Chapter Title: What Passes for Human? Undermining the Universal Subject in Digital Humanities Praxis

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Book Title: Bodies of Information

Book Subtitle: Intersectional Feminism and the Digital Humanities

Book Editor(s): Elizabeth Losh and Jacqueline Wernimont

Published by: University of Minnesota Press

Stable URL: https://www.jstor.org/stable/10.5749/j.ctv9hj9r9.6

What Passes for Human?

Undermining the Universal Subject in Digital Humanities Praxis

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In the 1980s television series *Small Wonder,* inventor father Ted Lawson creates a robot, a Voice Input Child Identicant, and brings it home to live with his family while passing as a distant relative named Vicky. While she resembles a ten-year-old girl dressed in a pinafore, concealed panels hide the cyborg's AC outlet, serial port, and electronics panel. Early in the first season, Ted demonstrates Vicky's ability to scan text at swift speeds and recite information back. In mere seconds, Vicky successfully repeats information from the newspaper on command. Ted's son, the enterprising young Jamie, makes Vicky speedread research for his history report and write the report for him. His grades improve dramatically as Vicky reads an entire history textbook and produces an exemplary report that earns Jamie an invitation to his school's honor club. He fools both his teacher and parents but, plagued by a guilty conscience, eventually admits that Vicky completed his homework. When Jamie's teacher asks who wrote the report, Vicky confesses. In disbelief, the teacher questions her on the contents of the report. Impressed, the teacher says, "I wish we had a bright little girl like Vicky at our school."[1] Indeed, Vicky manages to pass for human in both oral and written expression.

While the stuff of bizarre television shows and emerging technology in the 1980s, the phenomenon of computers performing tasks thought to require sentience and human cognition has become commonplace. In some respects, these are contemporary versions of the Turing test, proposed by Alan Turing as a way of evaluating computer-generated natural language. In a Turing test, human judges evaluate conversation between a human and a machine spouting natural language.[2] A machine that passes the test does so by passing for human, convincing the judge that it is the human, not the computer. These methodologies are increasingly becoming part of those used by digital humanities practitioners. For example, Peter Leonard and Lindsay King's project *Robots Reading* Vogue employs data mining algorithms

to analyze 122 years of *Vogue* issues and explore changes in magazine content over time.[3]

As digital humanities scholarship continues to embrace natural language processing software and machine learning in its methodologies, the tensions between human and computer influence scholarly output; yet this matter has not received the attention it requires to ensure that digital humanities projects are not unthinkingly reproducing the normative white, male, European subjectivity inherited from the Enlightenment. This raises several important questions: Who is the presumed subject of digital humanities scholarship? And how is digital humanities reinstantiating a normative human subject in the digital cultural record? This essay takes up these questions by considering how an exclusionary universal subject is encoded in the technologies that subtend digital humanities scholarship and, in turn, is represented, legitimated, and ultimately sanctioned by digital humanities.

The Universal Technological Human

At an alarming pace of acceleration, chatbots, robots, natural language processing software, and algorithms are demonstrating the ability to learn from input, replicate qualities often accorded to human beings, and pass as "human." When Microsoft launched an artificial intelligence chatbot in March 2016, the company expected that Tay, accessible on the platforms Twitter, GroupMe, and Kik, would interact with users, learn from them, and respond with the vocabulary and syntax of social media's millennial user base. Anyone with accounts on these platforms could speak with Tay, which was designed to "engage and entertain people where they connect with each other online through casual and playful conversation."[4] Microsoft further intended for the bot to gather information about and emulate the conversation patterns of eighteen- to twenty-four-year-olds in the United States, promising, "The more you chat with Tay the smarter she gets, so the experience can be more personalized for you."[5] What the company did not expect, however, was how quickly Tay would learn the vocabulary and speech patterns of the internet's racist trolls and progressively learn how to create social media messages more appropriate for a neo-Nazi than a millennial. In addition to denying the existence of the Holocaust, the chatbot compared Barack Obama to a nonhuman primate, stumped for Donald Trump, and advocated for genocide, all in the course of a few hours. Microsoft summarily took the chatbot offline, issuing a statement to address its controversial content: "The AI chatbot Tay is a machine learning project, designed for human engagement. As it learns, some of its responses are inappropriate and indicative of the types of interactions some people are having with it. We're making some adjustments to Tay."[6] Artists Zach Blas and Jemima Wyman's video installation "im here to learn so :)))))" gives Tay an afterlife, where she dances, lip syncs, and offers insight on pattern recognition algorithms, neural networks, Silicon Valley, and cybersecurity.[7] The case of Tay illustrates the range of issues at stake in the development of

