Digital humanities emerged as a term in 2001 to capture a field with an early focus on digital tools and archives in relation to database collections of texts, artworks, scholarly works, dictionaries, and lexicographic corpora. However, it is important to note that a number of approaches preceded this constellation, including “humanities computing” and “computing in the humanities” (McCarty 2003, 1226; Hockey 2004; McCarty 2005, 2). Digital humanists, now called, have adopted and developed tools and methods that are new to the humanities, such as computer statistical analysis, search and retrieval, data visualization, and artificial intelligence, and apply these techniques to archives and collections that are vastly larger than any researcher or research group can handle comfortably (Schreibman et al. 2004; Berry 2012). These digital methods allow the researcher to explore how to negotiate between close and distant readings of texts and how microanalysis and macroanalysis can be usefully reconciled in humanist work (see Jockers 2013). In doing so they are increasing the capacities of humanists to work with larger complex datasets, corpora and image archives and also to move between them with greater ease. The digital humanities can be understood as a set of interlocking and interdependent parts that, while distinct and standing alone to some degree, nonetheless adds up to make the whole greater than the sum of its parts. In other words, digital humanities is a coherent, if nonetheless still contested, discipline (Schreibman et al. 2004; Liu 2012a; Allington et al. 2016; Berry and Fagerjord 2017).

Digital humanities has, however, tended as a field towards seeing itself primarily as solving technical problems, particularly in relation to what might be called “knowledge representation,” and this has sometimes led to a service orientation (see Drucker and Svensson 2016). The implications of this are that digital humanities has tended to become means-focused, allowing other disciplines to define the ends to which their work was oriented. This has structured the worldview of digital humanities towards the preservation of cultural heritage and archives using digital media, an instrumentalism revealed in its main two approaches, digital archives and digital tools. Digital archives encompass techniques and approaches towards the transfer of usually physical archives into accurate digital representations with the corresponding problems of metadata, OCR quality, material constraints, computational storage, and procedures and processes. For digital tools the main concern has been with developing software that enables the accessing, manipulation, and transformation of these digital archives for the use of scholars, particularly in the fields of English and History, with the emphasis on augmenting scholarly work through larger dataset analysis, sometimes called “distant reading” (see Drucker 2017; Underwood 2019). This goes a long way to explaining the location of many digital humanities centers within or aligned with English or History departments in universities (see also Kirschenbaum 2010).
Consequently, some of the problems identified with digital humanities may have been due to it being gestated within English and History departments. Arguably, this has engendered a conservatism in the digital humanities, manifested through its attempts to service these departmental needs. Not that the scholarly work produced per se was conservative, although sometimes it was, rather a conservatism emerged in relation to its self-regard as a service discipline and its fixation on digital archives and digital tools. Hence, digital humanities can sometimes be surprisingly reluctant to engage with issues outside of meeting these needs. As many digital humanists align firstly with their home department before their “digital humanist identity” this may affect the potential radicalism of an inner entelechy of the digital humanities (although see more recent attempts to discuss digital humanities in Dobson 2019). So, for example, born-digital content, web history, new media, and even the Internet were not central to the early computing in the humanities, and even now the digital humanities research agenda is largely set by those of the English and History departments to which they are aligned. Partly this has been a reflection of institutional forces such as promotion and recognition mediated through the “home” department and a lack of understanding about the specificities of digital work, but the direction has also been strongly influenced by external funding which has tended to be directives from the Office for Digital Humanities and other funding bodies. Too often this form of funding has seen itself as “modernizing,” “digitalizing” or “transforming” the humanities through an application of digital technology, a rather simplistic form of instrumentalism. It has also led to the growth of digital humanities research centers financed predominantly by soft money-funding and grant-capture and staffed by researchers on short-term contracts. Unsurprisingly, this has engendered a critical response from scholars on the supposed receiving end of the coming digital “disruption” (see Fish 2012; Allington et al. 2016). Nonetheless, the breathless language of Silicon Valley often remains embedded in funding attached to digital transformations, which sees the softwarization of the humanities as an end in itself.

