its inaugural session that year was called “The Significance of Science Fiction.” (The following year the seminar theme was “The Future of Science Fiction.”)¹⁶⁸ In 1959 *Extrapolation* began publication as the official Newsletter of the MLA Seminar on Science Fiction. For its first issue, its editor Thomas Clareson annotated the bibliography of his 1950s dissertation on American science fiction, 1880-1915, completed for the English Department at the University of

Guillory, *Cultural Capital: The Problem of Literary Canon Formation* (University of Chicago Press, 1993).

¹⁶⁷ Quoted in Eric Pace, “Science Fiction Getting Serious Study on Campuses,” *New York Times*, September 18, 1973, p. 36.

¹⁶⁸ The two longest-running seminars in the MLA are the Seminar on Science Fiction, founded in 1958, and the Seminar on English Literature in Transition: 1880-1920, founded in 1957. It’s not incidental that American science fiction and British modernism form the poles of professionalization in the discipline of English on its way out of the 1950s, splitting the professional attentions of new class literary critical elites between modernist writers thematizing professional alienation in literary fictions purported to be the products of artistic genius, and science fiction writers churning out formulaic fictions under conditions of workaday alienation in the mass-produced literary marketplace.

Pennsylvania. In 1972 the journal inaugurated a recurring column titled “SF in the Classroom,” devoting one essay per issue to the teaching of the genre. By 1978 it had 1400 subscribers in 38 countries.¹⁶⁹

The Milford writers conference was founded by Damon Knight, Judith Merrill, and James Blish in 1956, and the journal *Science Fiction Forum* was founded in 1957 as an extension of it. The Clarion science fiction writers workshop was founded by Robin Scott Kelley at Clarion College in Pennsylvania in 1968, on the Milford model. In 1972 Milford relocated to the UK and became a cornerstone of the New Wave. In 1968, James Gunn filmed a series of interviews, talks, and lectures as resources for his course on science fiction at Kansas University and others like it. Guest lecturers were some of the most renowned authors and critics in the field, including Poul Anderson, Isaac Asimov, John Brunner, Clifford Simak, Harlan Ellison, Damon Knight, Frederik Pohl, and Jack Williamson. In 1975 Gunn held the first Intensive English Institute on the Teaching of Science Fiction, a four-week course covering the history of science fiction in short stories and novels.

This was the program era in genre fiction. Science fiction came to campus not just thematically as part of its turn to inner space, but also literally, as a curriculum. And further, the university became implicated in the production of science fiction through its

¹⁶⁹ Thomas Clareson, “Introduction,” *Extrapolation: A Science-Fiction Newsletter, Volumes I through X, December 1959 to May 1969* (Gregg Press, 1978): 1-2. See also his wife, Alice S. Clareson, who provides an augmented narrative of the founding of the journal on the occasion of its 40th anniversary, “Carry On, Extrapolation!” *Extrapolation* 40.4 (1999): 271-276.

writers workshops and visiting faculty positions. Rachel Buurma and Laura Heffernan's work on "the teaching archive" of English is instructive in its directive to consider the classroom as a space of disciplinary history in formation, and one that upends tidy narratives of predominating schools and methods by recovering the vast array of texts and techniques in the practice of teaching literature.¹⁷⁰ The literary history of genre fiction, and of science fiction in particular, is often locked in a struggle between formalist and historicist accounts of genre boundaries and definitions, the difference between, for instance, defining science fiction as a genre of "cognitive estrangement" (formalist) or as a genre precipitated by the industrial revolution (historicist).¹⁷¹ But the teaching archive of science fiction encourages us to consider genre fictions as embedded in a mass cultural genre system (romance, horror, mystery, etc.) in tension with the academic or classical genre system (comedy, tragedy, lyric, etc.), and likewise informed by the shifting disciplinary system of university knowledge production internally differentiating under pressure of professionalization.¹⁷²

¹⁷⁰ Rachel Buurma and Laura Heffernan, *The Teaching Archive: A New History of Literary Study* (University of Chicago Press, forthcoming). See also their article, "The Common Reader and the Archival Classroom: Disciplinary History for the Twenty-First Century," *New Literary History* 43 (2012): 113-135.

¹⁷¹ "Cognitive estrangement" is the formal feature Darko Suvin proposed as the defining characteristic of the genre in "On the Poetics of the Science Fiction Genre," *College English* 34.3 (1972): 372-382.

¹⁷² In considering science fiction in terms of the mass cultural genre system and its differentiation from the academic-classical one, I am instructed by John Rieder's *Science Fiction and the Mass Cultural Genre System* (Wesleyan UP, 2017).

The three major peer-reviewed science fiction journals to date are *Extrapolation*, founded in 1959; *Foundation: The Review of Science Fiction*, founded in the U.K. in 1972; and *Science Fiction Studies*, founded in 1973 at Indiana State University with an editorial board including Darko Suvin, who would serve in that capacity through the journal's first decade of publication. Suvin had just one year earlier published his field-transforming essay "On the Poetics of the Science Fiction Genre," notably in the pages of *College English*, a bid for the legitimacy of expending scholarly labors in the study of science fiction not as an aesthetically dignified literary form nor a sociologically significant popular genre, though both of those aspects certainly figure in his discussion, but rather as a teaching resource, a useful way of leveraging some relevance on behalf of literary education through this genre with its robust set of conventions for conjuring the relation between word and world.¹⁷³

The period of roughly 1960-1980 saw the sudden uptake of science fiction by the academy, both as a domain of legitimate scholarly inquiry, and as a curricular imperative. Courses in science fiction sprang up in English departments around the country, and articles sprang up in journals and newsletters documenting their consequences for the field of science fiction. In 1961 Mark Hillegas at Colgate and Bruce Franklin at Stanford offered what were likely the first English courses devoted entirely to science fiction. And yet Mark Hillegas could write of "The Course in Science Fiction: A Hope Deferred" in

¹⁷³ Darko Suvin, "On the Poetics of the Science Fiction Genre," *College English* 34.3 (1972): 372-382.

Extrapolation in 1968, documenting continued resistance from his colleagues despite enthusiasm from his students. But a critical mass was quickly reached. Jack Williamson's 1971 essay "Science Fiction Comes to College" concludes with an annotated list of sixty-one science fiction courses being offered in college English departments in the academic year 1970-1971 and estimates that the total college course offerings in science fiction that year numbered nearly 200. By the time of his subsequent report, *Teaching SF* (1975), the list had increased substantially. Williamson noted of science fiction's new relevance in the college curriculum, "most teachers and students are motivated by a sense that science fiction has a special relevance to life in our transitional time. In a world of disturbing change, it can become folklore or gospel... Deriving its most cogent ideas from the tensions between permanence and change, science fiction combines the diversions of novelty with its own pertinent kind of realism" (68).¹⁷⁴ *Science Fiction: The Academic Awakening* (1974) edited by Willis McNelly was distributed as a supplement to volume 37.1 of the College English Association's *Critic* in 1974, intended as a primer to catch English professors unaccustomed to reading or teaching the genre up to speed on their discipline's growing new subfield.

Like Suvin's essay, remembered now for its theory but offered then as a rationale for academic attention to science fiction as teaching tool, many of the most famous science fiction anthologies began life as guest lectures delivered to undergraduate

¹⁷⁴ Jack Williamson, "Science Fiction Comes to College," *Extrapolation* 12.2 (1971): 67-78.

audiences as part of a new science fiction curriculum. Guest lectures on science fiction at the University of Chicago in 1957 by Robert Heinlein, C. M. Kornbluth, Alfred Bester, and Robert Bloch were collected as *The Science Fiction Novel: Imagination and Social Criticism* (1959) with an introduction by Basil Davenport. Kingsley Amis's *New Maps of Hell: A Survey of Science Fiction* (1960)—the Ballantine Books 1960 mass market paperback edition touts it as “the book that made science fiction grow up”—began life as lectures at Princeton in 1959.

This is also a moment that sees a proliferation of anthologies, edited collections, and primers addressing the idea of “social science fiction,” which would bring literary critical conceptions of science fiction into contact with something like the nineteenth century tradition of the “social problem novel” and the critical discourses developed to apprehend it. Reginald Bretnor's edited collection *Modern Science Fiction: Its Meaning and Its Future* (1953) features Issac Asimov's “Social Science Fiction” essay, as well as contributions from Arthur Clarke, John Campbell, and Philip Wylie, among other notables, speculating on the engaged future of the genre. Anthropologist Leon Stover collaborated with science fiction writer and critic Harry Harrison to compile *Apeman, Spaceman: Anthropological Science Fiction* (1968), “an anthology of speculation, fictional and nonfictional, about mankind,” that conceived of social science fiction very broadly and featured short fiction, excerpts, and comics, concluding with a long critical essay by Stover on the utility of science fiction as an extrapolative technology for the social sciences. Stover also collaborated with Willis McNelly on *Above the Human*

Landscape: An Anthology of Social Science Fiction (1972), which collected short fiction and excerpts divided into sections on “community,” “systems,” “technology,” “realities,” and “tomorrow,” and concludes with several critical essays by the editors on “science fiction as culture criticism.” In McNelly’s *The Academic Awakening*, Leon Stover contributed an essay on “Social Science Fiction” that listed instances of the genre as well as anthologies collecting fiction for sociological ends, including James D. Miles and George R. Peters’ *The Social Organization of the Future* (1974) and Bernard S. Philips’ *Worlds of the Future* (1972).

Sociologist Richard Ofshe’s *The Sociology of the Possible* (1970) set out to “provoke its readers into thinking about sociology in a certain fashion: how things could be or might become, rather than how they are and how they came to be that way” (xi). It features selections by sociologists and psychologists, including B.F Skinner, alongside excerpts from social science fiction broadly construed, including Plato and E.M. Forster alongside Philip José Farmer and Kurt Vonnegut, and divided into sections on “Interpersonal Behavior,” “Institutional Arrangements,” “Social Organization,” and “Culture.” *Sociology Through Science Fiction* (1974), edited by John Milstead, Martin Harry Greenberg, Joseph Olander, and Patricia Warrick, collects mostly contemporary short form science fiction under highly detailed rubrics, each with a preface describing its thematization of a specific matter of sociological concern. Its master categories are “The Study of Society,” “Social Organization and Culture,” “Self and Society,” “Social Differentiation,” “Social Institutions,” and “Population and Urban Life,” and its sub-

topics include “collective behavior,” “deviance,” “social and cultural change,” “race,” “age,” “social class,” and so on. The introduction proposes that “to the development of sociological consciousness, or sociological imagination, science fiction is particularly well suited. The questions science fiction writers ask are not about one social world, but about countless possible social worlds. As models, the societies described in science fiction can generate serious inquiry into the nature of contemporary social reality. That is, they provide starting points for constructing hypotheses about the present” (xii-xiii).

Yole G. Sills’s contribution to the 1968 *International Encyclopedia of the Social Sciences* on “Social Science Fiction” concurs with this assessment, citing social science fiction as “an instrument for social commentary and criticism” (474) that “might warrant systematic analysis” by social scientists in so far as it offers “reflections of the apprehensions and aspirations of a self-conscious society” (480).¹⁷⁵ She identifies “this new genre of literature” as successor to two literary traditions: “modern utopias and dystopias” and the “classic science fiction” of H.G. Wells and Jules Verne (474). In her assessment, “much of social science fiction is so inept in style and plot that it hardly merits consideration as literature... Much of it is published between the same lurid magazine and paperback covers as is classic science fiction... As a result, it has shared the same fate of being dismissed by literary critics as a minor, cultist offshoot of traditional literature... To the social scientist, however, the emergence of a vast body of

¹⁷⁵ Yole G. Sills, “Social Science Fiction,” *International Encyclopedia of the Social Sciences*, vol. 14, ed. David L. Sills (MacMillan, 1968): 473-481.

literature on the periphery of his academic vision... is of more than casual interest” (474). She proposes that “as a cultural phenomenon, social science fiction provides evidence of the growing impact of the social sciences on popular culture” (474).

The example of John Rechy in Chapter 2 demonstrated how a discourse of “sociological” literature mediated the critical reception of minority fiction, creating a backwater of the paraliterary bestseller celebrated for its documentary function but disparaged in the same breath for being merely that. Here, these anthologies show a different facet of the relationship between sociology and literature, as science fiction leveraged a discourse of its sociological merits into a new academic legitimacy that doubled as a discourse of its social efficacy. Science fiction is assessed for its sociological merits and offers itself as a kindred social scientific discourse. While sociology describes the composition and operations of society as it is, science fiction claims to extrapolate with commensurate rigor what society will be, could be, and, increasingly, what it should be. While the novels of sexual subculture discussed in Chapter 2 could be held at arms length from the literary proper with a compensatory discourse of their sociological merits, science fiction insisted that its value as literature was in its power to outdo sociology at its own game—and it found confirmation in its uptake by social scientists themselves.

Science fiction came out the other side of academia having taken on some of its critical apparatus. Adopting the mantle of utopian speculation handed it by academics who saw in it a more perfect realization of their hamstrung critical labors, science fiction

of the utopian variety carried its inward turn to its final extent: self-reflexivity. As Fredric Jameson describes, “as the true vocation of the utopian narrative begins to rise to the surface—to confront us with our incapacity to imagine Utopia—the center of gravity of such narratives shifts towards an auto-referentiality of a specific, but far more concrete type: such texts then explicitly or implicitly, and as it were against their own will, find their deepest ‘subjects’ in the possibility of their own production, in the interrogation of the dilemmas involved in their own emergence as utopian texts” (293).¹⁷⁶ Exemplary of this utopian self-obsession in Jameson’s estimation is Ursula Le Guin’s *The Lathe of Heaven* (1971), which “more transparently than much other SF... is ‘about’ its own process of production” (293).