machine learning and natural language processing algorithms intended to imitate "human" speech and behavior online.

The possibilities of such developments capture the public and academic imaginations, offering the sense that science fiction is coming to life or that the future is now. They seem to promise that humanity is edging ever closer to the technological singularity, when artificial intelligence will be able to redesign itself and autonomously create more powerful machines, generating computational superintelligence beyond human prediction and cognition. Such a point is perhaps closer than ever. University of Cambridge researchers, for example, have developed a robot capable of reproducing itself, programming it to assemble smaller robots, and in doing so, recursively self-improve.[8] This development has prompted observations that robots and other forms of artificial intelligence are getting closer to mastering processes thought to be unique to humans.

As such developments occur, they are often greeted by excitement over technological progress and innovation; after all, they hold great promise for accelerating the speed at which data analysis can occur. However, they also engender fear over their ethical and social implications as they valorize normative human subjects through their design. They raise questions of what it means to look, speak, write, and think as "a human." Invariably, the answer to this hews to dominant cultural values of the Global North, reinforcing the cultural, historical, and technological othering of communities in the Global South. In a field as diverse in method, thought, and subject as digital humanities, it is essential to examine the ethical challenges these technologies pose and their effects on methodologies. Moreover, attending to such issues emphasizes the unique value of the humanities for science and technology, which is evident in digital humanities practices that use humanistic lenses to analyze digital objects, cultures, and technologies.

In the broader context of these technologies, an area that remains underexplored is the way that the "human" is articulated, produced, and normed in the drive toward emulating "human" processes. At stake is the way that universalist framings of the "human" are produced through natural language processing software, machine learning, and algorithms. For digital humanities, using these technologies raises the question of complicity with the reproduction and amplification of normative forms of human subjectivity. The forms of "human" authorized and sanctioned by developments in machine learning and artificial intelligence are exclusionary ones drawn on the presumptions behind the Enlightenment subject: white, male, Eurocentric. As a result, they reinforce the notion that there are normative and singular ways of being human in the twenty-first century. This is primarily evident in the endeavors to produce "humanoid texts" and other forms of evidence that machines can replicate the linguistic processes that have typically been the domain of humans.

The question of what it means to be "human" has been taken up throughout the history of philosophy, often to discern a distinction between human and animal.

Aristotle links humanity to the notion of being able to speak by virtue of having a telos and belonging to a polis, which he sees animals lacking.[9] In Enlightenment discourses, the definition of "human" became a subject of great interest. For René Descartes, being and cognition are yoked in the phrase *cogito ergo sum* ("I think, therefore I am"); conversely, Descartes posits that animals do not have language or speech and therefore lack consciousness.[10] Yet, this human Enlightenment subject is a narrowly conceived category from which women and colonized or enslaved peoples are excluded; therefore, the human/animal binary is already troubled by those whose identities position them outside the category of "human." Later, Immanuel Kant raises the issue of rationality, arguing that the difference between human and animal is reason.[11] A number of thinkers have complicated these constructions. Charles Darwin, for example, argues that traits like sense, emotion, and intuition are not limited to humans but are visible in animals.[12] Jacques Derrida makes a similar claim on the basis that humans themselves may not possess the attributes of humanity that have been articulated in the European philosophical tradition.[13] Notably, the subject of human thought throughout this body of work is exclusionary, based on the primacy of the white, male, European Enlightenment subject. It thus fails to encompass the full sweep of humanity, including women, working classes, and people within the Global South, including those who have been enslaved and colonized. The fraught nature of the human subject articulated in this body of work is the very "human" that shapes the development of the humanities.

