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Author

Kim, David D

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PROLEGOMENON: Distant Reading and Computational Networking in German Studies

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David D. Kim

It seems fair to say that Franco Moretti's book *Distant Reading* has transformed how cultural and literary scholars understand critical interpretive methods. Although computational text analysis dates back to the late 1940s, it is in no small part due to Moretti's bold use of digital tools in analyzing large corpora of texts that the field of digital humanities has only recently gained traction.¹ Heralding a new age of humanities computing, he has opened the door to pursuing literary studies in collaborative computationally oriented laboratories.²

Of particular importance in Moretti's paradigm-shifting work is the disruption of close reading through network analysis. By scrutinizing connections among subjects, objects, and concepts, this inquiry driven by big data aims to shed light on problems that come into view only at a large scale. Moretti explains that the basic idea behind this type of distant reading is to estrange textuality. Since close reading has long been tied to an ideological school or to a particular discourse, his argument is that network visualization makes possible a more comprehensive and empirically documented interpretation.³ More specifically by translating the plot into a set of social relations between characters, it turns "time into space," making everybody appear equally in the present (Moretti 215). By transforming "*the temporal flow of a dramatic plot [...] into a set of two-dimensional signs*," it reveals the clustering of characters "at a single glance" (211; emphasis in original). Although temporal divisions are flattened into relations, Moretti claims that such visualizations elucidate communal properties that are otherwise difficult to discern. When applied to Shakespeare's *Hamlet*, for instance, the computer-generated graph illustrates that Horatio, seemingly a marginal character in close reading, goes back and forth between two major social networks, each representing a court in the drama.

¹ It is beyond the scope of this essay to examine the history of digital humanities beginning with Roberto Busa's philologically inspired, indexical work on St. Thomas Aquinas. For an overview, see David Berry (2-3).

² For an informative critique of the science lab as a model for scholarly production in digital humanities, see Amy Earhart (393-394). Summarizing other scholars who have reflected on this problem, she identifies four reasons why such a design is problematic for humanities research. They include the hierarchy of collaborative relationships in laboratories, the implication of data-driven scholarships for the humanities, the prioritization of science-based projects at educational institutions, and the simplistic adoption of existing infrastructures and epistemologies in digital humanities.

³ Jane Gallop offers an astute examination of close reading as an "enhanced, intensified reading" whereby reader and text enter into a deep encounter (183). As she explains, though, it is a tediously theorized practice. Johanna Drucker is critical of the suggestion that network visualization constitutes a less mediated knowledge production. According to her, it "*displays information*" without revealing the assumptions or interpretations that are made in graphic formats (2014, 3; emphasis in original).

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Moretti acknowledges, however, that this methodology involves both abstraction and reduction. The graph, static as it is, does not specify who addresses whom (direction); it only shows who speaks with whom. Nor does it distinguish strong ties from weak ones (weight); everyone appears equally connected to one another. Being on stage with someone or speaking with someone signals a quite different interaction, but such a distinction does not figure in the visualization. Furthermore, as mentioned above, the graph obscures any change in sociability over time; it includes every character in the network at all times. “This can’t be right,” as Moretti himself concludes (214), explaining that currently existing network visualization platforms do not lend themselves to humanistic inquiries without deliberate and strategic manipulation.

What Moretti expresses here is a rather common frustration among digital humanists. As Burak Arikan observes, “existing tools for network mapping and analysis” tend to be “designed for engineers, scientists, and business and government experts” (268). These applications do not represent, just to name a few examples, “layers of direction, weight and semantics,” which are in accordance with the practices of close reading (Moretti 240). So what are some of the pressing theoretical and technological challenges when network analysis fuses with close reading? How do we generate the type of hybrid methodology or pedagogy best suited for raising and answering scholarly questions in the humanities? When do digital humanities projects speak to scholars who work mostly within disciplinary boundaries or with more established methods? The following pair of articles—one on Goethe’s concept of *Weltliteratur*, the other on Sebald’s poetics of remembrance—is an attempt to address these queries by foregrounding computational networking as a mode of knowledge production in digital humanities and German Studies. There are obviously many tools, objectives, and practices at this intersection, but the essays shed light on how I have collaborated with undergraduate and graduate students in German Studies on data mining, collaborative graphing, network analysis, and multimodal argumentation.

WorldLiterature@UCLA and *Patterns of the Anthemion* are digital humanities projects that explore the value of network mapping for humanities research and teaching. In the former, the scholarly team consisting of faculty and students creates microcosms of world literature by constructing, on the basis of big data, Goethe’s intellectual network, as well as a translational map of *Die Leiden des jungen Werthers* in different languages. In the latter, the authors utilize the open-source data visualization program *Gephi* to investigate how Sebald uses language to differentiate between networks of coincidence as a central topos in fictional historiography. Both projects generate “network narratives,” narratives that present complex relationships between subjects, objects or concepts without generating totalizing pictures (Beal and Lavin 2). These narratives are neither linear nor complete. Complementary to spatial representations and figurative maps, they reveal interactions with and interpretations of captured data.⁴ At a broader level, the projects

⁴ According to Drucker, it is pivotal to conceive of data as constructed characters, figures or quantities within particular contexts or from specific points of view. She argues that data are culturally inscribed, time-dependent constructs of knowledge. They require a critical shift in language: “By recognizing the always interpreted character of data, we have shifted from data to capta, acknowledging the constructed-ness of the categories according to the uses and expectations for which they are put in service” (Drucker 2011, 12). In other words, data are neither straightforward nor self-evident; they are non-neutral representations of the world from the perspective of a calculating subject. Elsewhere, Drucker goes a step further by calling for a recovery of “the lineage of critical theory” to expose any implicit or inherent values that are inscribed in digital artifacts (18). Every digital activity draws upon multiple systems of analysis, both material and

combine aspects of close reading and distant reading while reflecting on best practices of data collection and curation, faculty research and student learning, scholarly argumentation and digital publishing. Focused as much on theoretical issues as on applied interdisciplinary frameworks, they illuminate how “teamwork” in a digital setting allows researchers to treat historical, linguistic, literary, and intellectual affinities as malleable, observer-dependent connections (Burdick et al. 134).

