**Transcript for Episode 19: Dimensions of Data: Visual Disciplinography with Derek Mueller**
*Run Time: 23:30*

AH:     Allison Hitt (co-executive producer)
JR:     Jana Rosinski (host, producer)
DM:     Derek Mueller (special guest)
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*Cue music: "Readers! Do You Read?" by Chris Zabriskie.*

AH:     You're listening to This Rhetorical Life, a podcast dedicated to the practice, pedagogy, and public circulation of rhetoric in our lives.

JR:     Hi, this is Jana Rosinski. Recently, I had the pleasure of conducting an asynchronous interview with Derek Mueller, Assistant Professor of Written Communication and Director of the First Year Writing Program at Eastern Michigan University. Derek's research converges at the intersections of writing, rhetoric, and technology, caring for questions of pedagogy, mentorship, and the shape of the discipline. In examining these matters of concern, he utilizes data mining, visualization and modeling methods to make scholarly and discourse networks visible through graphing and mapping.

        A special thanks to Derek for being a part of the show.

JR:     To begin, I think a plotting of points would be useful: What does data have to do with rhetoric and composition? What do we gain by seeing our discipline? I asked Derek about what draws him to working with data and the visual.

DM:     So I guess…I suppose in part *why data?* and *why visualization*?—Maybe, I don't want to be too flippant—but I think it's possibly the repressed former life, or former career, sports information director in me. I spent seven years on the sidelines of sporting events in Kansas City at my undergrad alma mater. And, you know, really there, I was spending time doing a lot of different things: announcing starting lineups and creating gameday programs, different kinds of posters about events and things like that, you know, staffing events. But one big part of that was, without much real technical infrastructure to support it, things like the software that's designed to do these things, I spent a lot of time trying to come up with systems, especially early on—so these are around like 1997 or so—working on how best to make sure statistical records were kept in real time at athletic

events. We had, I don't know, several different sports—something like 13 different programs—and so, you know, I realize now that some of my interests in data, statistics, visualization, and also some of my comfort level with spreadsheets and databases stems from those years spent puzzling through those kinds of questions in an athletics context with very little infrastructure to do it with. We were essentially trying to figure it out as we went—systems, for example, tracking statistics in real time at a basketball game with, you know, pencil and paper. So you have maybe someone who's calling out every action in the game and then someone else who's recording it, and getting involved with that— doing it myself, filling in for students who maybe were sick and didn't show up to work or sometimes just when we were short-staffed, things like that. I got to know those problems from a lot of sides. I suppose if anything, I can characterize my interest in those same sorts of real-time activity tracking interests or experiences and generalizing them to sort of a broader domain of disciplinary activity. That's essentially in a nutshell what I see some of my work as attempting these days.

*Cue music: "Is That You or Are You You?" by Chris Zabriskie.*

So you know, we can—with data, we can describe a complex activity as it unfolds, and then we can recreate…we can approximate that event through the data that's captured in whatever methods we use: some quantitative, some qualitative, often a blend or mixed methods. Obviously we can engage these things by other means, too—other means like interviewing. But counting things that happen and simply, sort of, engaging them at that level, it feels to me like this is there for the taking as far as some real exploratory work about what disciplinary activity—again, what's traceable about disciplinary activity. I mentioned that a little while ago.

So for me, I guess, maybe, I keep gravitating back to terms, in particular a term like "disciplinography" or the writing of a discipline. This is influenced in large part by Maureen Daly Goggin's work in authoring a discipline. This is a term also that Collin Brooke took up and that we talked a lot about a few years ago when I was at Syracuse. Disciplinography, or disciplinographic methods—What are they? What does this writing of the field possibly look like and involve that is not necessarily just repetition of what's been attempted before, which are mostly localized and hyper-local kinds of narrative accounts that have a kind of experiential bias, too, in that they're best said, best told by people who have spent almost their entire careers in a particular location or attending the conference annually. So they have a much higher degree of familiarity kind of informally, just sort of learned by a lot of experience. And that's hard to recreate or reproduce or even extend to newcomers to the field. So I think in my dissertation, you know, I framed disciplinography in terms of distant reading, and I tried to enact some different distant readings of disciplinary activity. I was inspired there in terms of distant reading by

Franco Moretti's work on patterning and the history of the novel.

