

# What's the Matter with Computational Literary Studies?

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The debate about computational literary studies (CLS) is stuck. Forceful arguments are repeatedly made as to why literary studies must now—or could never—involve quantification, statistics, and algorithms (not least in this journal) with little sense of either side convincing the other of their case. Surveying this debate over the past decade, I propose that what seems a complete divergence of opinion obscures a fundamental agreement: that computation is separate from literary phenomena. In arguments both for and against CLS, computation is a technological and material process, distinct from readers, texts, and reading. CLS proceeds, in these terms, by representing—in simplified, discrete, and manipulable forms—what occurs elsewhere in complex and continuous ways. For the field's critics, this distinction makes CLS an oxymoron; for its proponents, both ways of knowing can contribute to literary studies, and there is critical potential in working across the divide. Yet the perception of a divide remains, and it prevents effective critiques of reductive uses of computation (in literary studies and beyond) or productive engagements with computation's constitutive effects (including for literary textuality and subjectivity).

In charting this divide as it characterizes and limits apparently very different arguments, I connect claims about technology and subjectivity made in critiques and defenses of CLS to the separation of matter and meaning, commonly referred to as Cartesian dualism.<sup>1</sup> With both sides maintaining

1. On Cartesian dualism as a theological misappropriation of Descartes's theory of matter, see Sarah Ellenzeig, "Who's Afraid of Inertia? The Cartesian-Newtonian Legacy Reconsidered," in *The New Politics of Materialism: History, Philosophy, Science*, ed. Ellenzeig and John H. Zammito (New York, 2017): 19–43.

this paradigm, the debate about CLS is sealed off from techno-cultural inquiries in multiple fields (including literary studies), and from much of what matters in and as contemporary literary phenomena. The performative approaches to subjectivity, materiality, and technology that I use to elucidate problems with the existing debate also help to characterize, explain the need for, and make legible where it already exists, a different—performative—CLS. Attuned to the coconstitution of computational methods and objects—with each other, and with literary subjectivities and textualities—this CLS builds on and extends existing critical paradigms to enable literary studies in the “postprint” era.<sup>2</sup>

### Which Case against CLS?

CLS has attracted considerable opposition as an unwarranted instrumentalist intrusion into a fundamentally interpretive discipline. Some accounts, usually mainstream ones, ascribe this instrumentalism to neoliberalism,<sup>3</sup> while other, more academic, arguments often object to CLS following “the sciences,” in staking its “claims to truth on . . . contact with the raw data”<sup>4</sup> or the “sovereign object world.”<sup>5</sup> In either case, these essays defend the political and critical acuity, and complexity and contingency, of established methods—especially reading—against the merely technical competency, and passivity and determinism, of computational arguments. Reading is said to offer “not bit-counting, but synthesis” in an “act . . . where critic and object come together” (“CR,” p. 61), whereas computation means “setting up a visualization to see what leaps out” or waiting in “the hope that the voice of data . . . can break the hermeneutic circle (“I,” pp. 5, 6).”<sup>6</sup>

2. See N. Katherine Hayles, *Postprint: Books and Becoming Computational* (New York, 2021).

3. Popular arguments often criticize Digital Humanities while discussing CLS, including Daniel Allington, Sarah Brouillette, and David Golumbia, “Neoliberal Tools (and Archives): A Political History of Digital Humanities,” *Los Angeles Review of Books*, 1 May 2016, [lareviewofbooks.org/article/neoliberal-tools-archives-political-history-digital-humanities/](http://lareviewofbooks.org/article/neoliberal-tools-archives-political-history-digital-humanities/); Timothy Brennan, “The Digital-Humanities Bust,” *Chronicle of Higher Education*, 15 Oct. 2017, [www.chronicle.com/article/the-digital-humanities-bust/](http://www.chronicle.com/article/the-digital-humanities-bust/); and Stephen Marche, “Literature Is Not Data: Against Digital Humanities,” *Los Angeles Review of Books*, 28 Oct. 2012, [lareviewofbooks.org/article/literature-is-not-data-against-digital-humanities/](http://lareviewofbooks.org/article/literature-is-not-data-against-digital-humanities/)

4. Jesse Rosenthal, “Introduction: ‘Narrative against Data,’” *Genre* 50 (Apr. 2017): 8, 9; hereafter abbreviated “I.”

5. Nathan K. Hensley, “Curatorial Reading and Endless War,” *Victorian Studies* 56 (Autumn 2013): 62; hereafter abbreviated “CR.”

6. See also Brian Connolly, “Against Accumulation,” *J19* 2 (Spring 2014): 172–79.

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Instead of a broad survey, the next two sections explore this opposition to CLS by focusing on just two exemplificative pieces—a critical response and an article published a decade apart in this journal—that appear very different to these other accounts and to each other. Katie Trumpener’s exegetical, autobiographical “Paratext and Genre System: A Response to Franco Moretti” concentrates on a single article by a single author—Franco Moretti’s “Style, Inc.,” published in the same issue—and evaluates the capacity of statistical methods to explore literature’s material and historical existence. Its stated conclusion—that “counting” and “reading” are “equally important” to literary studies—could stand in for the conclusions of many CLS essays:<sup>7</sup> that both close and distant reading are needed.<sup>8</sup> By contrast, Nan Z. Da’s “The Computational Case against Computational Literary Studies” uses the language of empirical proof, and the scientific genre of a replication study, to review multiple contributions to CLS as unable to investigate textual complexity.<sup>9</sup> Presented as a radical departure from previous ideological, political, and historical critiques of the field, Da’s article has been accepted as such, by those literary scholars who endorse its arguments and by those CLS scholars who contest its summaries of projects and its conclusion: that the field can make no contribution to literary studies.<sup>10</sup> Despite these differences, the convergence of both essays—on rejecting the instrumentalism of computation and defending the experience of reading—mirrors the concerns of other critiques and emphasizes the consistency of opposition to CLS over the past decade.

What differentiates Trumpener’s and Da’s essays from many other such arguments is their attempts to justify rather than simply assert the separation of computation and literary phenomena. These justifications establish what might otherwise appear an epistemological objection to CLS (based on what is possible to *know* by computing or reading) as an ontological

7. Katie Trumpener, “Paratext and Genre System: A Response to Franco Moretti,” *Critical Inquiry* 36 (Autumn 2009): 171; hereafter abbreviated “PGS.” See also Franco Moretti, “Style, Inc. Reflections on Seven Thousand Titles (British Novels, 1740–1850),” *Critical Inquiry* 36 (Autumn 2009): 134–58. And for Moretti’s rejoinder to Trumpener, see Moretti, “‘Relatively Blunt,’” *Critical Inquiry* 36 (Autumn 2009): 172–74.

8. See, for example, Frederick W. Gibbs and Daniel J. Cohen, “A Conversation with Data: Prospecting Victorian Words and Ideas,” *Victorian Studies* 54 (Autumn 2011): 69–77, and Andrew Piper, “Novel Devotions: Conversional Reading, Computational Modeling, and the Modern Novel,” *New Literary History* 46 (Winter 2015): 63–98.

9. See Nan Z. Da, “The Computational Case against Computational Literary Studies,” *Critical Inquiry* 45 (Spring 2019): 601–39; hereafter abbreviated “CC.”