Developments in computing technology have influenced investigations about the nature of humanity as well. While humans and computers appear radically different in form, computing is increasingly focused on replicating human processes. An early inkling of this movement was evident in IBM's computer Deep Blue, the chess-playing machine that beat Grandmaster Garry Kasparov in 1996. Now, IBM's Watson, an artificial intelligence supercomputer, has successfully defeated *Jeopardy!* champions, including Ken Jennings, who holds a record number of consecutive wins on the game show, and Brad Rutter, the show's highest earner of award money. Watson has seen a number of applications, such as making health care decisions for lung cancer at Sloan Kettering Cancer Center, powering self-driving buses, and serving as a teaching assistant at Georgia State University, where students did not realize that Jill Watson was, in fact, a chatbot.[14] Given the humanity ascribed to such technologies, it is incumbent on digital humanities practitioners to engage with the question of what kinds of subjectivities are centered in the technologies that facilitate their scholarship.

An important model for interrogating these matters in digital humanities appears in feminist and postcolonial science and technology studies scholarship, which brings together the philosophical and technical implications of human subjectivity by raising concern over divisions between the binary categories of "human" and "nonhuman." Donna Haraway, for example, has emphasized the need to deconstruct the division between the two through her work on the cyborg.[15]

Within discourses of technoscience, such binaries are often taken for granted as a matter of objective fact, but, as Haraway's work suggests, the separation between the human and nonhuman is a false one.[16] Rather, the two categories are both connected and interdependent. For example, Jane Bennett posits the existence of a vibrant materiality that connects human and nonhuman bodies.[17] Appreciating the relationship between the human and nonhuman is essential to understanding the contemporary world. As Karen Barad's theory of agential realism posits, the world is best interpreted through connections between human and nonhuman, rather than the presumption that they occupy separate realms.[18] When computers and other forms of technology blur the boundaries between human and machine, as they are presently doing, the nature of humanity comes into question. When engaging with "artificial intelligence," scientific scholarship positions "artificial" as nonhuman but seeks to replicate processes of "human cognition."[19] The term "artificial," which dates to the early fifteenth century, denotes "made by man" and is further related to "artifice," connoting "skill, cunning," "device," and "trick."[20] The goal of artificial intelligence is to create devices that skillfully trick humans into believing that computers are capable of cognition—and it is increasingly becoming more successful.

But what forms of "human" are sanctioned when artificial intelligence can reproduce human processes? Alison Adams argues that artificial intelligence reflects "Western" presumptions about human intelligence, privileging white, Eurocentric male subjectivity as the form of cognition on which it is modeled.[21] This effects the erasure of women from the history of scientific knowledge production. These disembodied neural networks[22] and other cognitive models are being created based on theories of human cognition that are themselves the result of observing intellectual processes of white men of the Global North. Therefore, artificial intelligence purports to represent universal "human" intellectual processes but, in fact, is only representative of a fictive "universal" model of human cognition that elides women, peoples of the Global South, and those at the interstices of these categories. In addition to reflecting such biases, these technologies are based on tech stacks, platforms, and code that privilege knowledge production of the Global North in their design. Complicating the relationship between human and nonhuman in these cases is essential to understanding the connections between the two and the influences of normative human subjectivities on technological development. As technologies like algorithms and artificial intelligence are brought into digital humanities practices, it is critical to understand the assumptions subtending their development.