One response to this has been a call for digital humanities to be more responsive to cultural critique and critical theory (Berry 2012, 2013; Liu 2012a, 2012b, 33). This calls for wider social, cultural, political, and economic questions raised by digital technology to become part of critique in the digital humanities. This also means developing a program of criticism with respect to the computational in parallel with the digital transformations of the humanities and social science, and particularly its manifestation in digital capitalism, through what is called critical digital humanities (Berry 2013; Raley 2014, 35; Berry and Fagerjord 2017; but see also Dobson 2019). This includes not just the technology itself but also the way in which the digital can be used to import neoliberal labor practices, academic restructuring, and grant-capture culture, particularly through digital humanities units that are not reflexive about their own situation. For example, digital humanities research centers often import hierarchical management structures with a director sitting atop the pyramid of research workers and administrative staff which consequently undermines collegial academic cultures. This structure is then often used as a justification for the differential pay that is awarded to managers and directors, as in the private sector, where it is claimed “leadership” or “vision” must be highly compensated. In contrast, critical digital humanities argues that future directions for the digital humanities must be collegial, critically oriented, and more reflexive of the way in which computation is no longer merely a tool for thought, but also a disruptive infrastructure, medium, and milieu. Digital technology is therefore a medium of change and carries social change along with it, tempora mutantur, nos et mutamur in illis.
also constitutes an entire apparatus and political economy with its own endogenous interests and value-structures and which cannot just be naively “applied” to the humanities.

This matters because the application of computation in the arts and humanities is not merely a neutral act of switching to a new medium, say from paper to digital. The digital and computation carry with them an imposed selectivity on how knowledge is transferred into data and in many cases the communicative capacities of digital networks can and do distort the data transmitted or stored. In addition, computation forms a political economic network which forms real material interests. While digital humanists have been exemplary in thinking critically about issues such as inherited, and sometimes contested, classifications, absences, encoding, and metadata when archives are digitalized, they have paid less attention to the medium-specific problematics or political economy of an inherent instrumentality in computation. That is, computation has a politics, partly due to its historical formation but also due to its tendency to impose metaphysical or formalist thinking on projects and programmers which may consequently be transmitted onto digital humanities work.\(^\text{10}\) This can lead to a valorization of the mathematization of thought whereby formalization of knowledge through computation is seen as not just one approach to thinking but the exemplary one, often one that is misplaced (see Da 2019 for a related critique of using statistics). This is an idea shared by the logical positivists that “there was a certain rock bottom of knowledge … which was indubitable. Every other kind of knowledge was supposed to be firmly supported by this basis and therefore likewise decidable with certainty” (Carnap 1967, 57). Mathematization tends towards formalization and rationalization, which can become an ideology that reduces the digital to instrumental rationality. Computation thought of as a mathematical or logical force comes to be seen as an independent participant in human social relations, it is given “life” fixed by its own nature and a power to shape social life. This is the reification of a social relation and as Marx argues,

\[
\text{in order … to find an analogy we must take flight into the misty realm of religion. There the products of the human brain appear as autonomous figures endowed with a life of their own, which enter into relations both with each other and with the human race. So it is in the world of commodities with the products of [one’s] hands. I call this the fetishism which attaches itself to the products of labour as soon as they are produced as commodities.}
\]

(Marx 1982, 165)

To human eyes it can seem as if computation is acting for itself and out of its own inner necessities, but in actuality it is subsumed to the needs of capitalism, not a form of mystified computational unfolding. Most notably computation, under conditions of capitalism, tends to develop the technical ability to separate control from execution (Braverman 1974, 159; Deleuze 1992).

This results in a process of generalized proletarianization of human thought and related social pathologies such as an individual’s alienation from social life. This can lead to a sense of powerlessness and loss of meaning as the experience of social life mediated through computation makes it appear as fragmented and does not fit into a meaningful whole. In capitalism, computation tends to contribute to creating structural obstacles, such as persuasive interfaces and obfuscation of underlying computational processes, affecting an individual’s capacity to understand the world and to see themselves as agents who can shape and change that world.

Further, this can encourage a tendency towards assuming that a digital project informed by mathematical foundationalism is recognizing “ideal” forms, and hence to proceed to argue that
these are the only interests. Which, of course, ignores material interests including the political interests of those wielding the mathematical formalisms.\textsuperscript{11}

In contrast, critical digital humanities can be understood as a research program guided by a common goal of human emancipation, carried out through reflexive interdisciplinary work that traditional scholarship has failed to address. It identifies the search for foundations and origins, which are current in digital humanities and computationalism, as not only problematic from a theoretical point of view but also politically suspect, tending towards reactionary politics (see Golumbia 2009).\textsuperscript{12} This mania for foundations is built on the idealist assumption that everything can be reduced to mind. As Berry argues in relation to this tendency,

\begin{quote}
It is likely that we should expect to see new philosophies and metaphysics emerge that again entrench, justify and legitimate the values of a [computational] accumulation regime. This calls for attentiveness to the tendency of philosophers to declaim their situatedness and historical location, and develop critical approaches to what we might call metaphysics of the computational and to the forms of computational ideology that legitimate a new accumulation regime.
(Berry 2014, 5)
\end{quote}