10. See, for example, Benjamin Schmidt, “A Computational Critique of a Computational Critique,” *Ben Schmidt*, 5 Dec. 2019, [benschmidt.org/post/critical\\_inquiry/2019-03-18-nan-da-critical-inquiry/](https://benschmidt.org/post/critical_inquiry/2019-03-18-nan-da-critical-inquiry/); Piper, “Do We Know What We Are Doing?,” *Journal of Cultural Analytics* 5, no. 1 (2020): [culturalanalytics.org/article/11826](https://culturalanalytics.org/article/11826); and Hoyt Long and Richard Jean So, “Trust in Numbers,” *In the Moment*, 1 Apr. 2019, [criting.wordpress.com/2019/04/01/computational-literary-studies-participant-forum-responses-6/](https://criting.wordpress.com/2019/04/01/computational-literary-studies-participant-forum-responses-6/)

claim (about what entities are possible, or come to *be*, under what conditions). That ontological point associates the case against CLS with a hermeneutic and aesthetic tradition, which for over a century has offered one of the clearest justifications for, and defenses of, humanistic and literary inquiry, based on privileging ways of thinking and being that are open to contingency and complexity and contesting those that seek discrete and deterministic categories and conclusions. While Trumpener's and Da's essays thus establish the case against CLS as composed of something more substantial than the dichotomies and assertions of a two-cultures divide characterizing some of its expressions, their arguments are undermined by their own reductions and determinations.

Though defending emergent meaning, Trumpener and Da can only answer the question they pose—What is reductive or generative of literary being and thinking?—by allocating data and computing, and literary phenomena and reading, to prefabricated and opposing realms: produced by and productive of, respectively, only instrumental inputs and outputs or purely human experiences and meanings. While the next two sections treat this refusal of computation and defense of reading in turn, these core moves in the case against CLS are two sides of a single proposition, regarding the separation of meaning and matter (including mind and world, subject and object, human and machine). The fact that decades of humanist and literary scholarship have contested these oppositions—and that critical accounts of technology and reading continue to do so—puts the substance of the case against CLS at odds with the tradition it intends to defend.

### **Simplifications of Statistics**

For Trumpener and Da, statistical methods or tools can only deal with the instrumental effects of their own instrumentalist judgements. That computing and reading are not just different ways of knowing literary phenomena but, alternatively, destructive or constructive of their possibility is apparent in the way that literary critics and texts are not simply opposed to computers and data in these essays but transformed—even disappearing—in their presence.

Trumpener sets the stage for such a disappearance with two personal anecdotes. The first describes “generic designations . . . nonfiction, fiction, mysteries, poetry” in bookstores as “violat[ing] the individuality of the text”; the second recounts her mother's attempt to encourage the family to learn German by attaching “German labels to everyday objects around the house,” so they “existed at an odd remove from their usual selves” (“PGS,” p. 160). Aligning these violating and alienating experiences of categorization with Moretti's “statistical” approach, Trumpener suggests that it reduces novels

to their titles (their labels) and obscures or divorces them from their individuality (“PGS,” p. 168). In her reading, Moretti replaces literature—which one can spend time with and live with—with data, which is dispersed and multitudinous. Yet Trumpener also blames this outcome not on Moretti but statistics, which replace him as the agent of analysis. The description of “statistical analysis as a relatively blunt hermeneutic instrument, redeemed mainly by Moretti’s own exegetical verve,” praises Moretti’s critical capabilities while making statistics the cause of an instrumental encounter. Elsewhere, statistics are imbued with agency as they “of course highlight continuities and discontinuities in a given body of data” (“PGS,” p. 170). The problem is thus not—or not only—Moretti’s lack of “commitment to specific novels”: the computational encounter leaves no *one* to commit and no *thing* to commit to (“PGS,” p. 164).

Da claims to discredit CLS purely on “an empirical level” by identifying “a series of technical problems, logical fallacies, and conceptual flaws” (“CC,” p. 603). Yet her discussion of whether this or that study should have included bootstrapping or used inappropriate measures or overfitted the model are incidental to the article’s core argument, which is the same as Trumpener’s and expressed in the identification of “a fundamental mismatch between the statistical tools that are used and the [literary] objects to which they are applied” (“CC,” p. 601). “Statistical tools” have a purely instrumental purpose, predetermined by the industrial-commercial contexts that supposedly give rise to them: they “are designed to do certain things and solve specific problems . . . [, and] we must use them in accordance with their true functions” (“CC,” pp. 601, 619–20). These “instrument[s] of measurement” transform literary critics into “users of CLS” and the complexities of literature into simplistic word counts and frequencies. Even if “someday all literary things . . . [could] be accurately tagged,” the computer’s intercession would thus still be determining in its reductiveness: “The researcher would still be left with a list of tags and their frequencies, which would have to be heavily reduced in dimensionality to have any extractable statistical meaning” (“CC,” pp. 608, 622, 636). Statistics are thus presented as the opposite of literary studies, which is “about *reducing* reductionism” (“CC,” p. 638). Indeed, for Da, these approaches are “ontologically different” due to the absence or presence of intentionality. Only “*intentional*” interpretations, arising from a reader’s “insight” instead of “what happens mechanically,” within computers, can be “meaningful” for literary studies (“CC,” pp. 629, 621, 639).

Da maintains that her “personal conviction” that “human and literary phenomena are irreducible to numbers” does not “enter into this critique,” and she is right in one sense (“CC,” p. 604): this is not a personal conviction. Her argument—and Trumpener’s—accords with what literary scholar Dennis

Tenen calls a “powerful hermeneutics of suspicion toward mechanization, digitization, and the subsequent computability of human experience” in Western philosophical thought “from Heidegger to Kittler.”<sup>11</sup> Whether acknowledged or not, this tradition—especially its conception of industrial technologies as objectifying and destructive—forms the beating heart of many defenses of humanistic inquiry. To a significant extent in literary studies, it provides the normative grounds from which to push back on or hold out against institutional and economic systems that deem a discipline without instrumental aims or outcomes to have no purpose or future.

The weight of this tradition is not acknowledged—nor offset—by the mostly practical ways that CLS (and DH) scholars propose to overcome scholarly resistance to computational research through changes to research training and assessment or to the quality and accessibility of software programs or digital collections. Such proposals implicitly ascribe that resistance to lack (of technical proficiency, by colleagues, or of resources and recognition, at institutional levels) rather than to the presence of this philosophical tradition. At the same time, the way Trumpener and Da articulate the case against CLS allows a deterministic opposition of computational matter and human meaning to overwhelm that tradition’s abiding curiosity about technology and its generative effects, including for human being(s). In presuming that statistical methods and tools are not only reductive but reduce everything they encounter to themselves, Trumpener and Da find that one can do nothing with computation—or CLS—but reject it.

At least three important trends in contemporary scholarship counteract Trumpener’s and Da’s conclusion. One of these is contemporary hermeneutic and aesthetic theory, which largely avoids presenting computers as “regulated-regulating instruments of information”<sup>12</sup> and instead adapts and extends historical accounts of technology—such as by Martin Heidegger, Gilles Deleuze, and Friedrich Kittler—to emerging computational objects, practices, and platforms. Refusing to relegate the question of authentic or deterministic being and thinking to the absence or presence of mechanization and digitization, these arguments explore the practices and material conditions of knowledge in encounters that include, but are not reducible to, computational technologies.<sup>13</sup> Where such arguments focus on emergent

11. Dennis Tenen, *Plain Text: The Poetics of Computation* (Stanford, Calif., 2017), p. 184.

12. Martin Heidegger, “The End of Philosophy and the Task of Thinking,” trans. Joan Stambaugh, in *Basic Writings*, trans. Stambaugh et al., ed. David Farrell Krell (New York, 2008), p. 434.