The Lathe of Heaven (1971) is something of a peculiarity insofar as it makes the project of science fiction the crux of its narrative drama, without very comfortably inhabiting the genre of science fiction itself—science fiction figures in this utopian fantasy less as genre than as theme, and in this way crystallizes a set of relations characteristic of the scene of science fiction’s cultural diffusion as mode and metaphor in the postwar period, and its institutionalization as academic discourse in the decade of *Lathe*’s publication. In Theodore Sturgeon’s account, *The Lathe of Heaven*, “carrying on

¹⁷⁶ Fredric Jameson, *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (Verso, 2005).

the concept that there is more room in inner space than in outer space... brings reality itself to the proving ground.”¹⁷⁷

The sociology of the possible: science fiction was rising to the occasion of utopian literature. Jameson notes that utopian literature is always to some extent about the impossibility of its own project, and it is made up, at its best, of a working through of the contradictions that prevent its full realization. As science fiction becomes increasingly entwined with the university, the campus naturally gets swept up into science fiction’s contemplation of the conditions of possibility for its own utopian project. Science fiction ends up asking the question “what is a utopian education?” in terms of the campus and/as the world. *The Lathe of Heaven* is a novel about experts cravenly instrumentalizing the imagination of a reluctant artist to wreak self-serving havoc on the world. It dramatizes academic experts as technocratic careerists, allegorizing the academic uptake of science fiction as professionalization ploy. In the novel these experts manipulate science fiction’s utopian fancy into a horrifyingly instrumentalized utopian program—rather than escapist fantasies, its science fictional nightmares are realized as urban renewal program.

VI. The Man in the Middle of the Graph

The Lathe of Heaven is a story of a draftsman, George Orr, possessed of a power over which he has no control and for which he is seeking a cure, and the power-hungry psychiatrist, Dr. William Haber, who instrumentally manipulates this power for his own

¹⁷⁷ Theodore Sturgeon, “If...?” *New York Times*, May 14, 1972, p. 33.

ends instead of curing it. Orr has “effective dreams,” which is to say his dreams remake the world in their image each time he has one, no matter how “incoherent, selfish, irrational” they may be—and indeed they mostly are (14). These dreams not only change the present, but they fabricate a deep historical past to vouchsafe its bizarre new qualities, and only Orr maintains the “double memory”—and by the end it is much more than double—of the various realities that he has wrought.

As Orr’s unconscious mind cobbles together by turns “cheap utopian concepts, or cynical anti-utopian concepts” (148)—at a certain level they converge—we see a clichéd array of science fiction tropes concretized on the ground of the city. Orr only dreams about Portland, making it the beneficiary of the world’s best innovations as well as the privileged target of its most horrific devastations—at least it cuts both ways. (In effect the Vietnam War and its attendant atrocities become provincial soap-operas of the Willamette valley, conceivable as tragic only in their immediate proximity to the mind and body of the mourner, who is also the one who has wrought the mourned destruction in the first place.) But the novel itself swaddles this process in the conventions of fantasy: if you extract this quasi-fantastical frame story, the novel would read this way: after the end of the world, living in a solipsistic web of his own creation, an anomalous man is taught how to dream righteously, and extra-physiologically, by a race of telepathically endowed Aliens of his own invention who speak a mythical language only ever partially intelligible to him, but most so when allegorically conveyed through the repeated playing of the song “with a little help from my friends” by The Beatles. The novel is set in a post-

apocalyptic 2002 in which the sounds of the Beatles are as lost to cultural memory as the lyrics to “Down by the Riverside”—one of its lines, “Ain’t gonna study war no more,” is recalled only as a hazy fragment of “an old song,” a fragment in which Orr cannot remember the operative verb: he tries “fight” before finally landing on “study” (135).

The stabilizing third here is Heather Lelache, by turns a legal secretary and a privacy lawyer, depending which of Orr’s dreams she is living in, but in any case a representative of the law to whom Orr turns to mediate his increasingly fraught doctor-patient relationship with Haber. Lelache is a “brown” woman, with a “mixed nature,” the daughter of a white hippie mother and a black father who, significantly, fell in love over their shared commitments to protesting war as university students “back in the ‘70s.” This aspect of her character makes her both the perfect foil and ideal wife for Orr, whose name is a none too clever pun on his own “mixed nature”: his nature is to mix, to inhabit the position of “either/or,” dissolving the oppositions that would produce biraciality as an intelligible identity category in the first place. That is to say, while in one sense Orr and Lelache inhabit, if not the same, then, analogous positions between worlds, they are also constitutively, perhaps even ontologically, at odds with one another to the extent that Orr’s very being consists in his tendency to dissolve the binaries that form the constitutive ground of Lelache’s character. Here Orr’s “double memory” approaches something like a pun, or a sideways slide towards social critique, a way of contemplating the capacity of science fiction modes like “cognitive estrangement” to represent social forms like “double consciousness.” But the novel ends up making the binarisms of

American racism the formal answer to its desire for a properly dialectical historiography, foreclosing this line of reasoning long before it produces any interesting answers.

To illustrate this point as the novel does, let us recall that about halfway through, Orr dreams a world into being in which racial strife has been obviated by a trick of evolution: all humans have gray skin. The only catch, of course, is that in such a world Heather Lelache, whose “color of brown was an essential part of her,” who “could not have been born gray,” does not—indeed, cannot—exist (130). Orr, on the other hand, “could be born into any world. He had no character” (130). This lack of character is in fact Orr’s defining characteristic. Interpreting the results of the battery of personality and intelligence tests to which Orr has been subjected as part of his treatment, Haber tells him, “You are so sane as to be an anomaly. [...] In quantifiable terms, you’re median. [...] You cancel out so thoroughly that, in a sense, nothing is left. [...] You’re the man in the middle of the graph” (138). Orr is the impossible embodiment of statistical man, the form given to the nullity of the statistically normal, and he bends reality to conform to his dreams of the real, but it is a reality into which others fit only with much cognitive dissonance—or rather, with precisely that degree of cognitive dissonance meted out by the standard deviation from “the man in the middle of the graph,” who is in fact no man at all, but rather more like “a piece of uncarved wood,” as Lelache describes him throughout.

The violence of the remaking of the ground of Portland in the novel is due to the fact that the “master plan” is composed of the contents of the unconscious of the man in

the middle of the graph. That is, the city is being made for the lowest common denominator, the unconscious imaginary of the average man, which is to say the most constrained imaginary possible for it springs directly from the repressed psychological content of the “median.” In this way the novel points up a disturbing statistical inhumanism lurking in the heart of the master plan. The genre of the master plan is, in fact, a speculative map of city space whose symbolic horizon is constrained by its affiliation with the aesthetic imaginary of the non-entity, a statistical model of the city and its dwellers. This is exactly Jane Jacobs’ critique of the master plan as privileged approach to urban development.

In “The Kind of Problem a City Is,” the final chapter of *The Death and Life of Great American Cities* (1961), Jacobs notes that “Beginning in [...] the 1930’s [in the US], city planning theory began to assimilate the newer ideas on probability theory developed by physical science. Planners began to imitate and apply these analyses precisely as if cities were problems in disorganized complexity, understandable purely by statistical analysis, predictable by the application of probability mathematics, manageable by conversion into groups of averages” (436). “It became possible also to map out master plans for the statistical city, and people take these more seriously, for,” Jacobs writes, “we are all accustomed to believe that maps and reality are necessarily related, or that if they are not, we can make them so by altering reality” (438). This is essentially the premise of Le Guin’s novel, in which reality is reconfigured nightly to match the dreams of Orr, “the man in the middle of the graph.” In Jacobs’ estimation, this is a mistake not

only because it enacts a violent inattention to the material conditions of the world, but also because it misrecognizes the significance of aberrant outliers to abstracted expectations. She warns that city planners “have inevitably come to regard ‘unaverage’ quantities as relatively inconsequential, because these are *statistically* inconsequential” but in fact, “‘unaverage’ quantities are important as analytical means—as clues. They are often the only announcers of the way various large quantities are behaving, or failing to behave, in combination with each other” (443).¹⁷⁸

The novel triangulates its perspective on statistical extrapolation through its three main characters. Haber is a representative of institutional power and a mouthpiece advocating the absolute abstractions of governmental-cum-actuarial logic. His motto is “the most good for the greatest number” but actual “people” mean nothing to him, and he means nothing as a person—he is not characterized at all, has no details or “life” beyond descriptions of his ambitions and general philosophy. Lelache, a privacy lawyer, takes people on a “case by case” basis, absolutely particularized, helping them manage the imperfect fit between real life and legal abstraction by shielding their particularities from the law’s incursion into the private realm. Orr is the statistical nullity shunted back and forth between them, as each attempts to marshal the power of the median on behalf of their diametrically opposed world views. In Dan Bouk’s cultural history of quantification,

¹⁷⁸ Jane Jacobs, *The Death and Life of Great American Cities* (Vintage, 1992 [1961]). This is likewise Lewis Mumford’s critique of Jean Gottmann’s theorization of megalopolis, which Mumford rejects as a “statistical non-entity” and “anti-city” (170) in *The Urban Prospect* (Harcourt Brace, 1968).

How Our Days Became Numbered, he describes the way actuarial risk society is premised on an insuperable tension between quantification and particularization, professionally embodied by statisticians and doctors.¹⁷⁹ We see that organizing tension being played out in the conflict between Haber and Lelache, quantitative experimental psychologist and privacy lawyer, each of whom wants with Orr to make the exception prove the rule, or the rule prove the exception.

The Lathe of Heaven is a post-apocalyptic novel, but it is not a dystopian one. It is a thought experiment in utopian world-making that takes apocalypse as its premise. In this way it is something of a cheap shot: it secures as ground for its utopian imaginary the *tabula rasa* of absolute annihilation, so that its fantasy may the better proceed unencumbered by the extant world and beyond the question of reform or/versus revolution, for there is nothing to reform, nothing to overthrow. (This is one difference between infrastructure and form: a wholly new envisioning of infrastructure requires something like annihilation or apocalypse as its condition of possibility.) It is both bleak and naïve, in that sense. The world ended in April of 1998. As of 2002, the present in which the action of the novel unfolds, Orr (or his unconscious mind, at any rate) is spinning his wheels trying to make a world from scratch, or anyway to make a world that will not itself end in annihilation. History is a trailing back-formation; it is there, but only

¹⁷⁹ Dan Bouk, *How Our Days Became Numbered: Risk and the Rise of the Statistical Individual* (University of Chicago Press, 2015).

as a guarantor of the present reality that Orr has dreamed up wholesale; in other words, it is close to arbitrary, something like “back story.”

The “science” involved in this fiction is the science of historiography: effective dreams, and the aliens and all the rest that they bring into existence, are all the stuff of fantasy. But the efficacy of the dreams nonetheless rigorously complies to the mandates of natural history, wherein the laws of genealogy and evolution, of speciation and sequence, cause and consequence, are invariably obeyed: in fact this is evidently the only parameter governing the effects of Orr’s dreams. But these historiographic manipulations are made manifest only spatially, in line with Fredric Jameson’s characterization of the exemplary artistic production of the postmodern moment as a spatialization of the temporal.

The novel is something of a successor to Le Guin’s short story of a decade or so earlier, “Ether, OR.” In a tongue-in-cheek hypothetical table of contents organized according to 18 idiosyncratic genre categories, Le Guin classifies “Ether, OR” as “Oregonian Realism.”¹⁸⁰ She was kidding, but only sort of. It is something of a regionalist or local color piece, a multi-perspectival account in the vernacular of life in a largely working-class rural Oregon town called “Ether” that could not be more typical save for the fact that it wanders unbidden around the state, much to the dismay of its inhabitants. Of her initial conception of the story, Le Guin has said, “I thought the town

¹⁸⁰ Le Guin, *The Unreal and the Real: Selected Stories Volume Two: Outer Space, Inner Lands* (Easthampton: Small Beer Press, 2012), ii; see also Le Guin’s website for some elaboration on her proliferation of genre categories.

was going to sort of shift in time. And it wouldn't do it. It would only shift in space.”¹⁸¹ If in “Ether, OR” the town shifts around the state of Oregon, in *Lathe of Heaven* Oregon becomes something of a palimpsest, and Portland becomes the primary locus of its re-inscription, innumerably overlaid with various iterations of what a “city” might be.

In 1943, the city of Portland hired famed New York master planner Robert Moses to design a highway system that would make the city more accessible to suburban commuters. Moses's design, which entailed highways cutting through neighborhoods in sweeping ribbons 8-lanes wide, was approved and funded by the state. The Mount Hood freeway, which would displace approximately 1,700 residential buildings, became the target of much opposition, and in 1969, as the state began buying up properties in the highway's path, public outcry consolidated into active protest. The freeways became the crux of Portland's 1972 mayoral race, ultimately decided in favor of Neil Goldschmidt, the anti-freeway candidate, who killed the project and repurposed its funding into support for the construction of a light-rail system which was finally built 10 years later.

Considered in this context, *Lathe of Heaven* looks like “Oregonian Realism” indeed—if you just ignore, for a moment, those pesky telepathically endowed aliens. The climax of the novel involves Orr struggling to halt Haber, who has himself acquired the ability to “effectively dream,” from eradicating the world's forms, and taking down its infrastructure with them. Notably, the first thing to go is language: as Haber's dream

¹⁸¹ “The Real and Unreal: Ursula K. Le Guin, American Novelist,” interview with Julie Phillips (December, 2012).

begins to take effect, all the city's signage is wiped clean—"Nothing said anything. Nothing had meaning" (170). Then comes the rest: "The buildings of downtown Portland, the Capital of the World, the high, new, handsome cubes of stone and glass interspersed with measured doses of green, the fortresses of Government—Research and Development, Communications, Industry, Economic Planning, Environmental Control—were melting. They were getting soggy and shaky, like Jell-O left out in the sun" (171). Amidst this, Orr's "car swung wild in the abyss, between the unforming city and the formless sky" (172). Orr's response is to abandon the roadways to ride, instead, a "funicular" into the eye of this deformation, offering a strangely prescient image of a Portland rescued from the grip of a maniacal "master plan" of highways "unforming" the city by a lowly draftsman with public transit dreams. I want to suggest that the form of the "master plan" is one that *The Lathe of Heaven* is fully in conversation with, and through this proximity the master plan itself comes to look like something of a speculative fiction: it faces all the same problems of totality and closure, of representation and reference, that science fiction does, and perhaps more so, as it is actually responsible for concretely conjuring the world it represents.