Indeed, mathematical theorizing, like capitalism, conceives of itself as somehow independent and free and so formulates itself as self-grounding and self-justifying.\textsuperscript{13} It does this by authorizing its very speech as the limits and boundaries of intelligibility. But speaking which is not conscious of itself, as both a subject and object of the historical process, is sophistry. Computational speaking, which mirrors mathematical speaking, cannot grasp how its every attempt to speak about itself must fail because the very idea of speaking about something only represents its authority.\textsuperscript{14} That is, the speaker from this position takes as a secure beginning that which is euphemized through notions of axiomatics, provisionality, or hypotheses. This is a practice that is allowed to slip into forgetfulness as present-speaking, which we might call alienated theorizing. This is a form of theorizing that looks in the wrong direction, continually looking away from itself to everything other than itself.

One of the paradoxes of computationalism is the way in which it is simultaneously understood as a logical foundationalism with a demonstrative method combined with a developmental or processual explanation.\textsuperscript{15} The foundationalism tends towards an invariant conception of entities and relations frozen at the time of their computational fixation. The world is tethered to the ideal forms of the computational. These formal entities are then instantiated by the particularities of process which can only act in the theater of the concepts. Once it is set in motion, the complex and delicate machinery of applied computation becomes extremely difficult to change, due to sunk costs, development time, and what is seen as justified faith in the foundational structures that have been created. It becomes easier for computationalists to conceive of changing the world, rather than change the computational model. This means that too often the tail wags the dog when a computational system has been created, and so the world is remade in the image dictated by the computer system, rather than the other way around. When one identifies how deeply capitalistic logic is embedded within computational thinking, it becomes clear that markets, individual monads, and transactional relations tend to be paramount.\textsuperscript{16} And so, the alien force of computation, the opaque algorithms of a new computer system, the sheer difficulty of challenging the output of the “truth machine” of computation, results in changes in social life that through other means would be difficult, if not impossible. This explains the difficulty of grasping the computational which needs
a double aspect theory to capture both the mathematical foundationalism and developmental or processual sides of its actuality.\textsuperscript{17}

In contrast, a critical digital humanities argues that computation and digital theorizing should and must be situated within a historical constellation to understand that it presents a distorted view of thought and experience, revealing the hidden structures of computational ideology.\textsuperscript{18} By drawing on critical theory, critical digital humanities has the only prescription that one must have insight into one’s own responsibility. Knowledge is seen as a historical and material phenomenon. That is, that the dominant mode of thought increasingly expressed through computationalism disguises partisan interest, indeed \textit{material factors are the repressed factor}. Materialism, unlike idealism, always understands thinking to be the thinking of a particular people within a particular period of time. Idealism presupposes a subject who is independent of time able to discern abstractions, theories, and ideas by which the knowledge of an underlying structure is obtained. But that knowledge and structure belong to a particular historical situation. Indeed, materialism challenges the claim for the autonomy of thought and instead focuses on the concrete conditions under which humans live and in which too often their lives become stunted. These computational forms of life under capitalism should be criticized where it is not only different from what it could be but also different from what it should be.

We could say that computation loves to hide, and its laminate structure means that computation easily leads to misunderstanding of the veiled multi-layered nature of software.\textsuperscript{19} This has implications on the way in which politics, interests, biases, and assumptions can be buried in a proprietary software stack and might be carried over into new software projects. We might consider how computation itself is ideological, encouraging thinking that unconsciously reinforces a reification of computational labor and assigning agency and power to a commodity fetish—an alien force. This can be seen repeatedly in digital projects that turn the human labor hidden within the opaque structure of software into a force of its own, most notably in projects that work with crowdsourcing, artificial intelligence, or machine learning, and which distort the social relation of labor under computational capital.\textsuperscript{20}

Asking questions about the normative and political delegations into software/code requires digital humanities to develop a politics which challenges data practices, the implicit utilitarianism, and the consequences of algorithms and computation more generally (see Berry 2021). This would encourage digital humanities not just to “build things” but to take them apart and question the values that are embedded in the software—developing critical software to test its ideas and challenge its assumptions. This would call on digital humanities to turn its hermeneutic skills on the very software and algorithms that make up these systems. Critical digital humanities should advocate an ideology critique that challenges the knowledge industry, including the universities, museums, galleries, and arts, to uncover and reveal the hidden factors such as the struggle, social conflicts, and divisions in society. Often it is claimed that the digital creates a transparency through its mediating lens which “shows” or “reveals” hidden patterns or structures; however, as much as the digital may reveal it only does so partially, simultaneously hiding other aspects from view.