13. See Yuk Hui, *On the Existence of Digital Objects* (Minneapolis, 2016); David J. Gunkel and Paul A. Taylor, *Heidegger and the Media* (Malden, Mass., 2014); and Tenen, *Plain Text*. On the aesthetics of computation without human being(s), see M. Beatrice Fazi, *Contingent Computation: Abstraction, Experience, and Indeterminacy in Computational Aesthetics* (New York, 2018).

subject-object pairs, a second counterweight—science studies—considers these pairs’ coemergence with normative (including disciplinary, institutional, and infrastructural) practices and formations.<sup>14</sup> Among such arguments are studies of how statistical methods and fields—such as computational simulations and quantum physics—resist a representational-calculative logic to enact what Karen Barad calls a “performative understanding of scientific practices,” in which knowing comes not “from standing at a distance and representing but rather from *a direct material engagement with the world*.”<sup>15</sup> A final counterweight is offered by studies of intersections of computational processes, platforms, and structures with literary functions, practices, and cultures. In literary studies, such research explores how computation shapes literary phenomena, including how audience-algorithm responsiveness creates genres and changes publishing and reading practices;<sup>16</sup> how distributed textual productions involve new modes of textual coherence;<sup>17</sup> and how texts produced by algorithmically-assisted human actors (or human-assisted algorithmic agents) challenge established notions of authorial intention.<sup>18</sup> These inquiries resonate with, though remain largely separate from, studies in information and computer science of how literary phenomena do (or should) shape computational systems, including the role of literary texts in training large language models;<sup>19</sup> the way established bibliographical categories organize online book sales;<sup>20</sup> or the need for curatorial practices in governing “Artificial Intelligence.”<sup>21</sup>

14. Recent examples include studies of race and data and studies of proxies and standards; see Thao Phan and Scott Wark, “Racial Formations as Data Formations,” *Big Data & Society* 8, no. 2 (2021), [journals.sagepub.com/doi/10.1177/20539517211046377](https://journals.sagepub.com/doi/10.1177/20539517211046377), and Dylan Mulvin, *Proxies: The Cultural Work of Standing In* (Cambridge, Mass., 2021).

15. Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, N.C., 2007), p. 49. See also Natasha Myers, “Molecular Embodiments and the Body-Work of Modeling in Protein Crystallography,” *Social Studies of Science* 38 (Apr. 2008): 163–99.

16. See Mark McGurl, *Everything and Less: The Novel in the Age of Amazon* (Brooklyn, N.Y., 2021).

17. See Matthew G. Kirschenbaum, *Bitstreams: The Future of Digital Literary Heritage* (Philadelphia, 2021).

18. See Leah Henrickson, “Butterflies, Busy Weekends, and Chicken Salad: Genetic Criticism and the Output of @Pentameton,” *Authorship* 7, no. 1 (2018), [www.authorship.ugent.be/article/id/63905/](http://www.authorship.ugent.be/article/id/63905/)

19. See Jack Bandy and Nicholas Vincent, “Addressing ‘Documentation Debt’ in Machine Learning Research: A Retrospective Datasheet for BookCorpus,” *arXiv*, 11 May 2021, [arxiv.org/abs/2105.05241](https://arxiv.org/abs/2105.05241)

20. See Tjaša Jug and Maja Žumer, “Do We Need Better Online Book Review Organisation?,” *Libellariu* 9, no. 2 (2016): 203–16.

21. Nithya Sambasivan et al., “‘Everyone Wants to Do the Model Work, Not the Data Work’: Data Cascades in High-Stakes AI,” *CHI ’21: Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*, 6 May 2021, [storage.googleapis.com/pub-tools-public-publication-data/pdf/0d556e45afc544feb2eb6b51a9bc1827b9961ff4.pdf](https://storage.googleapis.com/pub-tools-public-publication-data/pdf/0d556e45afc544feb2eb6b51a9bc1827b9961ff4.pdf)

The focus among literary scholars in this third group, on how computation shapes literary forms and functions but rarely the reverse, suggests a disciplinary tendency to regard computational phenomena as somehow more powerful than, and determining of, literary phenomena than vice versa. Even so, all three areas of scholarship take computation as part of the techno-cultural enactment of subjects and objects, rather than something applied by the former to represent or investigate the latter. The insistence, in the case against CLS, on their separation—and the instrumental and reductive effects of computation—as well as being out-of-step with these contemporary scholarly trends, is self-defeating. It ascribes all power to computation, which not only decides the outcome of any encounter it is part of but makes that encounter purely computational, absenting literary critics and texts and destroying literary studies and meaning in the process. In this respect, the case against CLS embeds its greatest fear—the subordination of literary critics and texts in computational encounters—in the structure of its own argument.

### Equations of Reading

The other key dimension of the case against CLS—the defense of reading—might seem unremarkable for a discipline that still refers even to writing as (doing a) reading. Yet the way Trumpener and Da align literary studies with reading—and the model of critical authority and textual stability they maintain in the process—is incongruent with a discipline increasingly concerned with the material conditions and effects of its own practices and politics. Though they equate reading with a lack of technological mediation between reader and text, their defense of this purely human realm implicitly aligns literary studies with print-cultural configurations, suggesting an infrastructural dimension to the division of meaning and matter in the case against CLS.

For Trumpener, literary critics are, “first and foremost, highly trained readers,” and “simply . . . reading *more*[,] more widely, more deeply, more eclectically, more comparatively,” embodies “the unsystematic nature of our discipline” and “its salvation.” If statistics demonstrated Moretti’s lack of commitment before producing his disappearance, “incessant rather than distant reading” is the practice of a highly present and careful subject who “spend[s] more time browsing . . . in library or bookstore” and embraces effort, especially in the time-consuming practice of critical reading (“PGS,” p. 171). This “labor-intensive way to find answers” entails physical closeness, as when “tackling publishers’ archives, reading individual manuscript drafts in rare book libraries, and trying to figure out, book for book, who determined each novel’s title” (“PGS,” p. 164).



The critic's capacity to persist through a difficult task is confirmed by the way Trumpener contests Moretti's findings, via "a somewhat frustrating afternoon googling facsimile title pages from France and Germany" ("PGS," p. 168). While this reference to googling might seem to contradict my general claim—that reading is defended as a nontechnological connection between reader and text—and my more specific one—that this supposed absence naturalizes the discipline's twentieth-century, techno-textual (print) configuration—in fact it confirms both, while illustrating the reciprocity by which this relationship is deemed to exclude technology.