There are a wide array of instances where universal notions of humanity are invoked and implied in computing. Syed Mustafa Ali's work provides an example of how to uncover them and interrogate their politics. He raises the issue of robotics in this regard, making the case that humanoid robots produce and obscure racial concerns in purpose and form.[23] Ali questions whether robot faces are being conceived as raceless, obscuring Eurocentrism with false universalism.[24] Ali's concerns are evident in the rhetoric surrounding the design of Sophia, a product of Hanson

Robotics. The company bills Sophia as a humanoid, female, and lifelike robot, capable of generating more than sixty facial expressions. Through the coupling of camera and algorithm, Sophia is capable of visual recognition. Built with Google Chrome voice recognition, Sophia processes speech and uses the input for machine learning. According to company founder David Hanson, "Artificial intelligence will evolve to the point where they [robots] will truly be our friends. Not in the ways that dehumanize us, but in ways that rehumanize us, that decrease the trend of distance between people and instead connect us with people as well as robots."[25] He credits the humanoid face installed on Sophia with facilitating connections with humans, making the case that a robot needs a "beautiful and expressive" face to do so.[26] Modeled after Hanson's wife and Audrey Hepburn, Sophia raises not only the issue of the unacknowledged influence of race in the production of robots that Ali identifies but also the question of aesthetics governing "beauty." The significant market for skin-whitening products and plastic surgery in Asian countries is one example of the way that whiteness has come to signal the global standard for beauty, a legacy of white supremacy and colonialism. Another important example is the Clark doll studies, first run in 1939 and repeated in 2009, in which children of multiple races repeatedly identified a white doll as more beautiful than a black one.[27] By speaking to the visual dimensions of the face, Ali provides a physical example of what is, in most cases, an ephemeral understanding of the way that technologies are coded by race. Ali's analysis itself is an important contribution to digital humanities and its capacity for using humanistic inquiry to think critically about and complicate progressive narratives of technological development.

In the same way, a reading of "Large-Scale Image Memorability," or LaMem, developed by the Massachusetts Institute of Technology, illustrates the implications of these issues for digital humanities because LaMem draws on a database of images and machine learning algorithms in its methods. LaMem is artificial intelligence software reported to have "near-human" accuracy for memory, applying predictive algorithms designed to identify images that are most "memorable." LaMem is available online and users can upload images that are then scored for memorability, with heat map overlays indicating the most memorable portions of the image. While LaMem is not, strictly speaking, a digital humanities project, it raises troubling questions of how a universal human is interpolated in method.

LaMem relies on the concept of "intrinsic memorability" of facial images. Intrinsic memorability has been studied by the lab of one of LaMem's designers, Wilma Bainbridge, through creation of a 10,000+ image database representing the adult U.S. population, "following gender, age, and race distributions."[28] Amazon Mechanical Turk workers with IP addresses in the United States coded the images for demographic matching. They were then tasked with identifying "intrinsically memorable" dimensions of these images. Bainbridge and colleagues' work is underscored by the claim that "despite personal experiences, people naturally encode and discard the same types of information."[29] While care was taken to ensure that data

coding was undertaken by people located within the country, the study does not attend to the issue of cultural location within the United States, which may influence memorability. It is undercut by scholarship that claims memorability is influenced by racial and ethnic affiliation.[30] Moreover, these results are represented as generalizable to human populations, though they depict only a specific subset of users in the United States. While such an intellectual move is typical within discourses of the sciences, both feminist and postcolonial scholarship within science and technology studies have raised ethical questions about doing so.[31] By claiming that this research signifies human processes, Bainbridge and colleagues locate subjects in the United States at the center of a universal form of the human. While other scholars have made allowances for the subjective nature of memorability, they also aim to find evidence of agreement that supersedes subjective difference.[32] This is an important example of how the seeming objectivity of technology, an assumption that runs through many digital humanities projects and methods, can lead to the instantiation of a normative human subject. Further, it makes the case for problematizing this presumption.