Critical digital humanities therefore aims to map and critique the use of the digital but is also attentive to questions of power, domination, myth, and exploitation. As such, critical digital humanities seeks to address the concerns that digital humanities lacks a cultural critique (Liu 2012a). Developing a critical approach to computation calls for the digital and computation to be historicized. By focusing on the materiality of the digital it draws our attention to the microanalysis
required at the level of digital conditions of possibility combined with macroanalysis of digital systems. That is, their materiality, their specificity, and their political economy.

Computation is not just a technical matter, it is also a social, economic, and historical phenomenon and can be traced and periodized through this historicization. This is important because the hegemony of computational concepts and methods may lead to new forms of control, myth, and the privileging of computational rationality. As such, critical digital humanities should not only map these challenges but also propose new ways of reconfiguring research, teaching, and knowledge representation to safeguard critical and rational thought in a digital age. Digital humanities along with other cognate disciplines must remain attentive to moments in culture where critical thinking and the ability to distinguish between concept and object become weakened. As such, as research continues to be framed in terms of computational categories and modes of thought, the critique of the digital must become a research program in itself for the digital humanities. Digital technologies must be themselves subject to critique and the critical digital humanities by drawing on critical theory together with a sophisticated understanding of digitality would certainly help digital humanities develop and strengthen critical humanistic approaches to the new data-intensive world.

There is a clear need to strengthen critical reflexivity in the digital humanities, and I want to expand a little on this notion. Here there is only space to provide pointers towards a set of practices and ways of thinking rather than a comprehensive blueprint. Nonetheless, I want to suggest that a way of critiquing the, sometimes, instrumental tendencies within the digital humanities could be a greater focus on the socio-technical aspects of the technologies. This means examining how they are organized, assembled, and made as well as the possibility of making them otherwise. For example, we need to understand and challenge the ways in which “smart” objects and infrastructures bypass our cognitive capacities in order to maximize data-intensive value-extraction. This is to understand how these particular instantiations of the digital can result in further alienation, proletarianization of knowledge, and other social pathologies. Digital humanities can and should examine how processes of automation in knowledge production and manipulation are often a means of exploiting labor, together with a critique of its own organizational practices. It should critique the common structure of top-down hierarchical management in digital humanities centers, experimenting with new collegial structures for academic work. It should examine how extractive processes can lead to exploitation and alienation, even in nominally humanistic research projects that rely on line-management and crowdsourcing where the assumption is that the latter is a “participatory” practice. It should aim to understand how computation is not just a technical choice of instrumentation, but carries with it ideological assumptions and structures that may subtly distort the outcome of a particular digital project, such as about class, gender, or race (Eubanks 2018; Bordalejo and Risam 2019; Chun 2021). This would enable it to challenge the idea that digital technologies offer a panacea for liberal thought and freedom and show how they are equally able to undermine the human capacity for critical reflexivity and reason. For example, little thought in digital humanities has been applied to the alienating tendencies or potentialities of artificial intelligence and machine learning. Nor to the still prevalent practice of grants-funded digital humanities projects which, long after the funding runs out, become digital humanities ruins, slowly rotting and breaking down in forgotten areas of the Internet. As can be seen with these examples, digital humanities also absorbs the fetishism of the new which is endemic to computational cultures, particularly the programming industries.

Critical digital humanities draws attention to the politics and norms that are embedded in digital technology, algorithms, and software. It foregrounds these questions by affirming human
emancipation as a goal making a distinction between what society is and what it hopes to be. There
remains a need to embed the capacity for reflection and thought into a critically oriented digital
humanities and thus to move to a new mode of thinking, a two-dimensional thinking responsive
to the potentialities of people and things. This requires enabling a new spirit of criticality and a
rethinking of what it means to be human within a computational milieu—especially in terms of
nurturing and encouraging critical reason. In other words, there is an urgent need to reconfigure
quantification, formalism, and instrumental rational processes away from domination and
control, towards reflexivity, critique, and democratic practices. As Thompson argues, “the task
of articulating new forms of ethical life—that is, new shapes of social reality (relations, processes
and purposes)—is the fundamental task of a critical theory” (2022, 19). This would be to develop
a critical reflexive humanism which grants digital humanities some measure of autonomy from
quantitative and computational approaches. Critical digital humanities’ attempt to address these
issues within the field of digital humanities helps look to a more progressive future, one where
computation is not seen as an alien force over and against humanity, but rather as what it actually
is, human-created and human-directed infrastructures of thought that can and should serve the
common good.