The novel seizes upon this problem of having to close that gap, marshaling the conventions of fantasy to critique the maniacal fantasies of "master planning" that science fiction world-making and urban development both entail. The major difference between fantasy and science fiction in this context is that fantasy elaborates a moralized world: the setting is predisposed to be hostile or amenable to its characters, and character

is subordinated to “role,” to the place you occupy in this uneven terrain, this stacked deck in the struggle between moral incompatibilities. In science fiction, some impersonal rationality or commitment to extrapolative rigor replaces this sense of the moral, and neutralizes the terrain. But in wrapping a fantasy framework around a science fiction premise—cognitive estrangement—*The Lathe of Heaven* constitutes a reminder that the infrastructure by which we construct a world is never morally neutral, and there are better and worse ways to undertake that project.

VII. Universe/University: An Ambiguous Utopia

Ursula Le Guin’s *The Dispossessed* (1974) was published in paperback with marketing copy on its front cover: “an ambiguous utopia.” This description was so apt that it seemed to have sprung from authorial intention, rather than advertising, and over the subsequent decades the phrase has been adopted as if it had always been the novel’s subtitle. Samuel Delany’s *Trouble on Triton: An Ambiguous Heterotopia* (1976) was named partly in reference to Le Guin’s novel, solidifying the ratification of copy as title. The marketing apparatus of science fiction shapes its artistic ambitions, sometimes impinging on them, other times amplifying them, but always present as a component of its aesthetic force and public reception. Le Guin’s somewhat exceptional status as academia-literate critical darling has sometimes worked to obscure her works’ status as science fiction, as which it is beholden to a particular set of conditions of production.

When Stephen Schryer nominates *The Dispossessed* as exemplary of New Left utopianism, precisely this kind of elision is operative.¹⁸² Schryer's examples of a resurgent utopian literature of the Vietnam War era are novels by Marge Piercy and Ursula Le Guin, but he curiously skirts the question of science fiction, offering instead a historicist reading of their novels as thematizing the contradictions of the New Left being worked out in parallel by the new class fantasies of academic professionals. This chapter has labored to show that science fiction was not merely nominated as the utopian branch of academic fantasies of political engagement out of abstract affinities, but as a consequence of a decades-long process of incorporation of science fiction in the curricular imperatives and campus ideology of the academy.

Schryer's reading of Le Guin is insightful and detailed, and it moves the critical conversation about her work in a salutary direction, expanding its scope of relevance by sharpening its critique to a point. But it also perpetuates a tendency in Le Guin criticism to read her work not within the tradition of science fiction but rather as a privileged kind of what Gore Vidal derisively termed the "U-novel," novels that, however allegorically disguised, are about university life written by and for university insiders. We are now accustomed to thinking of Le Guin as an exemplary social science fictionist—from her natal context as the daughter of anthropologist Alfred Kroeber, all else more or less falls in line—but by insisting on her relation to linguistics and anthropology we miss out on

¹⁸² Stephen Schryer, "Experts without Institutions: New Left Professionalism in Marge Piercy and Ursula K. Le Guin," *Fantasies of the New Class: Ideologies of Professionalism in Post-World War II American Fiction* (Columbia UP, 2011): 141-166.

her interest in quantification, and specifically the quantitative social sciences.¹⁸³ Or, to put this another way, accounts of social science fiction that treat the genre as synonymous with an interest in ethnography sometimes seem to forget that the major trend in social science of the postwar period is a shift from qualitative to quantitative methods. “Social science fiction” describes the quantitative “hardening” of social science into a speculative mathematics as much as it does the science fictional turn to the soft sciences.

The Dispossessed is the story of a Visiting Assistant Professor of mathematics overcoming his culture shock when he takes a new post at a university far from home. Of course it is also a novel about primitive accumulation, colonial dispossession, exploitation and expropriation of natural resources, capitalism, anarcho-socialism, intergalactic travel, human speciation, linguistic determinism, and a number of other things. But fundamentally the plot of the novel is that a V. A. P. hates his boss, loves his comrades, and tries to shake things up in the system that creates these divisions of interest and power. Its protagonist, the mathematician Shevek, wields an anti-capitalist aesthetics of number against the instrumentalization of math by capitalism and the administrative profit motives that make for miserable, profitable multiversities.

The Lathe of Heaven dramatized the problem of conflating word and world, representation and reality, human psychology and statistical generalization, and it made manifest the impending horrors that result from utopian literature assimilating statistical

¹⁸³ See for example Donald F. Theall, “The Art of Social-Science Fiction: The Ambiguous Utopian Dialectics of Ursula K. Le Guin,” *Science Fiction Studies* 2.3 (1975): 256-264.

thinking to its aesthetic toolkit. *The Dispossessed* names this problem as a specific symptom of capitalism, rather than a natural allergy of utopianism to number, and it tries to imagine an anti-capitalist aesthetics of number that could rouse dupes of capital to revolutionary social transformation by speaking their quantified language back to them with a different logic. Shevek is operating under the ideological reign of the philosophy of Odo, which holds that the social body is an organism metabolically primed to maintain the order of homeostatic balance. This framework allows him to experience math as possessing something of the autonomy of art, so foreign is it to the predominating biological metaphors of his context. His math remains potently aesthetic and nimbly expressive. He is moved by it. He finds it beautiful.

Over the course of the novel Shevek comes to recognize that the precondition for number to be a true modality of self-expression is the abolition of capitalism as the master language of quantification. He can speak to the people of the hyper-capitalistic Urras in his native numeric tongue because capitalism has made them numerate, but he must transvaluate their sense of number's instrumentality and enliven them to its expressivity. He can authentically express himself numerically without feeling self-alienated because capitalism has not expropriated from him his appreciation for math as an autonomous aesthetic medium. On his planet, Anarres, it is language that is instrumentalized—the deliberately monolingual Anarresti speak Pravica, a “rational” language invented on the occasion of Anarres's founding to be commensurate with a new politics and new polis, and it is spoken by no one else in the universe. On Anarres

language per se is thus indistinguishable from the nationalistic ideology that underwrote its invention and continues to underwrite its grammars and vocabularies.

In *The Dispossessed*, the struggle between number and word as competing descriptive vocabularies of social experience has to be resolved in Shevek before he can generate the “unified theory of time” that enables “the ansible”—an intergalactic communications technology that would spell the end to universal strife—to come into existence. Shevek mistrusts his language and feels a misfit between it and his experience. He prefers number and takes refuge in it, but in his world this is anti-social and explicitly coded as such by his teachers and cohorts, who find his singular mathematical genius “egoistic” because his expertise is “private” and therefore at odds with the ideological order of his property-less world. He learns Iotic, the language of Urras, so that he can enter into the collegial discourse of knowledge production with Urrasti university scientists, socializing the language of number that is reluctantly his private property at home. But on Urras he learns for the first time of the social oppression wrought by quantification through a capitalist logic that converts people into numbers in order to assert exchange equivalences and extract value. In the novel’s climactic scene, Shevek occupies the center of the Capitol Square on Urras, mirroring the mathematical Magic Square of his primary schooling (in which the integers 1-9, gridded, add up to the same number in all directions), and makes a speech in Iotic to the Urrasti, rousing them to political action.

In this moment Shevek unifies narrative and number in his own person, and in doing so is able to tap into a socialized political vision simply by giving expression only to his own concerns, a magical alchemy by which his private concerns are aligned completely with the social concerns of the collective to whom he speaks. As he makes his speech, the content of which is not revealed in the narrative, we learn that “when he spoke, speaking was little different from listening... He spoke their mind, their being, in their language, though he said no more than he had said out of his own isolation, out of the center of his own being” (300). Shevek finally feels like he expresses himself in language, but the form in which that expression can take shape is mathematical, the form of inhabiting the center of the Magic Square that enables omnidirectional equivalencies without asserting exchange values.

The ansible is the corollary to Shevek in technological form of this rapprochement, the technology that represents identity as transmission, as Shevek also does in the moment of this speech: he is speaking to a crowd but feels as though he is simply expressing himself to himself. The ansible does “not transmit messages... simultaneity is identity. But to our perceptions, that simultaneity will function as a transmission, a sending” (344). Shevek’s articulation of the content of his identity is identical to the interest of the collective, and his expression of his identity is experienced as a transmission of political knowledge and imperative to the crowd. This is a school of narrative closure on the model of E. M. Forster totally perverted: instead of birthing a baby or consecrating a marriage, Le Guin’s narrative thrusts towards birthing a

technology that will solve the problem of historical transmission and intergenerational continuity. The ansible, child of the unified theory of time born itself of the unification of word and number, stands in as child to a world that is post-reproductive, post-nuclear family, post-private property. D.W. Winnicott's formulation, "sowed a baby, reaped a bomb," is very nearly literalized here.

The self-identity, itself identical to collectivity, that Shevek achieves in the middle of the square stands as counter-point to the horrific generalization of private psychological content that George Orr experienced as "the man in the middle of the graph" in *The Lathe of Heaven*. But both venture to resolve the antinomy of individual and collective by means of a quantitative logic of scale, and they demonstrate the consequences of building fictional worlds premised on the model personhood of their characters. If Le Guin and Silverberg show how the scale invariant premises of model thinking are problematized by character, the texts dramatizing shrinking protagonists in the next chapter take this insight to its logical extreme. Le Guin's "man in the middle of the graph" becomes Richard Matheson's "incredible shrinking man" as a logic of calibration and quantification is consolidated into a world order. In Chapter 4, I take up the convergence between population explosion and atomic bomb crises to ask, when world historical action appears to be unfolding at inhuman scale—the micro scale of the atom, or the macro scale of the planet—what is the fate of the human who tries to scale to that level?

CHAPTER 4: MALTHUS WITH A COMPUTER: POPULATION BOMB ON
SPACESHIP EARTH

I. “Has man’s conquest of space increased or diminished his stature?”

The “Anthropocene” gives a new name to a phenomenon a long time in the making. This chapter takes as its premise that the aesthetic and epistemological ramifications of this epochal designation are likewise newly visible, but not altogether new. It thus sets as its task the delineation of the forms and functions of a set of cultural texts of the 1940s-70s that prefigure the scalar analytics envisioned by recent discussions of climate change in the humanities. In tracing this history, one finds a series of inversions, discursive condensations, and detours into the figurative, operating under the sign of “stature” and running up against the limits of the earth.

In 1963, a “Symposium on Space” convened to address the question “Has man’s conquest of space increased or diminished his stature?” The arrayed answers form the centerpiece of Encyclopedia Britannica’s 1963 volume of *The Great Ideas Today*, the yearbook series designed to evaluate the relevance of “the great books of the western world” to the most pressing concerns of the given year.¹⁸⁴ Hannah Arendt, Aldous Huxley, Paul Tillich, Herbert Muller, and Harrison Brown each take a shot at answering this question. A reprint of Thomas Malthus’s famous essay on population closes the

¹⁸⁴ “A Symposium on Space: Has Man’s Conquest of Space Increased or Diminished His Stature?” *The Great Ideas Today*, eds. Robert Hutchins and Mortimer Adler. Chicago: Encyclopedia Britannica, 1963.

volume. In the volume's twinned obsessions with Sputnik and Malthus, space and population, hanging as they do under the sign of "stature," one finds an organizing impulse of mid-century thinking about the scaling of man to planet. This essay follows a line of thinking out of *The Great Ideas Today*, in its course shifting the focus away from "the conquest of space," and instead onto "the stature of man." In so doing it grounds the cosmological anxieties of the space race in the Earth as the parametric condition of human life, attending to those domestic narratives of diminution, on the one hand, and population explosion, on the other, that set the potential to colonize other planets to one side in favor of a thorough-going account of the terrestrial effects of exceeding the Earth—be it by spaceship or resource depletion.

While scholarship from a number of disciplinary perspectives has elaborated the spatial imaginary of the social sciences and literatures of the mid-twentieth century that invest newly in the category of data and the mode of mathematical formalism to describe the built environments that contain and support human social life, this essay scales up once more to consider the spatialized and scalar logics of human climes writ large: the anthropogenic climate change that is remaking both the planet itself and our conceptual tools for making sense of the human species' relationship to it. The Anthropocene is the newest proposed geological epoch, dated to the moment when human influence on the planet becomes readable in the stratigraphic record. The International Commission on Stratigraphy has yet to endorse an official periodization, but a majority contingent of its Anthropocene Working Group has proposed pinning the moment to the first nuclear

bomb detonation, the Trinity nuclear test of July 16, 1945, conducted by the United States Army at Alamogordo.¹⁸⁵ Recent humanities approaches to thinking the Anthropocene have attempted to make sense of its conceptual consequences by historicizing conceptions of weather, climate, ecology, eschatology, or by theorizing agency at scale—be it through very large or very small inhuman units like icebergs, tectonic plates, bacteria, or microorganisms, or by reconceptualizing the locus of exertion of human agency as the species or supra-individual collectivity. In what follows, I take a different tack, elaborating instead an account of the planet conceived as form in which human life can be made to flourish. In the history that underpins this account, the planet is taken as a naturally given form reconfigured as a technology for supporting human life: “spaceship earth.”¹⁸⁶

¹⁸⁵ A recent paper co-authored by members of the Anthropocene Working Group describes the three predominant periodizing models that have been proposed. These would date the beginning of the Anthropocene variously from a few thousand years ago, from the Industrial Revolution c. 1800, or from the Great Acceleration of the mid-twentieth century. The article makes a case for the salience and utility of the last of these, based primarily on the globally registered geological presence of novel nuclear byproducts in the soil for which this moment is responsible, and that will persist for thousands of years to come. Zalasiewicz, et al. “When Did the Anthropocene Begin? A Mid-Twentieth Century Boundary Level Is Stratigraphically Optimal.” *Quaternary International* 38.5 (2015): 196-203.