LaMem also gestures toward problems with reproducibility and data coding that influence digital humanities practices. When creating LaMem, project directors selected images that had been used in these earlier memorability experiments, which were assigned memory scores and fed to the project's algorithms. They offered no indication of why the images were memorable, but the results were comparable to memorability scores rated by data coders.[33] By using images from previous studies, they replicate the centrality of data from the United States while making generalizable claims about human processes. Reproducibility is often invoked as a marker of validity, but it is valid only in relation to initial design. When the design itself contains fundamental presumptions about human subjectivity, simply producing more results only confirms the initial biases incorporated in it. One place this happens in LaMem is in the coding of data, which is portrayed as an objective process. LaMem used Amazon Mechanical Turk to code data, but its creators fail to identify who was included in or excluded from that labor pool, unlike Bainbridge and colleagues, who only selected workers with an IP address in the United States. As the majority of Amazon Mechanical Turk workers reside in the Global South, the question of who arbitrates memorability in LaMem is cloudy, and the anonymity of the Amazon Mechanical Turk labor pool raises questions about the cultural locations from which memorability is being determined. This is troubling not only from the perspectives of labor ethics—the pool of workers is paid mere pennies for performing coding tasks—but also from the reliability of results from data coded by an undefinable source.

These issues are particularly important as digital humanities practitioners turn to sources like Amazon Mechanical Turk for their projects. Notably, Lev Manovich's *selfiecity* relied on Amazon Mechanical Turk workers to code selfies for age and gender, while Ryan Heuser's *Mapping Emotions in Victorian London* used them

to attribute sentiments to locations drawn from Victorian literary texts.[34] Without the ability to interrogate the demographics of the workers who influence the data coding process, such as gender, race or ethnicity, and nationality, it is unclear which factors are influencing the results of these studies. Instead, the creators make claims about their data that appear to transcend difference without establishing a basis for making meaning of the data. The presumption of a universal subjectivity endangers the integrity of the data, which is unaccountably influenced by the particulars of the workers' identities, cultural backgrounds, and geographical locations. As a result, this work exemplifies a troubling approach that foregrounds utility and instrumental rationality in project applications and serves as an important warning for digital humanities practitioners.

The Algorithmic Universals

Methodological choices embracing artificial intelligence and neural networks are further implicated in the construction of a universal human subject. This is evident in LaMem, which is situated by default in the epistemological and ontological moorings of the Global North, deploys an unspecified labor source drawn largely from the Global South, and simultaneously claims to reproduce "human" memorability. Failing to identify its own standpoint, the project elides cognitive processes that may be shaped by the particulars of lived and embodied experience.[35] Moreover, the creators developed LaMem using artificial neural networks, which are designed on information processing procedures and tasks engaged by the brain. Neural networks have been embraced by the artificial intelligence community because they can be automated to process large datasets and identify patterns without human intervention. Like other methods subtending artificial intelligence that are based on modeling human cognition, these networks make universal claims about human processes based on scholarship that privileges a white male subject. As Carl Stahmer's work suggests, the application of artificial intelligence to digital humanities is largely focused on the interoperability of technical processes, particularly for interventions that engage with big data.[36] This acultural approach fails to attend to the cultural politics that subtend the production, circulation, and consumption of humanities data itself. Another troubling concern surrounding the use of neural networks is the challenge of identifying the precise processes at work. For example, the creators of LaMem—like many others who engage with artificial neural networks and algorithms—cannot explain the mechanisms by which their software works.[37] While they can explain the algorithms designed and why they used them, the exact processes by which LaMem arrives at results about memorability are a mystery to the creators. Regardless, they express confidence in the response, claiming accurate results. This is the same kind of scientific logic that risks influencing computational approaches to humanities data.

Failure to understand how algorithms work is a larger problem predicated on the iterative nature of algorithms, the large scale of calculations they perform, and the vast number of data points these entail. This has repercussions for digital humanities projects that use them. As Rob Kitchin notes, "Algorithms search, collate, sort, categorise, group, match, analyze, profile, model, simulate, visualize and regulate people, processes, and places. They shape how we understand the world and they do work in and make the world through their execution as software, with profound consequences."[38] Among the myths that the era of big data has produced is that the scope and quantity of data being produced by people is so vast in scale and computing is so powerful that their outputs are becoming increasingly more objective.