NOTES
1. John Unsworth outlined a proposal for a master’s degree in digital humanities in 2001, noting, “the
name of the program (‘Digital Humanities’) is a concession to the fact that ‘Humanities Informatics’
(which would probably be a more accurate name) sounds excessively technocratic, at least to American
ears. The other obvious alternative—‘Humanities Computing’—sounded too much like a computer
support function” (Unsworth 2001). This is one of the earliest uses of the term “digital humanities” in
relation to this field of study that I am aware of (see also Kirschenbaum 2010; Clement 2012).
2. Knowledge representation tends to focus on the “what” of data structures and databases, rather than
the “how” (Drucker and Svensson 2016). Also see McCarty (2005, 30) and Berry and Fagerjord (2017)
for a discussion of knowledge representation.
3. Underwood is interesting for the attention he gives to the historical practice of “distant reading as a
mode of interpretation rather than a computing technology” (2019, 157).
4. See The National Endowment for the Humanities, https://www.neh.gov/divisions/odh, and in the
UK, Arts and Humanities Research Council (AHRC), https://webarchive.nationalarchives.gov.uk/
ukgwa/20180702140003/https://ahrc.ukri.org/research/fundedthemesandprogrammes/themes/
digitaltransformations/ and https://webarchive.nationalarchives.gov.uk/ukgwa/20210802111505/
https://ahrc.ukri.org/research/fundedthemesandprogrammes/pastinitiatives/strategicprogrammes/
ictartsandhumanitiesresearch/.
5. It has also encouraged a search for ways in which digital humanities can respond to the ethical
conundrums that computation raises (see Chapter 42, “AI, Ethics, and Digital Humanities,” in this
volume).
6. On the notion of “digital transformation,” see Haigh (2019) who also introduces the intriguing
concept of the “early digital” in relation to “a set of localized and partial transformations enacted
again and again, around the world and through time, as digital technologies were adopted by specific
communities” (13).
8. Organized research units (ORUs), such as research centers, are “opportunistic entities” that run the
risk of creating systems of control through “mission-oriented” research which facilitate instrumental
effectiveness but create distorted power relations manifested in a unit with out-of-touch management,
lack of accountability, diminished academic collegiality, and hierarchical management rooted in the
elemental impulse of domination because “centers have a more authoritarian management structure
than departments" (Stahler and Tash 1994, 546). This becomes pathological where management becomes concerned with vaunting their social superiority or extracting personal difference from those below them. Rather than research culture, the unit then focuses on conformity with the rules, security based on seniority, and the ideology of busy managers, technicians, and staff. In this variant, a digital humanities center may become a more conservative force as it becomes more concerned with its own survival and funding than with its original founding principles of research. Indeed, as Stahler and Tash argue, “for the most part [research centers] are not major contributors to the educational mission of universities … because for centuries research and scholarship have been successfully conducted within the confines of academic departments, and centers often do not have an intellectual core” (1994, 542). They continue, “centers often have a way of becoming somewhat independent of their oversight and continue year after year without any systematic monitoring. Like academic departments, they should be reviewed on a regular basis to determine whether they are achieving their goals, whether changes in direction and internal support are necessary, and what they are contributing to their universities” (552).

9. Times are changed; we also are changed with them.

10. The structuring effects of computation towards certain “rational” forms which align with capitalism, and particularly with an a priori assumption of the superiority of markets for structuring social relations, are apparent in the way in which computational engineering structures roles, entities and processes in particular configurations (see Lohman 2021).

11. See Ricci (2018) revealing Marx’s deep interest in mathematics in the Mathematical Manuscripts of Karl Marx which has “strong analogies with the modern concept of algorithm and this makes Marx a precursor of modern computational mathematics” (225, see also Marx 1983).

12. Formalist and foundationalist approaches tend to describe a system of computation without a political economy, failing to draw inferences about how it actually functions. They also lack an understanding of its history, mediations, and qualifications. They fail to heed the advice of Hegel, who argued, “philosophy is its epoch comprehended in thought.”