Trumpener reports that, although she "could google only what [she] had read, heard of, or could think of," her "small, perhaps unrepresentative sample potentially complicates . . . [the] picture" Moretti attempts to "see or find" with "large-scale databases" ("PGS," p. 168). Discussing Trumpener's claim, and noting that Google is the "largest-scale database ever made," Laura Mandell describes this contrast as "highly disingenuous."<sup>22</sup> Yet its very speciousness might cause us to wonder why—or better, how—Trumpener overlooks the obvious ways in which "information . . . yield[ed]" by googling is "constrained by . . . search parameters" ("PGS," p. 170). Two aspects of Trumpener's commentary on googling are significant: it is motivated "only" by what she knows as a critic, and it produces not digital images or texts but exact reproductions of books or "facsimile . . . pages." The encounter of a (googling) human and print-like (digital) texts is thus specifically reciprocal: the appearance of these facsimiles is conditional on Trumpener's presence as reader, just as reading is enabled by the pages' appearance. So fully constitutive of meaning is that reciprocity that it not only suppresses technological interference but eclipses its own computational conditions and effects. Trumpener's description of googling is much less disingenuous if we recognize how her other anecdotal defenses of reading (and literary studies) dissolve or disappear the myriad factors shaping what is in the bookstore, rare book library, or childhood home, leaving an ideal coming together of reader and text, independent of material considerations.

Da evokes a similar reciprocity by presenting the scale and temporality of literature and reading in contradictory ways, which are nonetheless perfectly—and only—calibrated to each other. She dismisses the "overabundance argument" for CLS by noting that "it is important to remember that many of the key examples come from corpora or texts that have already been read," as if having been read precludes the possibility of there being "*latent patterns that no one reader can see*" ("CC," p. 638). As an alternative to CLS,

22. Laura Mandell, *Breaking the Book: Print Humanities in the Digital Age* (Malden, Mass., 2015), p. 157.

Da proposes that a corpus of “about fifteen thousand novels . . . at one novel a month will only take one thousand people one year to read,” as if a thousand people reading amounted to literary studies (“CC,” pp. 638–39). Computation is “relatively easy and cheap” but also “takes nearly as much, if not far more, time and arbitrariness (and with much higher chance of meaninglessness and error) than actually reading” (“CC,” pp. 629, 638). Whatever the logic or feasibility of these claims, reading for Da *is* literary studies, such that “literature—in particular, reading literature well—is that cut-off point” beyond which “computational textual analysis” cannot go (“CC,” p. 639). That Da’s defense of literary studies as reading implies a printed (or print-like) text is reinforced by the multiple lists she uses to contrast the complexity and coherence of “whole texts” with the desecration of meaning that occurs when dealing with their “very finite aspects,” especially word frequencies (“CC,” p. 630).<sup>23</sup>

Elsewhere in literary studies, the “reliance on *reading* as a catchall term” is coming under increasing pressure in ways that challenge such defenses of this practice as constitutive of the discipline and opposed to computing.<sup>24</sup> Decades of book historical scholarship have historicized the idealized form of reading (sustained, close, continuous, silent) assumed in Trumpener’s and Da’s defenses of it and the form of the text they relate it to (a directly accessible and stable facsimile of the work). This practice and form are shown to have coemerged with a long history of technological developments: from paratextual innovations to systems for classifying literature and associated modes of circulation and genres of commentary.<sup>25</sup> While Trumpener and Da reject computation on the basis that it replaces reader with computer and text with data, these other arguments consider diverse textual technologies as constituting what is legible as reading, text, and reader at different times and places.

A related challenge to this equation of literary studies with reading concerns the mode of critical subjectivity it upholds. For Michael Warner, framing the discipline as “critical reading” condenses and takes for granted “a vast cultural matrix” in order to reify an individual, autonomous, enlightened

23. Lists include: “location, order, context, syntax, speaker, voice, tone, proximity”; “tone, context, emphasis, rhetoric, and so on”; “lexical, syntactic, and grammatical ambiguities”; and “nuances, exceptions, ambiguities, and qualifications” (“CC,” pp. 633, 630, 635, 620).

24. Elaine Auyoung, “What We Mean by Reading,” *New Literary History* 51 (Winter 2020): 94.

25. See, for example, *A History of Reading in the West*, ed. Guglielmo Cavallo and Roger Chartier (Amherst, Mass., 1999); *Language Machines: Technologies of Literary and Cultural Production*, ed. Jeffrey Masten, Peter Stallybrass, and Nancy J. Vickers (New York, 1997); and Janneke Adema, *Knowledge Production beyond the Book? Performing the Scholarly Monograph in Contemporary Digital Culture* (PhD diss., Coventry University, 2015), [www.openreflections.org](http://www.openreflections.org)

subject.<sup>26</sup> That subject is a fantasy “keyed to liberalism’s pillars of freedom and autonomous agency,” as Merve Emre puts it,<sup>27</sup> such that, even when reading is presented in terms of humility or reparation (or reciprocity and calibration), what is defended, Caleb Smith writes, is the critic’s “agency and ethical authority.”<sup>28</sup> Equating literary studies with reading thus defends a theory of subjectivity “with which no critic would want to identify” and against which much of the political energies of the contemporary discipline have been expended (“DA,” p. 908). As a methodological refutation of this equation, literary critics have started discussing something DH scholars have long noted: the impoverished understanding of a discipline that results from defining it by only a limited number—or a single one—of its practices. While DH arguments foreground the diversity of any discipline’s methodological commons,<sup>29</sup> recent literary arguments against the alignment of literary studies with reading emphasize the importance of writing in shaping interpretation.<sup>30</sup> Jonathan Kramnick does so in performative and materialist terms, opposing the “visual and cognitive framework” of literary studies as reading with criticism as a “skilled practice” of *writing* that “makes something new in the act of interpreting it.”<sup>31</sup> Compared with these arguments, Trumpener’s and Da’s defense of reading is as abstract, ahistorical, and apolitical as their critique of computation.

Far from incidental, the importance of the printed (or print-like) text to Trumpener’s and Da’s essays clarifies the model of the discipline they advocate in defending reading and the essence of the challenge that computation presents to it. Naturalizing printed forms such as the page or the codex as inevitable conditions of literature allows *the text* to be transformed into content, held by or contained within, rather than performed with, matter. Supposedly given, the borders of the text can become the borders of the discipline, enabling the tautologies by which literary studies is the study of literary texts and reading and doing a reading are equivalent. These boundaries

26. Michael Warner, “Uncritical Reading,” in *Polemic: Critical or Uncritical*, ed. Jane Gallop (New York, 2004), p. 25.

27. Merve Emre, *Paraliterary: The Making of Bad Readers in Postwar America* (Chicago, 2017), p. 255.

28. Caleb Smith, “Disciplines of Attention in the Secular Age,” *Critical Inquiry* 45 (Summer 2019): 908; hereafter abbreviated “DA.”

29. See John Unsworth, “Scholarly Primitives: What Methods Do Humanities Researchers Have in Common, and How Might Our Tools Reflect This?,” 13 May 2000, [people.brandeis.edu/~unsworth/Kings.5-00/primitives.html](http://people.brandeis.edu/~unsworth/Kings.5-00/primitives.html), and Alan Liu, “Humans in the Loop: Humanities Hermeneutics and Machine Learning,” 6 Mar. 2020, [liu.english.ucsb.edu/humans-in-the-loop-dhd2020-conference/](http://liu.english.ucsb.edu/humans-in-the-loop-dhd2020-conference/)

30. See Auyoung, “What We Mean by Reading,” and Jonathan Kramnick, “Criticism and Truth,” *Critical Inquiry* 47 (Winter 2021): 218–40.