¹⁸⁶ “Spaceship Earth” is an unusually itinerant image, and one that was mobilized by ecological, environmentalist, conservationist, economic, speculative, policy, and governmental movements alike, though the values and goals motivating these various mobilizations were often far from aligned with one another. Compare for instance the Whole Earth movement of Stewart Brand and the economic theory of Kenneth Boulding, both of which take “spaceship earth” as their mascot, for an exemplarily stark contrast.

Figured as a spaceship, the earth is a fragile form under threat of buckling from without or busting from within by dint of human hubris—the outsizing of human existence relative to the planet that sustains and contains human life. Spaceship earth is manned by a human crew of variable size and stature, in possession of divergent but complimentary skillsets that must be expertly aggregated and properly scaled in order to keep the intricate form of the planetary vessel intact. This image is ubiquitously literalized into science fiction plots at midcentury, but perhaps in exemplary form in Richard Fleischer’s film (and Isaac Asimov’s famous novelization of the same) *Fantastic Voyage* (1966) in the team of astronauts, surgeons, biologists, and weapons experts radically scaled-down for their “fantastic voyage” into the human bloodstream aboard a spaceship shrunken and repurposed for travel in resolutely human climes—the viscera.¹⁸⁷ Outer space is refigured as visceral interior, as the spaceship meant for travel in the former is scaled down to traverse the latter. The chimeric entanglement of these two scales, outer space and human interior, is emblemized by the new universality of the spaceship as both conveyor and protector of human life, no matter the terrain: a vehicular planetarity. It also underwrites the crux of the plot, in which the fate of a world under threat of nuclear eradication rests upon the eradication of a blood clot in the body of the one man with the knowledge to disarm the bomb. That is to say, planetary survival is

¹⁸⁷ *Fantastic Voyage*, directed by Richard Fleischer. USA: Twentieth Century Fox, 1966. Isaac Asimov, *Fantastic Voyage*. New York: Bantam Books, 1966.

contingent upon the removal of micro-obstructions to the scaling-up of human knowledge.

To put this slightly differently, in *Fantastic Voyage* (1966) one witnesses a representation of the historical hand-off between organic and mechanistic models of the social world that forms the backdrop to the discourse of the stature of man that it is the project of this chapter to chart. In the consolidation in the early 1960s of the figure of “spaceship earth” manned by a human crew tasked with keeping everything in proper proportion, one finds a knitting together of the ecological, economic, and aesthetic in a common logic of system and scale. Like the contemporaneous figuration of society as organism with its attendant ecological theories of social formation and social deviance, but operating at several greater orders of magnitude, the figure of spaceship earth encodes ecological thinking at a planetary scale. By scaling up and away from the organic model in favor of a technological one, “spaceship earth” as conceptual model attempts to clean up the improperly algorithmic logic of the social sciences of the preceding decades, still in the thrall of the biological, by reconceiving of the earth as a technology of life-support, rather than a biological system. The equilibrium that the planet must maintain is thus reconceived as a problem of mathematical distribution (of resources and the populations that consume and produce them) rather than homeostatic regulation of competing sub-systems, as it was for the structural-functionalist founders of American social theory of the early twentieth century. The locus of responsibility for maintaining this balance is also relocated from the social world as autonomously operating organic system to its

constituents, as the earth is reconceived as at once the sustaining ground and precarious charge of its human inhabitants. But born of these shifts—the aggrandizement of human ecology and human responsibility, both—is a new uncertainty about the stature of man, at once puny with respect to a newly expansive world and grotesquely bloated with newly staggering power over that world.

In what follows I collate the discourses of population bomb and space race as the two most substantial attempts in the twentieth century to assay the limits of the earth.¹⁸⁸ Their affiliation is consolidated through a set of examples that explicitly grapple with the relationship between population, space, and planetary limits, and that utilize a figure of stature to think this conjunction of terms. This figure operates unevenly and sometimes simultaneously as metaphor, metonymy, synecdoche, or absolute literalization, synchronically bridging otherwise quite disparate modes and genres and bringing a complex conjunction of concepts into view. I find in this account of a conjoined population bomb and space race discourse a commitment to the Earth as absolute limit that makes these texts both precursors of and resources for the kind of thinking necessitated by the Anthropocene. This allows us to reframe the conversation as one

¹⁸⁸ Another attempt to assay the limits of the earth, very much of a piece with both population bomb and space race impulses, is polar exploration. The history of Antarctic exploration skews a bit earlier, and will not be my focus here, but it is important to note that Antarctica becomes significant in the Cold War as bases are rapidly constructed there in the 1950s, culminating with the signing of the Antarctic Treaty in 1959. Cf. for instance Elizabeth DeLoughrey, “Satellite Planetarity and the Ends of the Earth.” *Public Culture* 26.2 (2014): 257-80, and Elena Glasberg, *Antarctica as Cultural Critique: The Gendered Politics of Scientific Exploration and Climate Change*. London: Palgrave, 2012.

about the parametric and the scalar—rather than the catastrophic and the tragic. I propose that the discourse of the Anthropocene in the humanities be organized not around the history of science and the future of humanism, but rather the history of stature and the future of formalism.¹⁸⁹ This is to say that the opposition between humanism and scientism that is explicitly articulated in the historical discourse on space and planet, and inadvertently shored up in the contemporary one, is a false opposition, and an analytically mystifying one.

Part of the crux of its mystification resides in the changing fates of formalism, articulated historically as a scientific analytical procedure consisting in the conversion of linguistic meaning into pattern, sequence, and structure, and leveraged now quite differently as a riposte to the ousting of close reading by the arrayed methodologies of the “quantitative turn,” chief among them those that fall under the penumbra of the digital humanities. That is to say, formalism has mediated between humanism and scientism over the whole arc of the history I trace here, but where initially it marked a fearful

¹⁸⁹ There is an ample literature on the history of the social significance of human stature that operates adjacently to the project at hand. Because the texts of interest to the present study are ones that conjure an aesthetics of stature occasionally literalized through the actual stature of a human body, rather than ones that explore the signification in a given moment of variously statured persons such as midgets, giants, or the like, this history remains somewhat ancillary. For one approach to this history see Jean Franzino, “‘The Biggest Little Marriage on Record’: Union and Disunion in Tom Thumb’s America.” *American Quarterly* 67.1 (2015): 189-217. Susan Stewart’s *On Longing: Narratives of the Miniature, the Gigantic, the Souvenir, the Collection* (Duke University Press, 1993) is more aligned with the present one in its orientation towards aesthetics, but in its insistence on metaphor as the organizing term for its analytics of scale that alignment terminates.

encroachment of the coldly scientific into the properly humanistic province of narrative meaning-making, it now serves as a bulwark against the encroachment of the scientific into the very same humanistic terrain. I inquire in what follows after a formalism that would refrain from reinscribing an ideologically freighted opposition between an embattled humanism and a destructively hegemonic scientism. By reading the figuration of human stature in population bomb and spaceship earth discourses together, I historicize humanism in terms of a moment in which it was being heartily opposed to a fearfully scientific mathematical formalism in order to analytically disentangle formalism from the grips of a spuriously moralized debate between these false poles.

In the philosophical discourse of planetary limits in the early years of the Cold War, formalism is always already wedded to the scientific abstractions of the mathematical, which stands accused of displacing the humanism of the linguistic, and there was perhaps no more prolific accuser on this count than Hannah Arendt. I will return to her work in greater detail in closing, but I will begin with it now in order to consider the framing function granted to her in a much-cited essay by Dipesh Chakrabarty, whose two essays on the Anthropocene from 2009 and 2012 have quickly become the most discussed of the humanities contributions to the discourse of the conceptual consequences of anthropogenic climate change.¹⁹⁰

¹⁹⁰ Dipesh Chakrabarty, "The Climate of History: Four Theses," *Critical Inquiry* 35 (2009): 197-222; "Postcolonial Studies and the Challenge of Climate Change," *New Literary History* 43.1 (2012): 1-18. See also his "Afterword," *South Atlantic Quarterly* 116.1 (2017): 163-168, in a special issue on "Knowledge in the Age of Climate Change,"

In the more recent of these essays, “Postcolonial Studies and the Challenge of Climate Change,” Chakrabarty routes his closing thoughts through a brief reading of Arendt’s *The Human Condition* (1958), the prologue of which meditates on the significance of Sputnik’s 1957 launch into the Earth’s orbit and the possibility it represented of “escap[ing] from man’s imprisonment to the earth,” as Arendt (quoting an unnamed newspaper) puts it.¹⁹¹ Chakrabarty invokes Arendt’s reading of Sputnik as a way of tracking the distance between the 1950s and the present, finding that the “fateful repudiation of the Earth” (2) that Arendt hypothesized “has come in a shape Arendt could not have even imagined in the optimistic and modernizing 1950s” (15).¹⁹² Global warming, Chakrabarty writes in the final sentence of this essay, marks a “profound change in the human condition,” a change that provokes many of the same questions that Arendt broached in 1958, but that portends entirely different answers, free of what Chakrabarty identifies as her “optimism regarding the survival of the human species” (15)—because the Anthropocene admits of no optimism on this count.

But while Sputnik may signal the first “step toward escape from man’s imprisonment to the earth,” the repudiation of the earth that Arendt cites is in fact twofold, consisting of a flight from both earth and world: the “modern world” was “born” not with Sputnik, but “with the first atomic explosions,” and the “alienation” that

edited by Ian Baucom and Matthew Omelsky, and his article “Humanities in the Anthropocene: The Crisis of an Enduring Kantian Fable,” *New Literary History* 47.2-3 (2016): 377-397.

¹⁹¹ Hannah Arendt, *The Human Condition* (University of Chicago Press, 1958), p.1.

¹⁹² Chakrabarty, “Postcolonial Studies and the Challenge of Climate Change.”

characterizes this modern world consists in a “twofold flight from the earth into the universe and from the world into the self” (6). Both of these lines of flight derive from the inadequacy of human speech to the new conditions of the modern world, from the “trouble” that “the ‘truths’ of the modern scientific world view, though they can be demonstrated in mathematical formulas and proved technologically, will no longer lend themselves to normal expression in speech and thought” (3). This entails the problem “that we, who are earth-bound creatures and have begun to act as though we were dwellers of the universe, will forever be unable to understand, that is, to think and speak about the things which nevertheless we are able to do” (3).

Given these newly cosmic climes, in which “earth-bound creatures” behave as if universe-dwellers, Arendt reluctantly concludes, as Chakrabarty also does, that the newly modified human condition renders Marxism inadequate to a politically astute account of the present. The new relation each author identifies between humankind and the earth precipitates the need for as yet unavailable vocabularies. Arendt is hardly optimistic about the likelihood of cultivating such vocabularies; in her estimation, it seems likely that speaking and doing “have parted company for good” (3). But what “we are able to do” in Arendt’s estimation is not just launch Sputnik into the orbit of the earth, or leave Earth for some other post in the universe, but rather, and more pressingly, detonate atomic bombs that would obliterate the earth and ourselves. This is the difference she draws between the “modern age” and the “modern world” – the age began with the Enlightenment; the world came into being with the bomb, and it will cease being with it,

too (6). However “optimistic” Arendt may be about “the survival of the human species,” her optimism is set against the ground of a modern world “born with the first atomic explosions,” a world “against whose background [her] book was written” (6).

Chakrabarty notes in his earlier essay on climate, “The Climate of History: Four Theses,” that “the anxiety global warming gives rise to is reminiscent of the days when many feared a global nuclear war” (221). But he is quick to note that the two are distinguished from one another by “a very important difference”: while “nuclear war would have been a conscious decision on the part of the powers that be,” global warming “is an unintended consequence [...] of our actions as a species” (221). While it is fair to say that global warming cannot be detonated in the same way that a bomb can, it is precisely Arendt’s point that the existence of the atomic bomb is an “unintended consequence of our actions as a species,” or as she puts it, of the “thoughtlessness—the heedless recklessness or hopeless confusion or complacent repetition of ‘truths’ which have become trivial and empty,” a habit which she counts “among the outstanding characteristics of our time” (5). As a species we have endorsed a scientific program that exceeds our ability to articulate our actions in speech. The product of this program is an “unintended consequence” insofar as it exceeds human powers of intention: the bomb inaugurates the moment in which “know-how” and “knowledge” have “parted company for good.” That is, anxiety about the threat of global nuclear war prefigures the anxiety about global warming not just in its apocalyptic posthuman imagining, but also in the phenomenological rendering of human species-being that it inspired in mid-century

narratives that take the bomb as the parametric condition of “all thinking about the present.”¹⁹³

As Arendt writes, and as Chakrabarty cites, in the possibility for the repudiation of the earth represented by Sputnik, and more ominously by the bomb, science had landed upon a thought that “up to then had been buried in the highly non-respectable literature of science fiction” (2). I propose that one such burial site is Richard Matheson’s *The Shrinking Man* (1956), and his film adaptation of the same as *The Incredible Shrinking Man* the following year—the year of Sputnik’s launch.¹⁹⁴ These stories imagine not the repudiation of the earth that Arendt locates in Sputnik, but rather the

¹⁹³ It is also the case that climate change, while certainly an “unintended consequence” in its particulars, is in fact also monitored, mediated, produced, and managed by “the powers that be.” To suggest otherwise is to too promptly eschew climate change from the purview of politics. While Chakrabarty cites Giovanni Arrighi’s *Adam Smith in Beijing* as evidence of the shifting “mood” of “globalization analysis” towards global warming (199), he neglects to cite the conclusions of Arrighi’s analysis: namely that the extent and imminence of the global geological consequences “of our actions as a species” depend in large part on the ecological limits imposed and encountered by developing economies such as China’s. The strong periodizing move that Chakrabarty tries to interpose between the present and the ‘50s crumbles under a critique of capitalism that would find in this shift not a rupture but a transformation, and not even a particularly “disjunctive” one—as indeed Arrighi does across the works that Chakrabarty cites: *The Long Twentieth Century* and *Adam Smith in Beijing*. Chakrabarty notes a rhetorical transformation of the human in scientific discourse between these moments from “an experimenter on a geophysical scale in the 1950s” to a “geophysical force himself” “by the 1990s” but he sees them comparatively rather than systemically (11). Cf. *Adam Smith in Beijing: Lineages of the Twenty-First Century* (Verso, 2007), especially “Part IV: Lineages of the New Asian Age” on the ecological limits and consequences of capitalism, and *The Long Twentieth Century: Money, Power, and the Origins of Our Times* (Verso, 1994).