13. This valorization of the truths of the axiomatics of mathematics combined with the developmental or organic unfolding of processualism I call mathematical romanticism. Typically, the mathematical and rational would be contrasted to the intuitive and organic, but in mathematical romanticism they are fused in an unstable narrative which tends towards the idea of expressing the “life” of machines, technology, and computation. This is strikingly reminiscent of the futurist’s call to “mathematicians [to] let us affirm the divine essence of chance and randomness” and that “we must bring this mathematics directly into life making all breathing hypotheses come alive alongside us breathing beings” (Marinetti et al. 1941, 300).

14. Mathematical romanticism sometimes becomes transformed into its computational parallel as a form of computational romanticism, often derived from Gödelian incompleteness, as in the work of Land (2018), “Gödelian incompleteness is logically isomorphic with the halting problem in the (Church-Turing) theory of computation, and thus translatable after rigorous transformation into the uncomputable. It establishes a basic principle of unbounded application within the electronic epoch” (but see also Schmidhuber 2012). The recent increase in interest in superficial dualisms, such as the “uncomputable,” often ironically presented as a binary opposite of the computable, shows the degree to which a computational ideology needs to be critically examined (see, for example, Galloway 2021). See also the notion of computational ontologies (Berry 2014, 89–97; Smith and Burrows 2021, 148, 157).

15. We might think of this as magical thinking about computation. Omne ignotum pro magnifico est (“everything unknown seems wonderful”). As Marx comments, “no content is gained in this way, only the form of the old content is changed. It has received a philosophical form, a philosophical testimonial … Another consequence of this mystical speculation is that a particular empirical existent, one individual empirical existent in distinction from the others, is regarded as the embodiment of the idea. Again, it makes a deep mystical impression to see a particular empirical existent posited by the idea, and thus to meet at every stage an incarnation of God … And it is self-evident. The correct method is stood on its head. The simplest thing becomes the most complicated, and the most
complicated the simplest. What ought to be the starting point becomes a mystical outcome, and what ought to be the rational outcome becomes a mystical starting point" (1987, 39).

16. Winner (1997) describes this as cyberlibertarianism, describing it as “a collection of ideas that links ecstatic enthusiasm for electronically mediated forms of living with radical, right wing libertarian ideas about the proper definition of freedom, social life, economics, and politics.” Barbrook and Cameron (1995) memorably described this constellation as the “Californian Ideology,” which argues “that human social and emotional ties obstruct the efficient evolution of the machine” and that “the cybernetic flows and chaotic eddies of free markets and global communications will determine the future.”

17. One of the hallmarks of some forms of cyberlibertarian thinking about computation is the inherent idea of an organicism which sees the “rapid development of artificial things amounts to a kind of evolution that can be explained in quasi-biological terms” (Winner 1997). This is often described as a kind of internal necessity driven by an inner force of spontaneous development, variously emerging from indeterminacy, chaos, or complexity of the underlying computational logic. At the end of the process there are often claims to the emergence of “intelligence,” “creativity,” or “hypercomputation.” In the UK, Dominic Cummings, the Prime Minister’s advisor, was notable for translating this form of computationalist ontology into policy proposals in government (Collini 2020).

18. This often involves “blurring the concept of general intelligence with the concepts of mind or consciousness” (Golumbia 2019). It also tends to involve the reification of human cognitive labor within computational systems. Columbia (2019) has also made links with computational ideology and what he calls a “messianic/Christological structure,” particularly in artificial intelligence theorizing (see also Haider 2017 for similar links to right-wing thought).

19. Heraclitus wrote *phusis kruptesthai philei* remarking that “nature loves to hide.”

20. This also gestures to the troubling use of “crowd-sourcing” within digital humanities projects and the often untheorized implications of facilitating wider labor exploitation and outsourcing, what Gray and Suri (2019) call “ghost work.”

21. See for example an extremely thought-provoking piece by Golumbia (2016) about assumptions regarding open access.

22. Although there has been notable work thinking about the implications for ethics related to data bias, algorithms, and artificial intelligence (see D’Ignazio and Klein 2019; Ess 2009; Metcalf et al. 2019). See Chapter 42, “AI, Ethics, and Digital Humanities,” in this volume.

23. But see also King’s Digital Lab for an example of an institution that has sustainability of digital humanities projects as integral to its work. Through a number of different approaches KDL seeks to maintain or migrate a digital humanities project into the KDL, but also host a project through static conversion or datasets deposit. https://kdl.kcl.ac.uk/our-work/archiving-sustainability/.

24. See Schecter (2007, 71) in regard to avoiding these narrow forms of strategic reason more generally.

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