31. Kramnick, “Criticism and Truth,” pp. 222, 225, 231.

support and protect what Smith calls “the critic’s sovereign selfhood” (“DA,” p. 908), because they allow the critic to access the containerized text while remaining outside the purview of criticism (unexposed and unmarked). To put this another way, because it sits inside, but is unaffected by, its container, the text is established as an analogue to the critic’s mind. In the infrastructural sense of creating what remains invisible because providing the “pregiven conditions for making sense of the world,” the self-evident (printed) text allows two types of interiority (what is in the text and in the mind) to connect and intermingle while remaining separate from and unaffected by matter.<sup>32</sup>

This argument, and the peculiarly mobius-like inside/outside text/reader configuration that accompanies it, might seem altogether strange, if not entirely contradictory, until we recognize it as Cartesian. Joseph Rouse describes the idea that subjects have more direct access to the meanings and contents of texts than to the (rest of the) world as a “Cartesian legacy, a linguistic variation on Descartes’s insistence that we have a direct and privileged access to the contents of our thoughts which we lack towards the ‘external’ world.”<sup>33</sup> That the naturalized and invisible technicity of print allows texts to be understood thus, as contained in but not constituted with matter, is expressed by another critic of CLS, inadvertently but succinctly, as the capacity for “ideas persist without the threat of falsification” in literary studies, because “we sacrifice the ability to have our ideas describe the objects of the world” (“I,” p. 8). By contrast, emerging literary-computational configurations have not (yet) been smoothed over and standardized as immaterial content. Their mutability and changeability thus impede an idealized relationship between reader and text, disrupting the pretense of critical-subjective priority over and freedom from matter, and the model of the discipline built upon it.

Pace the common criticism of CLS—that it makes an exceptional claim to universal authority—what the computational rather threatens is the epistemic and ethical authority of an impossible ideal: the isolated, autonomous, purely human subject.<sup>34</sup> Hence, the choice that Trumpener and Da offer, between reader-text *or* computer-data, for when matter and meaning must remain separate, subjectivities or textualities enacted with technologies are no subjects or texts at all. In Cartesian terms, if matter is not reduced to nothing, it can only threaten to overwhelm everything.

32. Mulvin, *Proxies*, p. 6.

33. Joseph Rouse, *Engaging Science: How to Understand Its Practices Philosophically* (Ithaca, N.Y., 1996), p. 209.

34. See, for example, Gayatri Chakravorty Spivak, *Death of a Discipline* (New York, 2003), p. 108.

### When New (Materiality) Is Old

My original motivation for writing this article was to present the case *against* CLS as propagating a view of technology and subjectivity at odds with, and inadequate to, understandings of both elsewhere in the humanities and literary studies. Yet doing so has led me to ask if arguments *for* CLS do any better. In arguing they do not, I consider two sites at which support for CLS is strongest: in postcritique accounts that align computation with the descriptive future of the discipline and in CLS itself, specifically its two main enactments to date, which I call “distant reading” and “computational modeling.” Though all proclaim the value of computational engagements with literature, in instituting the same structural divisions as the case against CLS, they persist in aligning meaning with human subjectivity and presenting computation as other—and lesser—than literary phenomena.

Postcritique literary scholars apparently welcome CLS as a worthy fellow traveler in the move from depth to surface reading. For Heather Heuser, there is “no tension at all” between these fields, with both part of “a multi-pronged conversation about approaching and retreating from materiality that is unfolding across . . . literary studies.”<sup>35</sup> Academic critiques of CLS make the same point, in negative terms, presenting “distant reading, digital reading, and surface reading” as sharing the same “faith in the critic’s ability to apprehend directly a world of objects that is out there, allegedly ‘independent of interpretation’” (“CR,” p. 61). In fact, what is taken as postcritique support for CLS reproduces the (now) familiar, instrumentalist view of it as dealing with, and capable of, only derivative, simplistic, and deterministic outputs. Computation is specifically cast as a simplistic foil against which to define and defend the aesthetic unity and meaningfulness of (human) reading, albeit in supposedly new surface, thin, and networked forms. The inability of these arguments to extend their explicitly new materialist framework to CLS suggests the extent to which a Cartesian division of meaning and matter organizes understandings of computation across the discipline.

Sharon Best and Stephen Marcus’s “Surface Reading: An Introduction” is widely understood as celebrating “the recent turn toward computers, databases and other forms of machine intelligence.”<sup>36</sup> Their view that “digital modes of reading” offer “inspiration for the hope that we could . . . attain . . . objectivity, validity, truth” (“SR,” p. 17) suggests “mechanical objectivity,” in which claims to knowledge are grounded in the capacity of machines

35. Heather Houser, “Shimmering Description and Descriptive Criticism,” *New Literary History* 51 (Winter 2020): 3, 12.

36. Sharon Best and Stephen Marcus, “Surface Reading: An Introduction,” *Representations* 108 (Fall 2009): 17; hereafter abbreviated “SR.”

to transparently represent objects in the world.<sup>37</sup> Though this understanding differs from Trumpener's and Da's framework of instrumentalism, in that the computer discovers what is truly in the world rather than only what it already knows or admits into knowledge, the effects are the same. Critics are replaced with "machines" that "correct for . . . [and] bypass" "critical subjectivity" and "computers" that "are weak interpreters but potent describers" ("SR," p. 17). Surface reading is described in new materialist terms: it "configures and reconfigures matter" or "inhabits and is inhabited by" the critic ("SR," pp. 8, 9). But its value comes from an "interiority" that reasserts the division of external (computational) matter and internal (literary) meaning. Unlike the external mechanical objectivity achieved by computation, the "immersion in texts" and "freedom in attentiveness" enabled by surface reading relates to "objecthood, but of an unusually vivid and significant kind," aligned with "consciousness" and the "vibrant depths of persons" ("SR," pp. 14, 13, 8).

Heather Love's "Close Reading and Thin Description" maintains this same ontological—outside/inside, computational/literary—divide by aligning CLS and postcritique with two distinct forms of "thin description."<sup>38</sup> Love associates "Moretti's 'distant reading' . . . [and] approaches in book history and humanities computing" with Gilbert Ryle's paradigm, premised on technological neutrality and "taking up the position of the device" ("TD," pp. 411, 407). This mechanical replacement of critic with device—or, specifically, of critic with computational methods—produces objectification: "Treating the book as a material object, a commodity, or a social fact, *these methods* put books back in contact with hard surfaces of life including trade, industry, craft traditions, marketplaces, publics, geography, and discourse networks" ("TD," p. 411; my emphasis). Not only are methods agents in this encounter—as statistics were for Trumpener and Da—but they make books part of a "hard" material world. For postcritique literary studies, Love reserves the "better empiricism" of Clifford Geertz's "thin description" and its emphasis on the already-interpreted nature of textual records ("TD," p. 409). The resulting description of reading is idiosyncratic in presenting the author's social world as the source of empirical knowledge gained by a critic who attends as closely as possible to "what the text is *like*" ("TD," p. 412). Yet Love's investment in the power of reading—as an unmediated, reciprocal encounter of critic and text—is recognizable. Indeed, reading here is so powerful it can move the critic right through the text (and time)

37. See Lorraine Daston and Peter Galison, *Objectivity* (Brooklyn, N.Y., 2007).

38. See Heather Love, "Close Reading and Thin Description," *Public Culture* 25 (Fall 2013): 401–34; hereafter abbreviated "TD."

to the reality of a past world (see “TD,” p. 430). For Love’s conceit to work, there can be no difference between the author’s inscription of words and the critic’s reading of them: no intercession of trade, industry, traditions, markets—or other writers and readers—in an essential transfer of meaning. While CLS connects only with hard surfaces, “the text” of Love’s postcritical reading has nothing to do with “the book as a material object.”