¹⁹⁴ *The Incredible Shrinking Man*, directed by Jack Arnold, screenplay by Richard Matheson, (Universal Pictures, 1957). Richard Matheson, *The Shrinking Man* (Gold Medal Books, 1956).

repudiation of the earth that Chakrabarty locates in climate change. I turn to the 1950s not to track the distance between that moment and this one, but rather to track the continuity between Matheson's figures of the human and Chakrabarty's. I take these texts less as exemplars of the repressed political unconscious of either their moment or the present one, and instead read them as heavy-handed literalizations of the ideas put forth by recent humanistic attempts to think the present through global warming. The place of the literal in thinking about the present will be of greater concern as the chapter progresses.

II. The Shrinking Man

There are few more dogged narrativizations of an asymptotic logic than Richard Matheson's *The Shrinking Man*, the 1956 novel that Matheson adapted into the screenplay for Jack Arnold's better-known film version of 1957, *The Incredible Shrinking Man*.¹⁹⁵ Where the film sticks to straight chronological sequence, the novel proceeds as an extended inhabitation of the brink of "zero," intercut with flashbacks to taller times, titled only with the number of inches of its protagonist's height. He shrinks "a seventh of an inch a day, as precise as clockwork. He could have devised a mathematical system on the absolute constancy of his descent into inevitable nothingness" (83). This decline, plotted on a Cartesian plane, would make for the

¹⁹⁵ I claimed that there has scarcely been a more dogged narrativization of the asymptote than this—but that's not for lack of competitors. For example, the logarithmic scale of Charles and Ray Eames's *Powers of Ten* (1968/1977), Kees Boeke's *Cosmic View* (1957), and Eva Szaz's *Cosmic Zoom* (1968), very explicitly formalize and thematize these scalar aesthetics.

simplest of lines, descending arithmetically from a y-value of seventy-two inches by one-seventh of an inch per day, ticked off along the x-axis. But such a line, unchecked, come the five-hundred and fourth day, would pass cleanly through zero and into the negative. That's all well and good for a line, but what of the man upon whose diminution this "mathematical system" has been devised?

The great revelation at the end of novel and film alike is that what had seemed like an inexorable march towards the nothingness of death turns out in fact to be an asymptotic approach towards subsumption into the earth. But instead of disappearing into oblivion, the shrinking man simply disappears from the world of human perception into the "new world" of geological being (in the novel) or the cosmic ether (in the film), tracking both sides of Arendt's prophesied "twofold flight from the earth into the universe and from the world into the self" (6).

While the film maintains a shot of Carey disappearing into a bed of leaves as the camera zooms out in a crane shot to take in the landscape—a nod to the novel's closing meditation on leaves—it does one thing and says another: the voiceover comes in strong on the side of cosmic mysticism. The images ultimately catch up with the narration, however, which is in the last instance reinforced by a dissolve of the crane shot of the landscape into a shot of what is supposed to be the universe in full, followed by successive dissolves into increasingly tighter close-ups of our galaxy and finally of a hazy ringed planet that resembles the opening sequence of the film, featuring the atomic

“mist” that passes from credit sequence to diegesis to jump-start Carey’s diminution.¹⁹⁶

The voiceover monologue paired with the closing sequence begins, “It was as if my body had ceased to exist,” and ends:

I looked up as if somehow I would grasp the heavens, the universe, worlds beyond number, God’s silver tapestry spread across the night. And in that moment I knew the answer to the riddle of the infinite: I had thought in terms of man’s own limited dimension. I had presumed upon nature that existence begins and ends—that’s man’s conception, not nature’s, and I felt my body dwindling, melting, becoming nothing. My fears melted away, and in their place came acceptance, all this vast majesty of creation—it had to mean something, and then I meant something too. Yes, smaller than the smallest, I meant something too. To God, there is no zero. I still exist.

This is a fantasy in which dissipation entails not a repudiation of the earth but a redistribution of human meaning, displaced from “man’s own limited dimension” onto “all this vast majesty of creation.” To the extent that Carey has been absorbed into the order of the “vast,” his dissipation is in fact a reconsolidation of his significance: though his body has “ceased to exist,” the film closes with a definitive declaration that “I” exists still. He may be “nothing,” but he’s not “zero”—that is, he has no presence but he is not a

¹⁹⁶ This sequence is reminiscent of nothing so much as Charles and Ray Eames’s short educational film *Powers of Ten* (1977), which is in turn adapted from Kees Boeke’s book *Cosmic View: The Universe in 40 Jumps*, published in 1957, the year that *The Incredible Shrinking Man* was released.

nullity, and according to the logic of the film, being “nothing” may be the best way to “mean something” in any case.

Where the film posits a mystical reconciliation of man and world, a quasi-religious reunification of man and nature through the dissipation of the former into the latter, the novel closes with an image of agential absorption into a microscopic material world which is coded as an exploratory journey, an infiltration of the geological structure of the earth. Ultimately these prove to be one and the same—the novel ends this way:

Last night he'd looked up at the universe without. Then there must be a universe within, too. Maybe universes. [...] He'd always thought in terms of man's own world and man's own limited dimensions. He had presumed upon nature. For the inch was man's concept, not nature's. To a man, zero inches meant nothing. Zero meant nothing. But to nature there was no zero. [...] Suddenly he began running toward the light. [...] Scott Carey ran into his new world, searching.

If in the film “zero” is man's imposition upon God, in the novel it is “nature” for which “there was no zero.” And it is not the “universe without” with which Carey will be reconciled, in which he will “still exist,” but rather the “universe within” that forms the “new world” in which his “search” will commence. While “I meant something too” is the rallying cry of the film's resolution, an insistence upon the meaningfulness by proxy of absorption into the sublime cosmic order, in the novel Carey becomes a force of another order, an explorer acting ecologically in the deep structure of the earth's matter.

While the diminishment of the shrinking man's size may be arithmetic, decreasing linearly in even increments, the warping of his scale is logarithmic, becoming exponentially more distant from the human perceptual scale of "man's own world" as he approaches "zero" and finds "his new world" organized around "nature's" concepts, rather than man's. That is to say, "reality was relative," and one-seventh of an inch means a lot more to a shrinking man on day four-hundred and ninety-seven, when he's one inch tall, than it does on day one, when in fact he fails to register any change at all. (It takes him weeks to notice that he's shrinking.) *The Shrinking Man* thus dramatizes both the difference between size and scale, and the linkage between the geological and the cosmic, through the mathematical formalism of the asymptote and the perspectival aesthetics of scale: the ever-receding and expanding bounds of "man's own limited dimensions," capable finally of apprehending the cosmos itself as man and geology are enfolded into one another.

This obsession with the asymptote, with how close one might come to a limit without ever reaching it, with how long one might defer the moment of contact with a parametric condition or extend the tail of one's curve along its side—this obsession, that is, with logistic functions and logarithmic scales, with depicting and imagining the scaling of time and space, people and planet, to their joint limit—this is a formal feature yoking population bomb and space race to one another in the post-World War II period as part of an effort to cultivate models for calibrating the scale of man to planet.

III. The Space Age

“‘Has man’s conquest of space increased or diminished his stature?’ These ten simple words are pregnant with almost as many major problems in semantics” (21).¹⁹⁷ Aldous Huxley opens his contribution to the “Symposium on Space” with this disheartening observation, resituating the discussion (like any good scholar invited to weigh in on someone else’s program) as an inquiry into the semantics of its organizing question. Huxley determines in short order that this question, to put it bluntly, makes no sense. Or rather, it makes too much sense, as each of its constituent terms signifies in several directions at once. After taking great pains to enumerate these “major problems,” Huxley distills them into a fundamental inconsistency in the meaning of “man,” as animal-species versus human-culture, its two modes pitted at cross-purposes insofar as “man, the species, is now living as a parasite upon an earth which acculturated man is in the process of conquering to the limit—and the limit is total destruction” (24). Born of this conflict is another: acculturated man, “preoccupied [...] with new worlds to conquer” is “apt to forget that [the] much-touted Space Age is also the Age of Exploding Populations” (25). And indeed, this link has largely been forgotten in the decades since Huxley’s diagnosis.

¹⁹⁷ Aldous Huxley, [Untitled]. “A Symposium on Space: Has Man’s Conquest of Space Increased or Diminished His Stature?” *The Great Ideas Today*. 20-33. Chicago: Encyclopedia Britannica, 1963.

For their part, the editors of “A Symposium on Space” note in their introduction that the question of “the conquest of space” is already passé, even though, in 1963, it has yet to really happen. The real question is “the stature of man.” This is the pressing issue behind the endless debates over space travel; this is the question that transcends the boredom of the cold war framework that reduces everything to a symbolic contest of clout between American and Soviet powers.¹⁹⁸ If we grant “the stature of man” abstract meaning that “the conquest of space” has come to lack, then we apprehend the population bomb as a problem at once newly enveloped in the cold war framework, and newly meaningful beyond it. The “conquest of space” is, in this view, nearly a synonym for “population explosion,” it is just a matter of whether the “space” at hand is extra-terrestrial or squarely Earth-bound. “The stature of man” is likewise double, a figure for moral fortitude as well as for a species grown too large for its plot.

By the time the title of Paul Ehrlich’s best-selling *The Population Bomb* (1968) became a catch-phrase for the population crisis of the 1970s, the space race framework that the Britannica editors were eager to reconfigure had been largely sloughed off, and lost with it was the link between the “Space Age” and the “Age of Exploding Populations” upon which Huxley had so vehemently insisted. When *The Population Bomb* landed on bookshelves in 1968, it did not inaugurate a discourse so much as it

¹⁹⁸ Robert Hutchins and Mortimer Adler, “Introduction.” “A Symposium on Space: Has Man’s Conquest of Space Increased or Diminished His Stature?” *The Great Ideas Today*. 1-3. Chicago: Encyclopedia Britannica, 1963.

condensed one.¹⁹⁹ Ehrlich's book trained the course of population discourse towards conservationist, birth control, and policy efforts, and away from social hygiene and communist containment. (It's easier to talk about conserving resources than it is to talk about brainwashing populations, or eradicating them.) But in so doing, *The Population Bomb* did its part to obscure the tangled origins of population discourse in nationalist catastrophizing, imperial eugenics, and big business lobbying efforts that saw the population explosion as being bad for the maintenance of capitalism's globally distributed inequalities, and bad for the "stable-state economics" that would come to acquire many other names, including, a decade later, "spaceship earth."²⁰⁰

Ehrlich's title is a citation of entrepreneur Hugh Moore's 1954 pamphlet by the same name, which advises vigilance against "the deadly triangle of *War, Communism and World Population*," and warns that "Today the population bomb threatens to create an explosion as dangerous as the explosion of the H bomb, and with as much influence on prospects for progress or disaster, war or peace. But while the H bomb is only being

¹⁹⁹ Pierre Desrochers and Christine Hoffbauer, "The Post War Intellectual Roots of the Population Bomb: Fairfield Osborn's 'Our Plundered Planet' and William Vogt's 'Road to Survival' in Retrospect," *The Electronic Journal of Sustainable Development* 1.3 (2009): 37-61. Paul Ehrlich, *The Population Bomb*. San Francisco: Sierra Club, 1968.

²⁰⁰ While it may seem counter-intuitive that big business interests would be in favor of population control, as greater populations might presumably entail the salutary expansion of markets, in fact high population growth in this period was correlated with susceptibility to communism, and so the interests of capitalists in the spread of democratic governance and its attendant economic policies mediated their interests in the unfettered cultivation of new markets. It was more important to ensure the spread of global capitalism at the level of governance than at the level of consumers.

stockpiled, the fuse of the population bomb is already lighted and burning” (15).²⁰¹

Moore’s clarion call explicitly links the population bomb to the H bomb, nominating both as world historic threats to the “progress” of humankind. In this framework the Cold War imperatives of communist containment become coterminous with an American imperial eugenic project. Moore’s pamphlet recasts the Cold War as a struggle over the parametric conditions of human life, not just competing ideological frameworks. The parameters are set out between population bomb and hydrogen bomb, two figures for the potential to obliterate humankind at unprecedented scale.

Ehrlich’s book issued from a line of postwar population explosion discourse of which Moore’s pamphlet is but one part. This discourse is perhaps best exemplified by two best-sellers of 1948, Fairfield Osborn’s *Our Plundered Planet*, and William Vogt’s *Road to Survival*.²⁰² Vogt described man’s relation to the earth this way: “The human race is caught in a situation as concrete as a pair of shoes two sizes too small” (288). Vogt figures the human population of the planet as a man outgrowing his vestments, but new ones are not an option. If the human race’s feet are to be loosed from its crowded shoes, it must trade them in for a new foothold in the earth itself. Human thinking likewise must reckon with the material substrate of the planet as “total environment” to which our “philosophies” must be scaled. Closing out a long paragraph of rousing exhortation to epistemological reconfiguration, Vogt writes: “Our philosophies must be

²⁰¹ Moore, Hugh. “The Population Bomb.” New York: The Hugh Moore Fund, 1954.

²⁰² Fairfield Osborn, *Our Plundered Planet*. Boston: Little, Brown and Company, 1948. William Vogt, *Road to Survival*. New York: William Sloane Associates, 1948.

rewritten to remove them from the domain of words and ‘ideas,’ and to plant their roots firmly in the earth. Above all, we must weigh our place in the society of nations and our future through the decades to come in the scale of our total environment” (286).