However, considering the variety of ways in which algorithms are deployed to assist with conclusions that might otherwise be drawn by people alone—banking and loan decisions, likely recidivism for criminals, or employee hiring—the stakes of algorithms are high. The lack of transparency and the seeming black box nature of algorithms obscure the fact that they are subject to biases, in spite of myths that suggest their objectivity.[39] When they are deployed for subjective decision making, there are no guarantees of accuracy, and they function as gatekeepers of information. An example of this is YouTube's algorithmic labeling of LGBTQ+ content as unsuitable for users under age eighteen, which included videos that did not contain violence, nudity, or profanity.[40] Algorithms do so with biases that are not obvious but reflect the values of engineers who create them and the purposes for which they were created.

These issues are critical for digital humanities practitioners to consider. Like N. Katherine Hayles's posthuman subject, the contemporary human at stake in digital humanities is "an amalgam, a collection of heterogeneous components, a material-informational entity whose boundaries undergo continuous construction and reconstruction."[41] Humans are largely inseparable from their implication in the production of data. As Stephen Marche notes, "All human endeavor has by now generated its own monadic mass of data, and through these vast accumulations of ciphers the robots now endlessly scour for significance much the way cockroaches scour for nutrition in the enormous bat dung piles hiding in Bornean caves."[42]

Making meaning of those data is part of the scholarly possibilities of digital humanities, and it has implications for human subjectivity. As Gary Hall asks, "Is the direct, practical use of techniques and methodologies drawn from computer science and various fields related to it here, too, helping produce a major alteration in the status and nature of knowledge and indeed the human subject?"[43] For David M. Berry, the challenge to subjectivity has repercussions both at the level of the individual and in how we theorize the human subject: "The digital assemblages that are now being built not only promise great change at the level of the individual human actor. They provide destabilising amounts of knowledge and information that lack the regulating force of philosophy—which, Kant argued, ensures that

institutions remain rational. Technology enables access to the databanks of human knowledge from anywhere, disregarding and bypassing the traditional gatekeepers of knowledge in the state, the universities and the market."[44] Consequently, the impact of technologies on subjectivity is an important dimension of the "human" in the digital humanities.

In the context of digital humanities scholarship, James Dobson suggests that applications of these algorithms reflect nostalgia for structuralist literary criticism and disavowal of poststructuralist thought.[45] Such moves are evident in projects like heureCLÉA, a "digital heuristic" for identifying "narratologically salient features in textual narratives."[46] This language and the project itself suggest that narrative features of a text are divorced from its content, including its circumstances of production and cultural location. The algorithms the project uses are tasked with decisions about narratological salience that are themselves subtended by universalist notions of the human rather than situated in the contexts informing the text. Like other algorithms, they are steeped in the cultural and political implications of computation and code. These implications are overdetermined by the ontological categories and epistemological processes of the Global North. Further, datasets and databases used in conjunction with algorithms are themselves constructed and subject to political and social forces.

The Humanoid Text

In the realm of computational textuality, which is a popular subject in digital humanities scholarship, algorithms are also complicit in instantiating universal, and therefore exclusionary, forms of the human. One area in which this is particularly important is the use of natural language processing software and machine learning to produce texts that can "pass" as human. As Christer Clerwell argues, readers are increasingly unable to tell the two types of compositions apart.[47] The phenomenon of "passing" in racial politics in the United States connotes the practice of people of color who can be accepted as a member of a different race because of their phenotypical features presenting themselves as a member of that other group (typically as white). The term has come to be used to signify the broader ability of members of a particular identity category to convince others that they occupy a different one. The "humanoid texts" composed by computers are engaged in a similar act of dissimulation: presenting themselves as being written by humans when they are, in fact, computer generated.