Rita Felski’s *The Limits of Critique* only mentions “computer-generated quantitative scholarship” in passing as one of a number of approaches that avoid “the long shadow of suspicion” that marks critique.<sup>39</sup> Yet Felski also uses computation to define the relationship to matter that postcritical reading must avoid. Literary scholars are urged to “do the work of tracing the relevant networks, identifying the creation of new assemblies, or gathering empirical evidence for causal arguments,” while “steer[ing] clear of a vulgar sociology (where a reader is reduced to the sum of her demographical data) as well as of a one-dimensional theory of language (where a reader is a nodal point through which language or discourse flows).”<sup>40</sup> As with Trumpener’s description of statistical violation and alienation, the mere presence of these (“vulgar”) methods and (reductive) data destroys the generative possibilities of dispersed, new materialist networks or assemblages.

Although brief, this final example highlights the dramatic contrast between postcritique’s new materialist, specifically Latourian, language and its old materialist view of computation. All three works cite Bruno Latour’s article on critique’s exhaustion and the need for agential materialist alternatives, whether centrally (in Felski’s case), repeatedly (in Love’s), or in affirmative conclusion (for Best and Marcus). Yet their descriptions of computation maintain the theory of matter Latour identifies as responsible for critical exhaustion and do so in accordance with what he calls the “crassest of prejudices,” in which the “industrially made . . . object . . . [is] abandoned to the empty mastery of science and technology.” Only the text—conceived in Love’s case, quite literally, as a “handmade . . . thing,” stripped of its connections to industry or commerce—is deemed capable of “gathering” or composing culture.<sup>41</sup> These authors thus neglect and work against Latour’s discussion of computation in the very article they cite, including his remarks on the importance of recognizing “all entities, including computers” as “things, mediating, assembling, gathering.”<sup>42</sup> They cannot register Latour’s refusal to separate human and machine, so firmly do they hold to this belief

39. Rita Felski, *The Limits of Critique* (Chicago, 2015), p. 26.

40. *Ibid.*, p. 171.

41. Bruno Latour, “Why Has Critique Run Out of Steam? From Matters of Fact to Matters of Concern,” *Critical Inquiry* 30 (Winter 2004): 234, 233.

42. *Ibid.*, p. 248.

and its (Cartesian) association: that where the machine is, the human is not, and vice versa.

### CLS and the Problem of Representation(alism)

Distant reading and computational modeling operate in the same, atomistic terms. Barad's explanation of "representationalism" usefully elaborates the common framework organizing these approaches, despite their distinct ways of negotiating it.<sup>43</sup> Representationalism maintains that what "is represented is . . . independent of all practices of representing" and that, in their "mediating function," representations are more directly accessible to the knowing subject than "that which is purportedly represented."<sup>44</sup> Described above, with respect to the contents and meanings of texts, as a legacy of Cartesian dualism, this framework is apparent in CLS's preoccupation with the representativeness of datasets. Though the two main approaches understand computation to mediate between different things in different ways, their shared investment in representationalism produces the same understanding of computation that prevails in critiques of CLS as a separate—mechanical—addition to a purely human interpretive encounter.

I have written, previously, about how early articulations of distant reading presented computation as a transparent mechanism for bringing the literary past into view.<sup>45</sup> Though the rhetoric has shifted to emphasize the exploratory and incremental nature of findings, this core premise persists in routine descriptions of CLS as finding, revealing, or discovering events, trends, or patterns in literary history.<sup>46</sup> The common depiction of distant reading as providing a particular perspective on, or sample or selection from, the literary past also sustains this understanding, the implication being that different perspectives, samples, or selections will eventually combine to produce a complete view. The notion that computation re-presents—without constituting—literary phenomena is why distant readings can claim to investigate "large numbers of texts"<sup>47</sup> or "thousands of books,"<sup>48</sup> phrasing that

43. See Barad, *Meeting the Universe Halfway*.

44. *Ibid.*, pp. 46, 47, 46.

45. See Katherine Bode, "The Equivalence of 'Close' and 'Distant' Reading; or, Toward a New Object for Data-Rich Literary History," *Modern Language Quarterly* 78 (Mar. 2017): 77–106.

46. For an overview and critique of this rhetoric in over sixty CLS articles, see Moretti and Oleg Sobchuk, "Hidden in Plain Sight: Data Visualization in the Humanities," *New Left Review* 118 (July/Aug. 2019): 86–115.

47. Piper, "Think Small: On Literary Modeling," *PMLA* 132, no. 3 (2017): 652.

48. Ted Underwood, *Distant Horizons: Digital Evidence and Literary Change* (Chicago, 2019), p. 182; hereafter abbreviated *DH*.



discounts the complex techno-cultural, infrastructural, and algorithmic operations composing the data CLS analyzes. The effect resembles Trumpener's account of googling. Distant reading might deal with multiple texts, but these remain facsimiles of the work and containers of text (often, specifically, bags of words), from which meaning can be extracted. Technology again disappears to leave (now distant) reading essentially free from and independent of the material conditions that occasion it.

This prioritizing of transparency might seem to suggest mechanical objectivity, the framework that postcritique literary scholars ascribe to CLS generally. But that alignment overlooks an important understanding that accounts of distant reading share with the case against CLS. While in mechanical objectivity, the scientist's subjective blind spots are replaced by the machine's objective observations, the distant reader is the interpreter of what is made observable by mechanical instruments. Instead of becoming the device, the distant reader remains a fully human subject—notably, a reader—and the site in which literary meaning arises. Although often equated to the introduction of the telescope, a better analogy for how proponents of distant reading imagine computation is eyeglasses worn by a very myopic person.<sup>49</sup> What was unknowable, or blurry, comes into sharp relief in a way that quickly becomes invisible to the wearer. Arguments for distant reading thus extend the long tradition of what Donna Haraway calls “the technological eye,” as both “‘high technology’ and immaterial channel.”<sup>50</sup> The transparency of computation in distant reading, in its supposed capacity to “register pictures of the outside world in a representational, mentalist semiotic economy,” is thus analogous to, even as it prosthetically enhances the acuity of, “the seeing eye in brainy, knowing man.”<sup>51</sup>

This dematerializing of texts and prioritizing of critical subjectivity are apparent even in distant readings that seem to emphasize the constitutive nature of computation. Moretti's recent work, for instance, notes that CLS does not deal with thousands of “novels” but with something new, as “scale . . . changes the object itself.”<sup>52</sup> Yet his subsequent claim—“If there is a pattern in the data, *it's because behind it there is a form which repeats itself over and over again*”—reverses this acknowledgement that patterns are produced through, rather than preceding, boundary-making practices. Patterns are reclaimed as the “*actual causal mechanism*” lying behind or beneath large

49. See, for example, Florent Coste, “Digital Literature,” review of *La littérature au laboratoire* by Moretti, *Books & Ideas*, 5 Feb. 2018, [booksandideas.net/Digital-Literature.html](http://booksandideas.net/Digital-Literature.html)

50. Donna J. Haraway, “Cittercam: Compounding Eyes in Naturecultures,” *Postphenomenology: A Critical Companion to Ihde*, ed. Evan Selinger (Albany, N.Y., 2006), pp. 176, 178.