Fairfield Osborn, in his best-seller of the same year, *Our Plundered Planet* (1948), shares Vogt’s commitment to weighing the place of the human race “in the scale of our total environment,” but he scales up considerably, proposing that “we can best comprehend the human situation today if we first peer through the long vistas of space and time” (5). Osborn’s name for this maneuver is “the long view,” for “perspective sometimes provides its own insight” (5). The insight that perspective provides in this case is that “our home, the earth, is one of the smallest of the nine planets that belong to a star that we call the sun” (5). However, “the sun is, in fact, a relatively insignificant star” when set against the scale of the galaxy, and our galaxy in turn is relatively insignificant when contextualized in the universe as a whole—a whole the size and scale of which are inconceivable to the human mind. Osborn’s “long view” entails a rhetorical zooming out, away from “our home” and from the teeming populations of mankind who inhabit it, in order to reconfigure the earth as a small and vulnerable planet precariously occupying a tiny corner of an inconceivably vast universe. The earth, that is, must be coddled, like the “newborn babes,” “the children of the earth,” 175,000 of whom are daily “freed from the darkness of their mothers’ wombs” to become “day after day a living part of the environment into which each of them has come” (3-4). Like Vogt, Osborn locates his proposed solution in the instantiation of a feedback loop yoking man to planet as twinned

entities united in a shared struggle to persist in the indifferent darkness of extraterrestrial space, a prognosticative line syncing Osborn to the figure of spaceship earth to come.

Viewed long, the earth is scaled down. As Osborn puts it, “so it is that the earth is constantly becoming smaller, or rather our knowledge of it is leading us to think of it as diminishing rapidly, which, after all, amounts to one and the same thing” (33). The recasting of material condition as epistemological effect that this characterization performs allows Osborn’s ultimate designation of “The New Geologic Force: Man” to stand as both figure and fact, describing the power of the species to alter the geology of its home planet as well as inaugurating a conceptual schema that constitutively binds man and planet to one another (32). “Man” is redefined by apposition in geologic terms, as “the new geologic force”—strikingly prefiguring contemporary critical reconfigurations of “agency” in the era of climate change that relocate human agency at the geologic scale.²⁰³ Osborn’s articulation of man and geology prefigures this turn of thought, but until it sinks in, the human race is but a “plunderer” of a precarious planet.

This disposition towards the earth, as a vulnerable system in need of a steward but inhabited only by a naturally reckless crowd, would come in the ensuing decades to be crystallized in the image of “spaceship earth,” a phrase coined in the late 1960s across the

²⁰³ The language of “force” is particularly resonant with contemporary discourse. For example, Chakrabarty (2009) extends the metaphor of “force” in order to describe the human of the Anthropocene as a “geophysical force himself,” invoking Newtonian physics to argue that “A geophysical force—for that is what in part we are in our collective existence—is neither subject nor an object. A force is the capacity to move things. It is pure, nonontological agency” (13).

writings of Buckminster Fuller, Adlai Stevenson, Kenneth Boulding, and Barbara Ward.²⁰⁴ Aboard spaceship earth, humankind must imagine itself as a species working in concert among its ranks and with the planet to pilot a course through the time and space of the universe. The species and the planet that sustains it, and that it must in turn sustain, float free in the infinite abyss, with only each other to cling to. This is a different imaginary than the hubristic vision conjured by Vogt—man too big for his britches, and earth embarrassingly buckling under his load—but it shares this figure’s investment in describing a planetary limit, and in staking the definition of the planetary on its parameters.

One can still hear echoes of Buckminster Fuller’s “Operating Manual for Spaceship Earth” (1968) in the contemporary literature about climate change, as for instance in a 2009 report authored by a team of climatologists including Paul Crutzen, who popularized the term the Anthropocene. This report, “A Safe Operating Space for Humanity,” is devoted to “identifying and quantifying planetary boundaries that must not be transgressed.” The report, like the predecessors I have here discussed, is attempting to address “the scale of human action in relation to the capacity of Earth to sustain it”

²⁰⁴ Buckminster Fuller, *Operating Manual for Spaceship Earth*. Carbondale: Southern Illinois University Press, 1968. Adlai Stevenson, “Strengthening the International Development Institutions.” Speech before the United Nations Economic and Social Council Geneva, Switzerland, July 9, 1965. Kenneth Boulding, “The Economics of the Coming Spaceship Earth.” In *Environmental Quality in a Growing Economy*, edited by H. Jarrett. Baltimore: Johns Hopkins University Press, 1966. Barbara Ward, *Spaceship Earth*. New York: Columbia University Press, 1966.

(474).²⁰⁵ The yoking together of population and climate crises on the model of “spaceship earth” carries on today with the likes of Elon Musk, Space X, and Mars One, as the privatization of space travel makes the dream of creating self-sufficient human residential colonies on Mars increasingly plausible, if still not actually realizable.²⁰⁶

Osborn would follow up his best-seller of 1948 with another of 1953, *The Limits of the Earth*, “the purpose” of which was “to stress the influence [...] exerted by the relationship between people and the resources of the earth. This is indeed the eternal equation—the formula that holds the key to human life, then, now and tomorrow” (5).²⁰⁷ *The Limits of the Earth* would find an echo twenty years on in the Club of Rome’s *The Limits to Growth* (1972), novel in its implementation of computer modeling to describe the interrelation of elements in a world system, but fundamentally little more than an extension of Osborn’s concern into new methodological terrain.²⁰⁸ Their goal was to provide a conceptual model to aid in the achievement of “a society in a steady state of economic and ecological equilibrium” (196). To do so, they mandated that “man must explore himself—his goals and values—as much as the world he seeks to change. The dedication to both tasks must be unending” (197). Their vision entailed the installation of

²⁰⁵ John Rockström, et al, “A Safe Operating Space for Humanity.” *Nature* 461 (2009): 472-475.

²⁰⁶ David Valentine, “Exit Strategy: Profit, Cosmology, and the Future of Humans in Space.” *Anthropological Quarterly* 85.4 (2012): 1045-67.

²⁰⁷ Fairfield Osborn, *The Limits of the Earth*. Boston: Little, Brown and Company, 1953.

²⁰⁸ Donella Meadows, et al. *The Limits to Growth*. New York: Universe Books, 1972.

an “unending” perspectival feedback loop between “man” and “the world,” binding them to one another as proxies for economy and ecology.

The Club of Rome, an informal international association of scholars across the disciplines with a working group based at MIT, published *The Limits to Growth* in 1972 as the first report for a general audience of the results of “Phase One of the Project on the Predicament of Mankind.” Mankind’s predicament was this: “man can perceive the problematique, yet, despite his considerable knowledge and skills, he does not understand the origins, significance, and interrelationships of its many components [...]. This failure occurs in large part because we continue to examine single items in the problematique without understanding that the whole is more than the sum of its parts, that change in one element means change in the others” (11). The strategy that they devised to resolve this predicament was, as one of their critics would promptly put it, “Malthus with a computer.”²⁰⁹

Man and planet are thus imagined in systemic relation as a provisional conceptual resolution to the “problematique” that arises from the former’s propensity to outpace the latter. But because the alchemy by which the system in which man and planet are alike embedded comes to be “more than the sum of its parts” remains murky, the question of the relation of man to planet raises itself again as a problem of how precisely to scale them to one another. *The Limits to Growth* arises from a moment of convergence between

²⁰⁹ Christopher Freeman, “Malthus with a Computer,” *Models of Doom: A Critique of the Limits to Growth*, edited by H. S. D. Cole et al. 5-13. New York: Universe Books, 1973.

the historical trajectories of population and space discourses. What had been—for writers like Moore, Vogt, Osborn, Ehrlich, and Malthus (without a computer)—a social problem, the problem of how to structure and maintain human social forms given the economic and ecological constraints imposed on them by the finitude of the planet on which they take shape, becomes, with *The Limits to Growth*, a representational problem, the problem of how to model a problematique that otherwise remains conceptually elusive to the humans laboring blindly within it. With a computer, Malthusian thought can be made to model a relation formally that Malthus had decried morally. The model itself rises to salience, subordinating both its primary terms in favor of a focus on their joint limit.

As the scaling of man to planet becomes a representational problem, it becomes a parametric inquiry rather than an ontological one. The nature of man and earth are rendered moot in the face of an inquiry into their formal entanglement—no longer “the human condition” so much as the parametric conditions of human life. Here the double senses of the “stature of man” as denoting both physical size and moral integrity begin to delaminate in favor of the primacy of the former. It is in revisiting this moment that I locate the possibility of shifting the discourse of the Anthropocene away from the catastrophic and the tragic, and into the parametric and the scalar. The decades straddling the second World War may have been the “age of the crisis of man,” as Mark Greif’s recent book by that name argues, but they were also the age of “the predicament of mankind,” as *The Limits to Growth* put it, a moment of massive upheaval and extensive discourse on the crisis of the Earth as parametric condition for human life. What Greif’s

study leaves out of the picture by focusing on narrowly humanistic tracts is the contemporary ecological-cum-economic discourse—a kind of prototypical and apolitical instantiation of world systems thinking—that witnesses the crisis of man happening in a closed system bounded by the earth, such that the crisis of man is also the crisis of planet.²¹⁰ The name given to their joint limit conceived as representational problem is “carrying capacity,” a concept derived from Malthus that redacts his social thought into the representational idiom of mathematical formalism to address the new scene of the mid-twentieth century. This transformation of Malthusian thought is what lands his *An Essay on the Principle of Population*, first published in 1798, in the pages of *The Great Ideas Today 1963* alongside the “Symposium on Space.”

IV. Limits to Growth

Inspired in the mid-nineteenth century by Malthus’s *Essay*, the mathematician Pierre Franois Verhulst developed what he called the “logistic” equation to model the growth parameters narratively described in Malthus’s work. While Malthus’s model of population growth consisted in forecasting the inevitable incompatibility between two factors—geometric population growth outpacing arithmetic production—the logistic

²¹⁰ Cf. Kenneth Boulding’s “closed earth” economic framework in “The Economics of the Coming Spaceship Earth.” Reanimating this historical discourse has the benefit of bringing something like political economy or systems theory back into the account of climate, alongside aesthetics. For an illustrative example of the perils of excluding this aspect, see Mark Greif, *The Age of the Crisis of Man: Thought and Fiction in America, 1933-1973* (Princeton University Press, 2015), especially the last section which touches upon the ramifications of this crisis for our present encounter with the Anthropocene.

equation had the virtue of modelling population in a way that is inclusive of the “checks” on growth that Malthus described (i.e. positive checks that raise the death rate, and preventive ones that lower the birth rate). Population and its checks are represented by a single line, deforming into a sigmoid curve as it accommodates the hindrances to its otherwise exponential increase. Rediscovered and popularized in the 1920s by American biologist Raymond Pearl, the logistic equation became the standard model for representing a stabilized relation between population and resources in a given environment, despite being only haltingly successful as a predictive model, and not markedly better as a descriptive one.²¹¹

Population, to be meaningful, must be modeled. *The Limits to Growth* represented a new way of modelling the “limits of the earth,” and it marked a key moment in the drift into the figurative of “carrying capacity” as a formalization of the problem of man-planet mismatch: carrying capacity is a figure for the scaling of human to environment, a descriptive name for their joint limit.²¹² As humanity begins to be viewed at the species

²¹¹ Cf. Sharon Kingsland, *Modeling Nature: Episodes in the History of Population Ecology* (University of Chicago Press, 1985) for a history of the development and critiques of the logistic function. One way to account for the popularity of the logistic function for modelling relations between human reproduction and resource consumption irrespective of its empirical accuracy in doing so is to consider the ideological ballast it provided for a spate of racist eugenic projects of the era by lending the imprimatur of scientific authority and mathematical objectivity to a discourse of species crisis that underwrote the systematic underdevelopment of the third world and eugenically motivated medical interventions perpetrated by the state against poor people and people of color, especially African American women.

²¹² For a history of the slide into the figural of this initially quantitative descriptor, see Ronald H. Pulliom and Nick M. Haddad, “Human Population Growth and the Carrying

level by conservationists, and as globally linked by economic and political networks by just about everyone else, the “environment” is reconceived as the planet itself.²¹³ In this reconception, carrying capacity becomes a figure for a parametric planetarity.

Carrying capacity emerges from population discourse as a representational problem: how does one figure a limit and the trajectory by which it is approached? How does one formally represent the proper scaling of man to planet? We find illustrative resolutions to these representational conundrums as they unfold across two pairs of novels and their filmic adaptations of the same period, the late Matheson adaptation *The Incredible Shrinking Woman* (1981), and the adaptation of Harry Harrison’s sci-fi novel *Make Room! Make Room!* (1966) into the Charlton Heston vehicle *Soylent Green* (1973).²¹⁴ These texts, and their filmic adaptations in particular, formalize two organizing aspects of the modelling of carrying capacity. *Soylent Green* “grounds” this model by short-circuiting it, binding population and production to one another in geometrically increasing lockstep by converting human corpses into a food supply. *The Incredible Shrinking Woman* shorts this circuit in a different way, aggrandizing one woman’s shrinkage into a population control solution—shrinking populations, rather than people—

Capacity Concept,” *Bulletin of the Ecological Society of America* 75.3 (1994): 141-57; and Nathan F. Sayre, “The Genesis, History, and Limits of Carrying Capacity,” *Annals of the Association of American Geographers* 98.1 (2008): 120- 34.

²¹³ Sabine Höhler, “The Law of Growth: How Ecology Accounted for World Population in the 20th Century,” *Distinktion: Scandinavian Journal of Social Theory* 8.1 (2007): 45-64.

²¹⁴ *The Incredible Shrinking Woman*, directed by Joel Schumacher, Universal Pictures, 1981. Harry Harrison, *Make Room! Make Room!* New York: Double Day, 1966. *Soylent Green*, directed by Richard Fleischer. USA: Metro-Goldwyn-Mayer, 1973.

motivated by a closed-system logic that necessitates eradicating others in order to get bigger oneself. Across these films we can see the ingenious symbolic resolution of the Malthusian contradiction through a tighter and tighter braiding together of space and population, a union out of which “space” comes to mean in equal parts the expanses of outer space and the evaporating terrestrial space of a crowded planet.