Indeed, humanoid texts are increasingly becoming more successful at passing for human. When teaching digital literature courses, I include a unit on computer-generated texts, which begins with an exercise where I show students texts generated by computers and texts composed by humans, asking students to determine which were created by computers and which were written by humans. These texts range from news stories to snippets of code to poems, all of which confound students'

expectations of what humans and algorithms are capable of composing. One pairing of poems, in particular, receives great attention in this exercise: a sample from J. Nathan Matias's Swift-Speare project on poetry composition with machine learning and Harlem Renaissance poet Jean Toomer's "Sound Poem (I)."

To create Shakespeare-like sonnets, Matias trained the Swiftkey machine-learning engine on Shakespeare's sonnets and developed a dataset of William Shakespeare's vocabulary for the application to use. He generated sonnet lines word-by-word, using only the suggested words offered by the application. The result was a sonnet eerily reminiscent of Shakespeare's own:

> When I in dreams behold thy fairest shade
> Whose shade in dreams doth wake the sleeping morn
> The daytime shadow of my love betray'd
> Lends hideous night to dreaming's faded form
> Were painted frowns to gild mere false rebuff
> Then shoulds't my heart be patient as the sands
> For nature's smile is ornament enough
> When thy gold lips unloose their drooping bands
> As clouds occlude the globe's enshrouded fears
> Which can by no astron'my be assail'd
> Thus, thyne appearance tears in atmospheres
> No fond perceptions nor no gaze unveils
> Disperse the clouds which banish light from thee
> For no tears be true, until we truly see.[48]

Given the poem's meter and rhyme scheme, my English students invariably assume that this is a poem composed by a human. Typically, they insist that this is, in fact, a sonnet written by Shakespeare that they have read before. Conversely, students are quick to label Toomer's "Sound Poem (I)" as a computer-generated text. The poem begins, "Mon sa me el kirimoor" and continues in this register, representing sounds not words.[49] Because of Toomer's experiment with sound and poetic form, students are quick to dismiss the poem as randomly generated nonsense produced by a computer.

The ability to distinguish whether these texts are composed by humans or computers is more than just a parlor trick. Rather, it speaks to the way computer-generated texts are complicit in epistemic violence. Students generally identify "generic" texts composed of simple, factual sentences as being computer generated. By imitating a generic approach to human textuality that is itself a manifestation of a specious universal subject, these texts elide the complexities of human life that influence writing: culture, race, ethnicity, nation, gender, and language, among others. Yet, when students are confronted with the Swift-speare poem and Toomer's poem, they are quick to embrace the algorithmically generated poem as Shakespeare's work

and Toomer's poem as gobbledygook. This is particularly ironic because Harlem Renaissance writers like Toomer were writing to lay claim to the humanity of African Americans and their place in the democratic space of the nation through their capacity to produce art. Yet, Toomer's poem cannot pass for human.

This phenomenon is a direct result of one of the goals for natural language processing software: to develop algorithms and programs that can replicate "human" language. A nonhuman actor, in this case, is tasked with completing a "human" task. Just as "artificial" intelligence is expected to mimic human cognition but instead replicates white, Eurocentric male cognition, natural language processing software is complicit in the production of normative forms of the human. At stake in the production of humanoid texts is the question of universalism. With the move to generate software and algorithms that replicate "human" processes, particular forms of "human" are authorized. As postcolonial scholars have argued, the Enlightenment gave rise to the idea of a homogeneous definition of "human," which centers the European subject and, in turn, marginalizes all whose cultures, lifestyles, and values deviate from the universal. Postcolonial theory, crucially, has made the case for the importance of the particular, grounded in the idea that, indeed, cultures—specifically the cultures of colonized or formerly colonized communities—are left out by universalist discourse.