51. *Ibid.*, p. 177.

52. Moretti, “Patterns and Interpretation,” *Stanford Literary Lab*, Sept. 2017, p. 1, [litlab.stanford.edu/LiteraryLabPamphlet15.pdf](http://litlab.stanford.edu/LiteraryLabPamphlet15.pdf)

swaths of literary history, only now comprehended—or comprehensible—by an interpreting subject: “If you don’t grasp the form, your hands remain empty.”<sup>53</sup> Ted Underwood’s theory of “perspectival modeling” appears to temper his claims to make “discoveries in literary history,” by invoking hermeneutic theory to present CLS as objective but dependent on the relationships created by its models (*DH*, pp. xv, ix). In fact, meaning is limited to human subjects as data, given meaning by “historically grounded interpretive communities,” is transmitted across time by machine-learning algorithms that function as “complex but transparent moves in an interpretive argument” made by the distant reader (*DH*, pp. xii, 160). Even as Underwood metaphorically exposes the human mind to the machine’s glare—by describing predictive modeling as “not quite a time machine but something almost as useful: a memory-wiping flashbulb that allows us to strategically erase our knowledge of the future or past as needed”—the distant reader is still “strategically” in control of a transmission that connects them to the human(ity) of past reading (*DH*, p. 36).<sup>54</sup>

Though often conflated with distant reading, computational modeling makes a principled departure from assertions of transparency, presenting data and models not as mechanisms for transmitting patterns but heuristic methods for complicating and deepening understandings of literary phenomena. I wrote two books using computational modeling as a core conceptual paradigm and so have an unsurprising sympathy for the refusal of its proponents to abandon computation to instrumentalism.<sup>55</sup> In the past, I saw strength in its focus on “opening up rather than glossing over the inevitable discrepancies between representation and reality,” as Willard McCarty states in his foundational book on the method.<sup>56</sup> Now I would say, in assuming the *inevitability* of this gap, computational modeling perpetuates the division of matter and meaning—and of computation and literary phenomena—that constrains and stagnates the broader debate about CLS. It is trapped arguing for the value of computation from within a paradigm that can only recognize it as a simplification and reduction of what is actually the focus of inquiry.

In computational modeling, data and models do not reveal literary phenomena as they really are but re-present or externalize an understanding

53. *Ibid.*, p. 6.

54. For a detailed discussion of Underwood’s book, including its representationalism, see Bode, “Why You Can’t Model Away Bias,” review of *Distant Horizons* by Underwood, *Modern Language Quarterly* 81 (Mar. 2020): 95–124.

55. See Bode, *Reading by Numbers: Recalibrating the Literary Field* (New York, 2012) and *A World of Fiction: Digital Collections and the Future of Literary History* (Ann Arbor, 2018).

56. Willard McCarty, *Humanities Computing* (New York, 2005), p. 38; hereafter abbreviated *HC*.

of them: whether by an individual, as in McCarty's account, or in the "platonian ideal" of mathematical formula, as Richard Jean So argues.<sup>57</sup> These representations are simplifications due to the "crudity of any mechanical approximation to a subtle and complex reality" or the ideality of mathematical formula (*HC*, p. 24). But they are valuable; manipulating models allows for their refinement as a "*continual process of coming to know*" (*HC*, p. 28). This practice of reasoning by representing introduces uncertainty into computation but only by offsetting it from reality, which remains absolute: "All Models Are Wrong," as goes the title of So's essay, or they are "fictional or idealized representations," as McCarty puts it (*HC*, p. 24). While the heuristic *capacity* of models—and the possibility of incorporating computation into humanities inquiry—is thus premised on the transparency of a representational relationship, the heuristic *necessity* of modeling exists due to the lack of transparency between human and material realms.

Some accounts are ambiguous as to the importance of anything beyond the human (mind and its representation as model) to the knowledge enabled by computational modeling. Perhaps it is enough, McCarty implies in his early work on modeling, to develop and refine one's thinking with computing machines, regardless of whether the results correspond with some impossible-to-know real. As computational modeling is typically employed in CLS, however, aligning model and reality is of utmost importance, even as it remains impossible. Thus, Andrew Piper frames literary modeling as involving five "nested" "representational practices": theorization, conceptualization, implementation, selection, and validation. The first four, which successively externalize the subject's understanding of some literary phenomena as stages of representation, can be transparently tested and affirmed. Though Piper thus projects the representational space ever farther out from the subject to the world they seek to understand, still the final representational relationship—of the model to the "phenomenon that one is claiming to observe"—remains untestable and unknowable.<sup>58</sup> Piper thus advocates for the generalizability enabled by computation from within a paradigm that can only fail to achieve the search for correspondence that motivates it.<sup>59</sup> In the past, I have likewise advocated for accuracy between data and the historical context it represents as the goal for, and basis of judging, "a scholarly edition of a literary system."<sup>60</sup> In both the scientific terms of distant reading, and the humanist terms of computational modeling, CLS

57. Richard Jean So, "All Models are Wrong," *PMLA* 132, no. 3 (2017): 670.

58. Piper, "Think Small," pp. 653, 655.

59. See Piper, *Can We Be Wrong? The Problem of Textual Evidence in a Time of Data* (New York, 2020).

60. Bode, *A World of Fiction*, p. 4.

thus keeps computation separate from literary phenomena, while retaining literary subjects as the essential sites of literary meaning.

### Computational Performance

An alternative approach to computation is already evident in DH. McCarty's recent work explores modeling as an ongoing practice of ontologizing, grounded in "human-machine resonance rather than a symbolically mediated representation of the world."<sup>61</sup> Other DH projects likewise engage with computational systems as part of a making and materializing of (and with) artifacts, cultures, and communities.<sup>62</sup> CLS arguments that resist representationalism, refusing to separate computational methods and objects of inquiry, include Michael Gavin's response to Da's essay, which explains that semantic models do not represent large numbers of "texts" but create from words and documents new and complex forms of textuality, enacted in novel lexical and bibliographical spaces.<sup>63</sup> Another example is offered by Mandell, who maintains that data supposedly *about* gender, rather than referring to subjects who stand behind those categories, is "inextricably intertwined" with past and present categorizing practices and with other cultural formations, such as "historical time and genre[, which] are not incidental to, but constitutive of gender." Instead of identifying bias—misalignments in representation and reality—political engagements "contest discursive constructions like the sex/gender/sexuality system at every moment of their construction."<sup>64</sup> A decade ago, Alan Liu argued that meaning for CLS does not come from the data nor lie in the distant reader but is manifest in the intersections of algorithmic processes with the material-semiotic conditions of humanities infrastructure.<sup>65</sup>

Part of my aim in surveying the prevailing terms of the current debate about CLS is to make existing departures from representationalism legible

61. McCarty, "Modeling, Ontology, and Wild Thought: Toward an Anthropology of the Artificially Intelligent," *HAU* 9 (Spring 2019): 156.

62. See Tara McPherson, "Why are the Digital Humanities so White? Or Thinking the Histories of Race and Computation," in *Debates in the Digital Humanities*, ed. Matthew K. Gold (Minneapolis, 2012), pp. 139–60; Padmini Ray Murray and Chris Hand, "Making Culture: Locating the Digital Humanities in India," *Visible Language* 49 (Dec. 2015): 140–55; Roopika Risam, *New Digital Worlds: Postcolonial Digital Humanities in Theory, Praxis, and Pedagogy* (Evanston, Ill., 2019); and Catherine D'Ignazio and Lauren F. Klein, *Data Feminism* (Cambridge, Mass., 2020).