Yet a third formalization of the scaling of man to planet is articulated in *The Incredible Shrinking Man* (1957). Each of these texts innovates a strategy for the symbolic resolution of the Malthusian conundrum—the incommensurate scales of the production of resources, on the one hand, and the reproduction of humans on the other. The confluence of cold war logics of global governance and ecological postulates about the sustainability of the human species sets the stage for this conundrum to unfold as a rapprochement between man and planet, and each of these texts grafts into the cleft between them different connective tissue to make of this dichotomy a systemic set of relations striving for equilibrium. *Soylent Green* collapses economy and ecology into identity and lodges this new unity in the breach, while *The Incredible Shrinking Woman* reifies human populations as manipulable empirical units of resource consumption rather than casting them as the mathematical abstractions derived from the aggregation of individual lives that they in fact are. But the earliest of these, *The Incredible Shrinking Man*, is closest to a distillation of the man-planet problematique to its central terms. Its representational vocabulary hews closest to the conundrum of scaling man to planet because it is capable of imagining so few solutions to interpose between them, offering

instead a Robinsonade dramatizing man's confrontation with the indifference of his environment to his survival. The solution it proffers to this scalar incommensurability is located not in economy, ecology, or world systemic redistribution of people or resources, but in the project of scale itself, the perspectival rescaling of man to the planet on and in which he lives.

V. The Stature of Man

As *The Incredible Shrinking Man*'s eponymous Scott Carey begins to shrink, he attempts to liberate his wife, Louise, from her marital obligations. Louise protests, "I love you," but he replies, "No, you love Scott Carey. He has a size and a shape and a way of thinking. All that's changing now." In short order his wedding band falls off of his shrinking finger and bounces around mockingly on the floor of their car, crassly demonstrating that Carey's size, at least, is indeed changing now, to say nothing yet of his shape and way of thinking. It is easy to be distracted by this cheap shot at Carey's masculinity, casting aside incidentally the tripartite transformation that he has just credited with rendering him ineligible for love in favor of a tight focus on the first term, "size." And indeed, size is obviously a crucial theme of *The Incredible Shrinking Man*, but in their conjunction, "size," "shape," and "way of thinking" constitute a discourse, more pressingly, of scale—as the novel also illustrates in its own way above. The crux of it, as the shrinking man himself puts it in the novel from which this film was adapted, is that "he was not shrinking, but the world enlarging" (22).

In *The Fantastic Little Girl*, Matheson's screenplay for a sequel to the film that was never produced, Scott Carey's wife Louise falls prey to the same shrinking process and joins his company in the deep structures of the earth's matter—Adam and Eve set to repopulate an earthly Eden now writ stratigraphic.²¹⁵ This is a creation myth for the Anthropocene if ever there was one, the suffusion of the geological with human presence, and the “golden spike” planted not at the stratum delineated by the byproducts of man's earthly activities (industrial production, nuclear testing), but at the stratum wherein man himself is deposited in the earth's structure.²¹⁶ The etiology of both Scott and Louise Carey's shrinking derives from their exposure to some admixture of pesticide and radiation. The relationship this provenance plants at the root of the drama of stature between agricultural production and nuclear panic anticipates the epistemological indecision of the stratigraphic debates, resolved in advance by transforming these phenomena into the joint cause of an existential condition.²¹⁷

²¹⁵ Richard Matheson, “The Fantastic Little Girl,” *Unrealized Dreams*. 19-69. Colorado Springs: Gauntlet Press, 2005.

²¹⁶ This golden spike is no fanciful turn of phrase: once Global Boundary Stratotype Sections and Points (GSSP) are established, their boundaries are marked with a spike made of gold, or the like.

²¹⁷ As the yoking of the two together via the figure of the “P-Bomb” would already suggest, both population bomb and space race are quotidian forms of catastrophizing constituting the two major discourses of what Jessica Hurley has termed “the nuclear mundane,” the suffusion of cultural and state discourses with the logics of risk, exposure, event, limit, and containment that define and constitute the epistemology of the bomb. Jessica Hurley, “Ground Zero at the City on a Hill: Apocalypse and the Politics of Form in the Nuclear Age.” Ph.D. diss. University of Pennsylvania, 2016. This epistemology continues to undergird present debates over yet another presaged apocalypse, climate change, as stratigraphic debates about the placement of the “golden spike” that would

The Incredible Shrinking Man, like so many b-movies of its moment, has looked to critics like a closed case, a straightforward—not to say graceless—channeling of cold war anxieties into the medium of film, with minimal interference along the way from any concern for artistry or sophistication. If it has some deeper meaning this is secured only allegorically, which is to say by gesturing beyond itself, because all it contains in itself is a series of puns on impotence: a grab bag of dick jokes. But this obsession with size leaves shape and thought hanging. Scott Carey “had a size and a shape and a way of thinking. All that’s changing now,” not just the first term. The problem isn’t that Carey is too small to fulfill his marital obligations; the problem is that he is now too small *relative to Louise* (he has an affair with “Mrs. Tom Thumb,” a midget carnival performer, quite ably).²¹⁸ In other words, size alone doesn’t matter much; what matters is that “reality is relative”—this is one “way of thinking” about “size” and “shape.”

Readings of the film as a kind of pop psychoanalytic parable, male impotence standing in for masculine anxieties more generally—the weakest kind of allegorical reading—amount to reiterations of cold war ideology, not demystifications of it, to the extent that they cede the terms of analysis to the facile Freudianism that so heavily

designate the geological transition from Holocene to Anthropocene epochs revolve around whether it is waste deposits derived from the industrial revolution, or radiation-exposed soil derived from nuclear testing, that form the hallmark of this new epoch.

²¹⁸ Here the film is positioning itself relative to a nineteenth century tradition of representing “distorted” human scale by conjuring a character whose stage-name is citational of an eponymous celebrity “dwarf,” whose marriage to Mr. Tom Thumb was a tabloid sensation in the immediate postbellum period in the eastern United States (Franzino 2015).

saturates the popular discourse of the period that its power to decode its objects has been evacuated in advance through ubiquity and diffusion.²¹⁹ We might locate a different way of reading these materials by zooming out, away from the nuclear family and into the family of man.²²⁰ On the periphery of this inquiry lies a claim about cultural authority, and an inquiry about scale: why should it be the case that b-movies dramatize only Freudian theses? As Susan Sontag noted early on, “science fiction films are not about science. They are about disaster [...] If you will, it is a question of scale. But the scale [...] does raise the matter to another level.”²²¹ Following the matter to another level, I want to expand the sense of what the Freudian might mean here: not the family romance

²¹⁹ Examples of this kind of reading predominate in the critical discourse on the film. For instance, cf. Tania Modleski, *Feminism without Women: Culture and Criticism in a “Postfeminist” Age* (Routledge, 1991); Margaret Tarratt, “Monsters from the Id,” *Film Genre Reader*, ed. Barry Keith Grant (University of Texas Press, 1986); Jerome Shapiro, “Atomic Bomb Cinema: Illness, Suffering, and the Apocalyptic Narrative,” *Literature and Medicine* 17.1 (1998): 126-48; George Slusser, “Pocket Apocalypse: American Survivalist Fictions from *Walden* to *The Incredible Shrinking Man*,” *Imagining Apocalypse*, ed. David Seed, (St. Martin’s Press, 2000): 118-135; Mark Jancovich, *Rational Fears: American Horror in the 1950s* (Manchester University Press, 1996); Paul Wells, “The Invisible Man: Shrinking Masculinity in the 1950s Science Fiction B-Movie,” *You Tarzan: Masculinity, Movies and Men*, eds. Pat Kirkham and Janet Thumin (St. Martin’s Press, 1993): 181-199. Michael Tavel Clarke characterizes the main features of this criticism in a literature review that prefaces his own “reservations about interpreting narratives of shrinking men in Freudian terms,” citing their tendency to operate “as if body height can only be understood theoretically in Freudian terms such as castration anxiety” (244). Michael Tavel Clarke, *These Days of Large Things: The Culture of Size in America, 1865-1930* (University of Michigan Press, 2007).

²²⁰ For a reading of *The Incredible Shrinking Man* in relation to midcentury species-discourse, see Cyndy Hendershot, “Darwin and the Atom: Evolution/Devolution Fantasies in ‘The Beast from 20,000 Fathoms,’ ‘Them!’, and ‘The Incredible Shrinking Man,’” *Science Fiction Studies* 25.2 (1998): 319-35.

²²¹ Susan Sontag, “The Imagination of Disaster,” *Against Interpretation* (Farrar, Straus & Giroux, 1966): 209-225.

so much as the “consequence of man’s raising himself from the ground,” which is to say the Freud of phylogeny, not ontogeny. It is this Freud who authored a set of “theoretical speculations” on the history of the species and its futures, who ventured the historiographic hypothesis that “the fateful process of civilization” begins with the coming into stature of man, “with man’s adoption of an erect posture” (54, n. 1).²²²

VI. The Human Condition

If Freud speculated that civilization began with man’s adoption of an erect posture, Hannah Arendt predicted that civilization would come to an apocalyptic end with man’s arrogant stature. In “The Conquest of Space and the Stature of Man,” her contribution to the “Symposium on Space,” Arendt predicts that the end of the world will come with the hobbling of man back down from his hubristic heights wherein, buckling under the cosmological weight of his own totalizing scientism, man will have no choice but to regard himself behavioristically, “like a rat.” “Under these circumstances,” she warns, “speech and everyday language would indeed be no longer a meaningful utterance that transcends behavior even if it only expresses it, and it would much better be replaced by the extreme and in itself meaningless formalism of mathematical signs.” Arendt’s philosophical concern was not borne out by the historical unfolding of her feared future, but in its nomination of mathematical formalism as the apotheosis of mid-century

²²² Sigmund Freud, *Civilization and Its Discontents*, translated by James Strachey, (Norton, 1989 [1930]).

scientism, it serves in spite of itself as a very apt naming of an emergent aesthetic mode, exemplified in texts like Matheson's and in concepts like carrying capacity.²²³

Mathematical formalism did not (only) entail a reduction of man to rat—though its affiliation with population modeling conceptually derived from animal husbandry and nonhuman ecology does indeed go some distance towards eroding the distinction between man and animal. But this erosion is not for nothing, as mathematical formalism simultaneously instantiates a powerful mode of representing the relation of human kind to its sustaining conditions, which include those conditions underwriting the persistence of man as animal, which is to say as species: the ecology and geology of the planet Earth.

Arendt rounds out her vision of the asymptotic approach towards “meaningless formalism” with a final insistence on the absoluteness of the limit of which she writes: “the conquest of space and the science that made it possible have come perilously close to this point. If they ever should reach it in earnest, the stature of man would not simply be lowered by all standards we know of, but have been destroyed.” But the stature of man has neither been “lowered by all standards we know of” nor “destroyed,” as Arendt warned in these final remarks of her bitterly foreboding essay. In light of the recent deluge of popular and scholarly reports, remarks, critiques, and jeremiads on the dawning

²²³ Arendt is also describing, incidentally, the transition from an organismic to a linguistic model of thought. She is describing it painfully from inside of it, and projecting her discomfort into a warning about the future of humanity, but it is already fully underway in the transformations of structuralism, the making of language a model, a system in which meaning itself, not meaninglessness, is consolidated through “the formalism of mathematical signs.” Cf. Fredric Jameson, *The Prison-House of Language: A Critical Account of Structuralism and Russian Formalism* (Princeton University Press, 1972).

of the age of the Anthropocene, one might rightly say that the stature of man has been absolutely hypertrophied, aggrandized to cosmic proportions by the very science that Arendt feared. And that science has itself now become something of a humanism, charged with re-educating a public under the sway of an outmoded scientism—an absolute faith in technological deliverance that only very reluctantly gives way to the competing absolutism of the impending climatological apocalypse.

Despite this apparent divergence from Arendt’s feared future—its predicted peril not so much averted as inverted—the discourse tracing the conceptual consequences of the Anthropocene has nonetheless thus far remained strangely bounded by the terms of her now half-century old critique—and literally at that, as Chakrabarty’s favorable discussion of her Sputnik-obsessed preface to *The Human Condition* as a precursor to his own recent theses about the Anthropocene, discussed above, readily attests. Humanism has lost its sheen, to be sure, but the stature of man remains a pressing concern.

Recent thinking about and born out of the confrontation with the changing relation between the human and the earth has prompted broad attention to an analytic hitherto more familiar among geographers than humanists: scale.²²⁴ This is a historiographic and methodological debate as much as it is a political or topical one, with critics who otherwise scarcely share a discourse all circling the same set of concerns—

²²⁴ Scale has become a critical concept recently across many discourses, not just those concerned with the climatological. See for instance the special issue “Writ Large,” eds. Krishan Kumar and Herbert F. Tucker, *New Literary History* 48.4 (2017); and the special issue “Scale and Value: New and Digital Approaches to Literary History,” eds. James F. English and Ted Underwood, *Modern Language Quarterly* 77.3 (2016).

concerns with how to think about a world poised for catastrophe, and with how to represent this world to ourselves in a way that might make us feel a stronger stake in its fate. The problem this discourse runs up against, as Arendt did before it, is the moralization of an analytical conundrum that has the unintended and darkly ironic consequence of rendering the conundrum unresolvable. The question becomes one of how to represent the world as an object of care and concern, rather than as a limit not to be breached. But, as McKenzie Wark (2015) has quipped, “The unspeakable secret about climate change is that nobody really wants to think about it for too long. It’s just too depressing!” (xvi). Wark insists, as I do, that “a theory for the Anthropocene can be about other things besides the melancholy paralysis that its contemplation too often produces” (xx). The discourse of the Anthropocene is too often content to describe the confrontation with incommensurable or incomprehensible scale. In one case, this encounter is aestheticized to the point of becoming its own genre, “the posthuman comedy,” which does a lot to make the scene of climate change analytically available to humanities scholars, but nonetheless fuses literature and criticism to one another inside of the wild laugh with which both alike must meet the prospect of their ultimate extinction.²²⁵

We might think around the limits staked out by Arendt’s terms, the limits that have come to characterize a certain strain of scholarly thinking about the human and the

²²⁵ Mark McGurl, “Ordinary Doom: Literary Studies and the Wasteland of the Present,” *New Literary History* 41 (2010): 329-49; McGurl, “Neither Indeed Could I Forebear Smiling at My Self”: A Reply to Wai Chee Dimock,” *Critical Inquiry* 39 (2013): 632-38; McGurl, “The Posthuman Comedy,” *Critical Inquiry* 38 (2012): 533-53; and Wai Chee Dimock, “Low Epic,” *Critical Inquiry* 39 (2013): 614-31.

planet, by returning to her central question, the question of the status of the stature of man. But we return to this question not to take on her terms, but instead to turn her terms into objects of analysis. It is my contention that the various problems with the predominating line of thought about climate and planet in the humanities at present—its mysticism, its disabling wonder at the horror of the world, its disavowal of historical materialism, its helpless rejection of all extant modes of thought as inadequate to the radically new scene of the epoch, its insistence on novelty even as it retreads the most threadbare historical humanisms so that they might masquerade as contemporary theorizations—resolve into the larger problem of its tendency to sublimate its analytical objects into methodological concepts. This is a problem born of a confrontation with the order of the literal, with how to analytically apprehend the apparent concretion of our concepts (agency, force, contract, subjectivity, objectivity, animation, entanglement) in the matter of the earth itself. We might undo this collapse of method and object of analysis by thinking further about how to read the literal and concrete, without resorting to wonder, laughter, or depression at the collapse of our conceptual categories into the geological substrate out of which we are attempting to theorize them.