I have to say, I haven't been entirely satisfied with distant reading because—a couple of reasons. I think there's a common sense, especially in English studies, there's a common sense kind of association that distant reading bears to close reading, and that both of those essentially point back in the direction of *reading* and a sort of meaning-making hermeneutic direction, and that's fine. I don't think that's a problem exactly, but I kept finding that I wanted distant reading to make more explicit gestures toward the making, toward creating new things that sort of pointed to change, and that also itself stood as a rhetorical event. So I feel like distant reading with its emphasis on reading still seems to—I don't know, there's sort of a faint dissatisfaction I have with that, so maybe I'm tipping a little bit more toward different castings of disciplinography, like maybe aerial or maybe from middle-altitude disciplinography, kind of changing perspective or the depth of perspectival perch. I've talked about that before. Also alien disciplinography has come up a little bit with an interest in seeing the field as constituted not by purely human activity but thinking as well about the other dimensions of the system. So other aspects of disciplinarity, you know, *what are the things of the field?* for example. That question interests me, and I don't really know how to answer it, but I think it's a fun question and one that is due for different kind of grappling.

So I guess I'm looking at ways to maybe write the field, to re-write the field, and to continue to write the field. To update it essentially, to continue pushing for its visibility, but to do so in ways that ever so slightly estrange it from—and maybe even estrange it radically in some cases from—the ways it's been written in the past. And again, by mentioning it that way, I mean no disrespect to status quo or fairly conventionalized sorts of approaches to disciplinary history or disciplinary accounts, but just that I would like to see that sort of broadened out to include some of the data visual, some of the infographic, some of the different computational treatments that are available to us now in much more sophisticated ways than they were just half a decade or obviously definitely a decade ago.

JR:     Derek makes maps from the language in the texts of the discipline of rhetoric and composition. Using digital tools, he distantly, with the help of coding and scripting, reads large collections of published texts as datasets in order to look for patterns of term use, citations, and locations. From those patterns, Derek creates visualizations of these trends and discourse networks. His interest lies in the discovery of what becomes visible when we alter how we look at the materials of discourse. I was curious to find out what Derek thought about the affordances and limitations of doing work that is grounded in the digital.

DM:     You know, I suppose in response to what this makes available, its affordances, I think of

the digital as really operating with a variety of different, divergent, and in many ways distinct kinds of logics. Now these different logics, they're really quite vast and varied; they're myriad logics operating with and sort of through and among the digital. And it seems to me that digital methods, then, sort of take seriously these different pathways that maybe open up for us to engage various researchable questions. So this is, for me, thinking a little bit about computational rhetorics and, you know, sort of getting into these discovery routes and discovery pathways that open up for us when we test out and explore, where we involve computers in sort of co-shaping or transforming different kinds of data sets for us and with us. But the digital work definitely responds to and is itself constituted by these different logics, and so I think that's why maybe, above all, what I find appealing in turning to digital methods.

Now as far as affordances and constraints, or affordances and limitations, I think that these are hard to generalize about. In, sort of, undertaking any kind of digital project, it seems to me that the affordances and limitations are pretty tightly coupled to, you know, the specifications of maybe a coding language. But let me, I guess maybe I can be a little bit more specific about that. So for example, I think in *Kairos* the tagline that I published that had the different word clouds for the keynote addresses at CCCC—that was built using a kind of a mix of different PHP scripts that were established by Chirag Mehta. He put those together, and I think he applied them to presidential speeches—State of the Union addresses historically or something like that—and so what I wanted to do with those was kind of make the move from those presidential addresses to actually all of the articles that I had from I think 1987-2006 or so, so I don't know, maybe 430-440 articles from Cs. I wanted to create a tagline that would show, you know, with the changing hues, sort of a brightening and dimming of terms as, you know, terms kind of darkened. That meant they became harder set in the kind of the corpus over that, I don't know two [or] two and a half decades. But you know, as I got into that I kept trying to find the ceiling on what this scripting process could handle. And it turns out it couldn't handle as much as I wanted it to, and it kept kind of—I don't know—breaking. So I built this humongous XML file with all of these articles, the texts from all these articles inside of it, which I'm sure is a violation probably of—I don't know JSTOR, actually it wasn't JSTOR, anyway—but I'm sure that it kind of butts up against some of those preferred uses, at least at the time. And by sort of trying to process the text that way, it kept kind of breaking. So what I learned is that there was sort of a cap or a threshold for how many tokens, which are sort of units of language, how many PHP, by the scripting process, could keep track of. And I can't remember what the number was, if it was 10,000 or 100,000, but in any event it kept breaking in particular on Albert Rusi's article from 2001, "Conversation and Carrying-On," which was about serio-ludic discourse in synchronous computer conferencing. This is an article, again, published in *CCC*, you know, right after the turn of the century. So, it kept kind of stalling on that. And so I guess that what I'm

saying is that I discovered a certain limit that then pushed me to think differently about, well, what can I do with this scripting kit or with this kit for rendering these tag clouds? So the result, I guess, is what you see in *Kairos* where it's just focused more on the keynote addresses.