63. See Michael Gavin, "Is There a Text in My Data? (Part 1): On Counting Words," *Journal of Cultural Analytics* 5, no. 1 (2020), doi.org/10.22148/001c.11830

64. Mandell, "Gender and Cultural Analytics: Finding or Making Stereotypes?," in *Debates in the Digital Humanities 2019*, ed. Gold and Klein (Minnesota, 2019), pp. 15, 17.

65. See Alan Liu, "The Meaning of the Digital Humanities," *PMLA* 128, no. 2 (2013): 409–23.

as such. Yet there is a potential to do more: to extend discussions of the coemergence of methods and objects of study to that of subjects and objects of inquiry, treating neither as pairs (emergent or otherwise) but as agents and forces in distributed literary performances. While that task is beyond this article, to suggest its scope I end with another contribution to this journal, Hoyt Long and So's "Literary Pattern Recognition." This article propels CLS in the direction I am advocating but, lacking a framework beyond reading and representation, ultimately falls back into habitual ways of discussing digital methods—as techniques applied by literary critics to represent and investigate textual objects.<sup>66</sup> In the process it reasserts the separation of computational and literary phenomena that the authors otherwise contest.

Long and So's article explores three modes of enacting "the English haiku": close reading, historicism, and machine learning. Arguing that each "harbors its own ontology of the text," they propose and demonstrate a method for literary studies that involves explaining and relating the "understanding of literary pattern and stylistic influence" that each of these different ontologies constitutes ("LPR," p. 237). Among the considerable strengths of this article are Long and So's exploration of the conditions of these, often incompatible, performances and their recognition that each has limitations that are, also, its conditions of knowledge. The diverse ways in which close reading, historicism, and machine learning perform the English haiku, in other words, is what makes patterns—and meanings generated with them—possible. Da's critique of Long and So's article entirely misses this ontological dimension, understanding them as trying to "measure formal influence" when they clearly explain their intention to explore the different English haikus constituted by diverse methodological conditions ("CC," p. 618). Yet their framing of literary studies as reading, and the representationalist terms in which they ultimately describe computational modelling, also invites this misunderstanding.

As Long and So elaborate close reading, historicism, and machine learning, each mode involves complex techno-cultural, more-than-human practices of categorization, delimitation, and relationality: from the typographical and other design features that condition close readings to the small magazines and historical coteries of historicism and the anthologies, digital collections, and algorithms that enable machine learning. Yet their framework of reading requires a reader and an object to be read. It leads Long and So to divide human and machine, referring to "human reading" when traditional literary infrastructures are implicated, and "machine reading"

66. See Hoyt Long and So, "Literary Pattern Recognition: Modernism between Close Reading and Machine," *Critical Inquiry* 42 (Winter 2016): 235–67; hereafter abbreviated "LPR."

when those infrastructures include novel, computational components. When the modes are compared, instead of different—including incompatible—enactments of the English haiku, Long and So describe different perspectives that together “produce a more comprehensive picture” of something already there (“LPR,” p. 238).

With machine reading, this reversion to representationalism is especially pronounced. Repeating the adage that all models are wrong, Long and So suggest their particular model is “incorrect” because it does not “capture the complexity of how texts are produced through language” but also “useful” because it can “detect patterns of textual units across large and diverse corpora” (“LPR,” p. 254). An enactment of the English haiku involving complexly intra-acting agents and forces is thus judged by its correspondence with some prior, existing, textual complexity. Rather than being part of an enactment, computation becomes, once again, a method of mediating between subject and world, referring to, but never fully capturing, some prior, independent, and inevitably more complex, noncomputational real.

My aim is not to scold Long and So for a contradiction in their argument but to note the difficulty of avoiding representationalism in the absence of an alternative way of connecting epistemology and ontology. That missing element is a normative framework, which is what secures meaning when it is no longer judged by correspondence to a preexisting and singular reality. Though they do not call them such, Long and So allude to the normative conditions of human reading as the mixture of intuition and familiarity with existing criticism that, in close reading, enables “a general sense of what the haiku in English looks like” (“LPR,” p. 239). Long and So are admirably open in explaining the decisions they make in modeling. But they lack—because CLS does—the thick tangle of normative practices, entities, and subjectivities that exist for “familiar humanistic approaches” and would provide the basis for deciding, for instance, whether and which stop words *should* be included or if it is *reasonable* to lemmatize in the way they describe (“LPR,” p. 235). Substantial efforts are ongoing within CLS to develop these norms.<sup>67</sup> The challenge is considerable: the field is a long way from having its practices accepted as legitimate by a community of literary scholars. Yet developing such norms is necessary if CLS is to hang together as a field and with the rest

67. Examples include collaborative efforts to develop, test, and select standard measures and methods for inclusion in the Stylo in R package and initiatives such as the Data for History Consortium, “an international community aiming to establish a common method for modeling, curating and managing data in historical research” or the publication of shared datasets, for instance by the *Journal of Cultural Analytics* and the *Post45 Data Collective* (“Data for History 2021: Modelling Time,” d4h2020.sciencesconf.org/). See also Maciej Eder, Jan Rybicki, and Mike Kestemont, “Stylometry with R: A Package for Computational Text Analysis,” *The R Journal* 8, no. 1 (2016): 107–21.

of the discipline. Working towards such norms (including with the equivocations and incommensurabilities implicated in all systems of knowledge) is the means by which CLS will become—and come to matter as—literary studies.

As different as they seem, prevailing arguments for and against CLS are united by their insistence that computation only relates to literary phenomena by representing them. Whether that representation is a deformation of what is valuable and meaningful to literary studies or is partial, simplistic, and superficial or direct and absolute, in the end, computation stands apart from—in opposition to, to the side of, as a portal for, or a mediation of—literary being and knowing. These approaches leave us with the zero-sum question of whether computation should or could be applied to literature or used as a method in literary studies. None offer a basis for understanding or intervening in the many ways in which computational and literary phenomena compose each other, let alone for extending the substantial affordances of literary studies to participating in and complicating these emerging assemblages.

The discipline has much to gain from a performative approach to computation, which would enable engagement with the many computational situations—and agents and practices—with which literary phenomena are increasingly enacted. Such situations include the “artificially intelligent” techno-cultural-textual formations (or large language models) currently dominating discussions of computation across multiple disciplines (not to mention governments and corporations). In this respect, literary studies also has much to offer. As a site of expertise in working within and across past textual technologies and assemblages (such as archives and libraries), the discipline involves textual practices that understand and respond to intelligence as distributed. Core literary frameworks, such as mimesis, ekphrasis, and figuration, suggest ways of exploring generative relationships between words and things rather than asserting simplistic oppositions of original and copy.<sup>68</sup> Such engagements and contributions are conditional, though, on abandoning the tired terms of the current debate about CLS on both sides. They require recognizing that computation and literary phenomena, rather than inevitably separate, can and often do participate in constituting each other along with whatever agents, practices, and relations are active as particular, always temporary, formations cohere.

68. On figuration as a framework for big data archives, see Frederik Tygstrup, “Figura,” in *Uncertain Archives: Critical Keywords for Big Data*, ed. Nanna Thylstrup et al. (Cambridge, Mass., 2021): 235–40.