Language and textuality, which are core dimensions of the humanities, have played a significant role in the valuing of universalism, with the colonizer standing in as the figure of the universal, devaluing the particular as the culture of the colonized. Textual production of Europe—whether Homer, Shakespeare, or Cervantes—is valued for its universality and its articulation of a "human condition." That very articulation of "human" produces an essentialist definition expansive enough to account for Europe and European cultural production but that does not extend to Europe's "Others."[50] Indeed, the universal is not the universal but the European. Therefore, the universalist move to the "human" legitimates a narrow portion of the world as human—dominant cultural powers in particular—while raising the question of the claim to "humanity" available to a larger swath of the world that has been or is under the sway of colonialism. Universalist discourses surrounding language and textuality echo G. W. F. Hegel's assertion that there are people outside the dynamic movement of history. While this claim about Africans is well known, Hegel made similar assertions for Indians and nomadic peoples. In the case of Indians, Hegel accords the absence of history to an absence of *written* history: "It is because the Hindus have no History in the form of annals (*historia*) that they have no History in the form of transactions (*res gestae*); that is, no growth expanding into a veritable political condition."[51] Therefore, writing is linked to a particular form of human consciousness and subjectivity, to the production of culture and the possibilities of cultural transformation. In turn, writing—or lack thereof—is linked to the production of the human and to human destiny. Yet, digital humanities projects that take up computational approaches to textuality often fail to address the

cultural dynamics at stake, even when they are working with texts from communities that have historically been marginalized. For example, Shlomo Argamon and Mark Olsen's text-mining work aims to distinguish between black and nonblack playwrights and claims that their algorithms can discern between the two. Yet, they fail to attend to design of the algorithm itself, what "black" means in the context of their work, and its implications of the study.[52] This is especially disconcerting because what it means for a writer to be "black" is a vexing question, and Argamon and Olsen fail to interrogate the ways blackness is coded through language in their data. This is a missed opportunity to contribute to our understanding of the linguistic features of writing by situating the work in the historical and cultural contexts of African diasporic writing.

The production of a universalist notion of the "human" relies on defaulting to the aesthetics of dominant cultures and languages. Language wielded in this context determines the limits of universalism, both those included within its ambit and those outside it. Aesthetics that diverge from dominant ones are, accordingly, outside the boundaries of the "human" inscribed in writing. Such an idea is evident in Thomas Babington Macaulay's infamous "Minute on Indian Education," which argues for the cultural supremacy of English literature. Macaulay argues that the whole of the literature of the East cannot compare to one shelf of British literature and proposes that instruction in English literature might produce a group that is Indian in blood but British in taste and intellect.[53] For Macaulay and other British colonizers, literature serves as a strategy of domination under the guise of a universal culture.[54] Given that people writing from the margins, whether Anglophone colonial and postcolonial writers or African American writers of the Harlem Renaissance, have used writing to lay claim to voices denied to them, the deployment of universalist forms of the human through computer-generated text risks deauthorizing these voices.

Asserting the ability of a text, an algorithm, a piece of software, or a computer to "pass" as human presumes a universal definition of "human" and reduces the totality of humanity to the ability of a computer to perform a task in a particular way defined by a set of limits that reproduces dominant cultural norms. Yet, in the research on these mechanisms, there is a marked lack of clarity of how "human" is defined. In some cases, this scholarship rests on the notion of "human cognition" or the idea that there are certain mechanisms of thought that are, in fact, universal. The ontological and epistemological biases of this scholarship imply that even the notion of human cognition is grounded in the Global North. Universalism in the context of human cognition and humanoid texts brings with it the presumption that "science" mitigates cultural biases and is immune to difference. However, it only manages to reinforce the politics, cultures, and aesthetics of dominant cultural paradigms. Therefore, it is imperative that digital humanities practitioners resist the reinscription of a universal human subject in their scholarship, whether at the level of project design, method, data curation, or algorithm composition.

Notes

1. Baldwin, *Small Wonder.*
2. "Turing Test, 1950."
3. Leonard and King, *Robots Reading* Vogue.
4. Associated Press, "Microsoft Kills."
5. Associated Press, "Microsoft Kills."
6. Associated Press, "Microsoft Kills."
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