VII. Our Plundered Planet

One way of reading *The Incredible Shrinking Man* in the broadest of thematic strokes would be to say that this is a parable of the nearly absolute diminishment of a nonetheless indefatigable humanism under the crushing cosmological force of

scientism—not a bad caricature of the present predicament that humanities scholars collectively face. In this resonance one can begin to track a midcentury aesthetics of scientism to a contemporary science of aesthetics: the scientification of the humanities, in its methods and its objects. Here I want to distinguish between good and bad faith versions of “zooming out.” One enables more powerful historicisms, while the other tries to aggrandize the particular by suturing it to a generality of broader social significance. As Heather Love has noted of the rhetorical yoking of the “critique debates” to climate change discourse, perhaps the fate of the Earth hangs in the balance of the resolution of the methodological debates in the humanities—but more likely not. More importantly, “the most salient context for these debates is not global survival but rather the university, with its longstanding fractures along disciplinary lines.”²²⁶

Both forms of zooming out arise from a question about the shifting locus of historical and world-making agency. This is an analytical and political question, not an empirical one, though it is easy to mistake it as such. For Chakrabarty and others, in line with Arendt, the presaged future is one in which the stature of man is evacuated as agency travels to another scale: the species. For Latour and others, agency is relocated in the planet itself. But these two positions amount to one and the same insofar as they are two different descriptions of the same problem: how to apprehend the “anthropogenic” aspect of anthropogenic climate change, a change that begins with humans but promptly

²²⁶ Heather Love, “The Temptations: Donna Haraway’s Feminist Empiricism and the Problem of Critique,” *Critique and Postcritique*, eds. Elizabeth Anker and Rita Felski, (Duke University Press, 2017): 50-72.

exceeds us.²²⁷ This is a crisis of agency lost through diffusion, wherein agency becomes non-phenomenological—conceptual rather than experiential. We might seize this as an occasion, a prompt to critical reflection, rather than the death knell of our critical faculties and methods.

To do so we might dwell a bit longer on the family of man, which rhetorically forges a link between man and mankind, human beings and species-being. “The family of man” is bound to index the eponymous 1955 traveling photography exhibition curated by Edward Steichen and made infamous in academic circles by Roland Barthes’ conscription of it as a paradigmatic example of myth as a naturalization of ideology.²²⁸ My own use of the phrase is meant to index the humanistic spin in the period on neo-Darwinian devolution anxieties that conjured the image of the human-as-species. But it is also to point up, through the uneasy reverberations of anachronism emanating from it, the strange constancy of its deployment in much the same terms in today’s climate change

²²⁷ For a critique of conceptions of agency at scale in the discourse of the Anthropocene with which this essay is sympathetic, but which traffics in an adjacent theoretical vocabulary, cf. Derek Woods, especially as he argues that “The problem of writing the Anthropocene is this: how to interpret the data signal that differentiates the present geologic moment from the Holocene without amplifying the human subject smoothly across scales [...] or forgetting our addictive dependence on nonhumans. The point of arguing that the subject of the Anthropocene is nonhuman is not to suggest that biological humans can have no influence over this geologic epic. The point is to rewrite the epoch’s causes in order to see what forms agency takes and which mediators entangle it. So long as the smooth zoom and the human/nature gap dominate writing on the Anthropocene, a scaled up, abstract notion of the human mystifies the agency of terraforming assemblages” (140). “Scale Critique for the Anthropocene,” *Minnesota Review* 83 (2014): 133-42.

²²⁸ Roland Barthes, *Mythologies*, translated by Richard Howard and Annette Lavers (Farrar, Straus and Giroux, [1957] 2012).

discourse: as a conflation of history and nature, and a moralization of both by displacing the agency of apocalypse onto the species itself and off of particular bodies—individual, at risk, governing, or otherwise. As Barthes writes, “This myth of the human ‘condition’ rests on a very old mystification, which always consists in placing Nature at the bottom of History. [...] Progressive humanism, on the contrary, must always remember to reverse the terms of this very old imposture, constantly to scour nature, its ‘laws’ and its ‘limits’ in order to discover History there, and at last to establish Nature itself as historical” (197-8). Chakrabarty’s assertions that the Anthropocene inaugurates a “profound change in the human condition,” and that “anthropogenic explanations of climate change spell the collapse of the age-old humanist distinction between natural history and human history” resound uncomfortably in light of this formulation, and are rescued from this strange resonance only indeterminately by their exemplary insistence on the empirical veracity of this thesis (201). The apparent literalization of a trope of humanism in the geological record should not be taken for granted, not because this literalization is not occurring, but rather because we should not be so sure we know how to read the literal.²²⁹

²²⁹ As Elaine Freedgood and Cannon Schmitt put it in the introduction to their co-edited special issue of *Representations*, “the literal is a way of making meaning manifest rather than a manifest level of meaning,” (11). “Introduction: Denotatively, Technically, Literally.” *Representations* 125.1 (2014): 1-14. We have a lot of resources for reading the material, and for identifying “new materialisms.” The problem, though, arises when the abstraction of “species” comes on the scene, divorced from its ecological and historical senses as a supposedly novel occasion for epistemological bewilderment, as if we—

Among the problems with contemporary humanities discourse around climate change is its inhabitation of a history the consequences of which it would purport to explain. However the trouble comes less from the affinities with historical precursors than from the analytical confusion consolidated around the encounter with the *anthropogenic* aspect of anthropogenic climate change. Only the mistaking of the human primacy in anthropogenic climate change for a question *for* humanism as conceptual apparatus would make Arendt seem like the go-to theorist for this next chapter in the transformation of the “human condition.” But as C.S. Lewis put it, “Surely the analysis of water should not itself be wet?” (71).²³⁰ A more rigorous separation of the question of the scale of human agency from our extant theoretical frameworks of the human reveals the necessity of a formalist conceptual framework as the precondition for any analytical purchase on the human as a newly planetary phenomenon. And that is because the limits of the earth are themselves nothing but forms, material in consequence to be sure, but formal in essence. The parametric is a formal concept, and not necessarily a humanistic one, insofar as finitude on this scale has little to do with human perceptual experience. Just as Matheson’s shrinking man failed to notice his changing size until his circumstances were irremediably dire, anthropogenic climate change has, until quite recently, operated at a scale that eludes human perception. Another way of phrasing the

cultural critics, scholars, not to mention thinking people more generally—have no experience in making the non-phenomenological appear in its reality before us.

²³⁰ C. S. Lewis, *Of Other Worlds: Essays and Stories* (Harcourt, 2002).

Anthropocene is as the becoming-formal of human kind: the aggrandizement of human agency to a planetary scale is the formalization of human agency as geological force, rather than the extension of the human soul to the earth itself.

Let's take one last pass at the limits of the earth: "Zhdanov made fun of Alexandrov the philosopher, who spoke of 'the spherical structure of our planet.' 'It was thought until now,' Zhdanov said, 'that form alone could be spherical.' Zhdanov was right: one cannot speak about structures in terms of forms, and vice versa. It may well be that on the plane of 'life,' there is but a totality where structures and forms cannot be separated. But science has no use for the ineffable: it must speak about 'life' if it wants to transform it" (220).²³¹ As the humanities turn once again to "the spherical structure of our planet" and find embedded there deposits of the human, let us not resort to a cry or a laugh in the face of the ineffable—if we are to have a brush with science, let us at least make the most of its mandate to transform life.

²³¹ Roland Barthes, *Mythologies*, translated by Richard Howard and Annette Lavers (Farrar, Straus and Giroux, [1957] 2012).

APPENDIX

A working bibliography of salacious Kinsey citations

Erotic paperbacks with sexological themes indexing Kinsey and/or advertised with cover blurbs from Kinsey:

Ernest Gébler, *The Love Investigator* (Doubleday, 1960)

Irving Wallace, *The Chapman Report* (Simon & Schuster, 1960)

Victor Menzies & Jean Bernard-Luc with illustrations by Wendy Des Moulins,
The Fig-Leaf (Digit, 1961)

Stuart James, *Bucks County Report* (Midwood, 1961) [variously printed as *Bucks County Report* by Irwin Wallach; later retitled *Devil's Workshop* by Stuart James]

Joseph Hilton Smyth, *The Sex Probers* (Beacon Envoy, 1961)

Arthur Aldon, *Lesbos Is for Lonnie* (Beacon-Signal, 1963)

Edgar Box (nee Gore Vidal) trilogy:

Death in the Fifth Position (1952)

Death Before Bedtime (1953)

Death Likes It Hot (1954)

Brian Black, *The Unfaithful* (Softcover Library, 1965)

Victor J. Banis, *Small Town Sex... Today!* (Medco, 1966)

Clyde Allison, *Sexperiment* (Corinth, 1966)

Ray Train, *Miss Kinsey's Report* (Chevron, 1967)

Robert Kyle, *Venus Examined: A Physiological Novel* (Fawcett Crest, 1968)

Don Bellmore, *Swap Research* (Corinth, 1970)

John Dexter, *Esther on the Couch* (Greenleaf, 1971)

Dan Greenburg, *Scoring: A Sexual Memoir* (Dell, 1971)

Barry Malzberg, *Confessions of Westchester County* (Olympia, 1971)

Paul Warman, "*Lay*" *Therapy* (Bee-Line, 1972)

Lambert Wilhelm, *Meat* (Arena Publications, 1978)

T.C. Boyle, *The Inner Circle* (Viking, 2004)

Ted Mark, "Man from O.R.G.Y." series, which includes:

The Man from O.R.G.Y. (Lancer, 1965)

The 9-Month Caper (Lancer, 1965)

Dr. Nyet (Lancer, 1966)

The Real Gone Girls (Lancer, 1966)

My Son, The Double Agent (Lancer Books, 1966)

A Hard Day's Knight (Lancer Books, 1966)

Room at the Topless (Lancer Books, 1967)

I Was a Teeny-Bopper for the CIA (Berkeley Medallion, 1967)

The Square Root of Sex (Berkeley Medallion, 1967)

Back Home at the O.R.G.Y. (Berkeley Medallion, 1968)

Here's Your O.R.G.Y. (Berkeley Medallion, 1970)

Around the World is Not a Trip (Dell, 1973)

Dial "O" for O.R.G.Y. (Dell, 1973)

Beauty and the Bug (Dell, 1975)

The Girls from O.R.G.Y. (Manor Books, 1975)

The Man from O.R.G.Y.: Thy Neighbor's Orgy (Zebra Books, 1981)

The Tight End (Zebra Books, 1981).

Film adaptations of these novels include the mainstream releases *The Chapman Report* (dir. George Cukor, 1962) and *The Man from O.R.G.Y.* (dir. James Hill, 1970), and the porn adaptation *Miss Kinsey's Report* (dir. Larry Windsor, 1977).

Nominally scholarly publications pitched for erotic intrigue on sexological topics with Kinsey dedications and/or prefaces:

Norman Lockridge, *The Sexual Conduct of Men and Women: A Minority Report* (1948)

Shailer Upton Lawton, *Sexual Behavior of Unmarried Women* (Sexual Guidance Publications Inc., 1951)

Jess Stearn, *The Sixth Man* (Macfadden, 1961)

Edmund Bergler, *Homosexuality: Disease or Way of Life?* (Collier Books, 1962)

Harold Cross, *The Cross Report on Perversion* (Softcover Library, 1964)

Lucius Steiner, *Sex Behavior of the Homosexual* (Viceroy, 1964)

Leland Glover, *How Do You Feel About Sex?* (1964)

Roger Battle, *Sex for 3-4-5 or More, Commonly Known as "The Sandwich Lovers"* (Echelon, 1968)

Ferenc Sari, *Sex Games Adults Play* (Newfact Library, 1969)

Arnold Turner, *The Erotic Extremists* (MT Publishers, 1969)

John Warren Wells, *The Wife Swap Report* (Dell, 1970)

Leo Guild, *Confidential Sex Survey* (Holloway House, 1970)

Morton Hunt, *Sexual Behavior in the 1970's* (Playboy Press, 1974)

W.D. Sprague (nee Bela Bloch) series on American sexual practices including:

Sex Behavior of the American Secretary (Chariot, 1960)

Sex Behavior of the American Housewife (Tower, 1961)

The Lesbian in Our Society: Detailed Case Histories of the Third Sex
(Tower, 1962)

Sexual Behavior of American Nurses (Lancer, 1963)

Sex and the Secretary (Lancer, 1964)

Patterns of Adultery: A Marriage Counselor's Casebook (Lancer, 1964)

Sexual Behavior in the Sixties (Lancer, 1965)

The Sex Cheats: A Physician's Casebook of Psychosexual Aberration
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