Not intended to be exhaustive in explication, the essays present certain project and interface designs as illustrations of how digital tools are utilized in context-based humanistic investigations. By virtue of the multiple disciplinary discussions within which both projects are embedded, the two “big” problems of world literature and historiography addressed by these essays stimulate productive and synthesizing negotiations between close reading and distant reading, computational analysis and cultural awareness, quantitative calculation and qualitative evaluation.⁵ These activities coexist within iterative and open-ended frameworks, critically relating German Studies to digital humanities. They employ digital technology to generate interconnected and multimodal knowledge structures. At the same time, they foster “cognitive abilities of thinking both with and against the machine” (Jessop 307).

In addition to being inspired by Moretti’s pioneering work, the following digital humanities projects draw upon Georg Simmel’s study of interpretive linkages in the human mind and interpersonal networks in modern society to build and analyze relations as differentiable structures within specific milieus. In “Die Kreuzung sozialer Kreise,” an essay widely considered to be the beginning of social network theory, Simmel describes social relations as ambiguous, time-dependent, and variously differentiable linkages. For him, networks are living constellations of people and their ideas. They are positive and negative. Although social relations look homogeneous, equivalent or straightforward at first glance, they vary from one another just like individual thoughts. Simmel writes:

Das zufällige Zusammensein in Raum und Zeit reicht zunächst hin, um die Vorstellungen psychologisch zu verknüpfen; die Vereinigung von Eigenschaften, die einen konkreten Gegenstand bildet, erscheint zuerst als ein einheitliches Ganzes, und jede derselben sieht mit den andern, in deren Umgebung allein man sie kennen gelernt hat, in engem assoziativem Zusammenhang. Als ein für sich bestehender Vorstellungsinhalt wird sie erst bewußt, wenn sie in noch mehreren und andersartigen Verbindungen vorkommt; dann tritt das Gleiche in allen diesen in helle Beleuchtung und zugleich in gegenseitige Verbindung, indem es sich von den Verknüpfungen mit dem sachlich Andern, nur durch zufälliges Zusammensein am gleichen Gegenstand mit ihm Verbundenen, mehr und mehr frei macht. So erhebt sich die Assoziation über die Anregung durch das aktuell Wahrnehmbare zu der auf dem Inhalt der Vorstellungen ruhenden, auf der die höhere Begriffsbildung sich

immaterial, but their programmed correlation does not expose knowledge as much as it creates the condition under which a certain interpretation as approximation is supposed to become possible. The digital activity is managed by what Drucker calls “a model of humanistic interface design” whereby the complexity of calculations, events, and ideas is exposed (1).

⁵ Ted Underwood asserts that humanists are not opposed to distant reading and quantitative assessment. What they find troubling is the absence of “the principle of contrast that has long distinguished literary culture from the forms of learning purveyed by other disciplines” (16).

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aufbaut, und die das Gleiche auch aus seinen Verschlingungen mit den verschiedenartigen Wirklichkeiten herausgewinnt (20).

As Simmel suggests in this telling paragraph, a superficial thinker views associations as a unified whole, whereas a person with greater associative sensibilities knows how to distinguish the different types of connections from one another. She does not reduce the coincidence of contemporaneity or co-presence to sameness or meaninglessness.

Simmel's analogy between social networks and critical thoughts informs how *WorldLiterature@UCLA* and *Patterns of the Anthemion* use big data visualization as a valuable mode of humanistic inquiry. The point here is not to confirm critical hunches or interpretations with given data. Our ambition is to utilize and refine digital tools in order to enrich research and teaching in German Studies.⁶ This hybrid methodology or pedagogy requires experimentation with collaborative learning, interactive iteration, project design, and multimodal literacy, as they become more and more core elements or practices of German Studies in the digital era.⁷ It is also our intention to reflect on Matthew Kirschenbaum's observation that "critical methods, assumption, and discourse networks do not always align" with disciplinary practices (54). Despite differences in historical context and thematic focus, the projects exemplify how questions derived from reading literary texts and scholarly publications closely serve as the bases for pursuing open-ended digital humanities projects.

Although it is beyond the scope of the following essays to discuss algorithmic properties of networks, questions of project management and technical training, sources of institutional funding or even experiences with web development and plugin coding, we hope that the investigations will contribute to continuing already vibrant debates on bringing together German Studies and digital humanities. At stake is the challenging interface between these diverse fields.

⁶ Bethany Nowviskie, Jeremy Boggs, and J.K. Purdom Lindblad emphasize the importance of "unforeseen insight" for digital humanities projects (14). I also want to underline how digital humanities projects link faculty research to student learning, although, as Brett Hirsch observes, there has been an "almost systematic relegation of the word 'teaching' (or its synonyms) to the status of afterthought" in this field (5).

⁷ See Lisa Spiro's explication of experimentation as a core value in digital humanities (28).

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