But in developing that project, I think, and this maybe responds in other ways to the question about the digital making certain things available, I guess I was a little bit fixated on not only knowing the limits of that system but really wanting to produce work that printers would refuse, or, I should say, would refuse to print. So it's sort of like breaking printers by breaking away from the printable, and the digital of course makes that available. Now there's a certain, I guess, negative consequence—possibly negative consequence, could be framed positively, I guess—around this question of ephemerality and the fact that these projects can be fleeting and very easily disappear once deleted or once removed, taken down, these kinds of things. But I would like to see more of that kind of work in the field. I think I've always been sort of fascinated by it. Not only that it's fascinating but that it complicates these sort of assumptions about status quo publishing for scholarly work, these kinds of things. And there's a lot of movement afoot these days, I think, where people are working on these kinds of projects. But historically they were things like, you know, Collin Brooke's piece in *Enculturation* on style. You know, Anne Wysocki published in *Kairos* "The Bookling Monument," which required Shockwave, and I'm not sure if it's the sort of project that can even really be viewed now—I haven't tried it in a little while, to be fair. There are other projects, I think, Peter Vanderberg and Katherine Wozniak and Melanie Yergeau—they worked on a project in *Kairos* on writer center conferencing. And then there's also Dan Anderson's desktop, kind of screencasting. I think that fits here, too. Which is really all just to say that there are several different ways that researchers and scholars are developing digital projects whose affordances defy print. And it seems to me there's still so much to explore there and to figure out about what's possible.

JR:     Thinking about exploration—what's possible—what is significant about being able to look at the field as terms, turns, patterns, and trends?

DM:     What it always brings me back to is not only just sort of a fascination with the field and with kind of plotting and charting and keeping track of disciplinary activity as such, but it kind of for me keeps refreshing this question about what is available for tracing disciplinary activity. Like, what really is available there for the tracing? I guess it turns out that there's not a lot. There's only but so much that can be traced. Now there are certain things like citation, for example, is one place to start, and I've done a little bit of that work. Certainly published language and so the words that show up themselves in journals—this is the sort of, these in different ways I think are articulations of

disciplinarity or something that we could describe as kind of a disciplinary, a *locus* that's tangible of disciplinary activity. And then there's also stuff with geolocation, and in the dissertation I tried to work on those three different aspects of what's traceable: citation, published language—published articles that could be rendered into keywords—and then also some stuff with mapping, with geolocation of where scholarly activity, where institutionally, where again geographically this stuff happens.

But I think we still haven't done quite a lot with these. And you know, it's a start, but it feels to me like an important starting place for newcomers to the field. Oftentimes when we're engaging maybe for the first time in a new conversation, it seems like one of the things that we want to figure out is: where is this conversation coming from most recently? What kinds of ways or, you know, what specialized discourses are people using to talk about it? What's, in other words, *timely* in the conversation? What's been timely in the conversation in recent history, more distant history, and so on? So I think some of these methods that I continue to find fairly attractive and compelling and kind of rich in terms of the asking we can do with them—a lot of that brings me back to, I think, these suggestions pointed out in your question about terms, turns, patterns, and trends. We could learn a lot more I think about how these work. And especially how they work for something like a field of scholarly activity.

In terms of how we model these visually, it seems to me that we can continue to be working on—again, maybe experimentally on—what some of these look like. The latest project I've been spending time on has to do with sort of asking about and trying to figure out, using geolocation and geocoding, what's the sort of referential basis for mentorship networks, and where I'm leaning with that is sort of a perspective that says, it's mentorship networks are best mapped when they involve compound reference. So reference to at least two things: not just an affinity that's named by, say, a mentee or a mentor, but also the compound reference means that it's mapping to an institution. So that what we understand is that these mentorship networks actually manifest in that sort of dual way. I'm not maybe explaining that exactly clearly, but that's partly because this is a work in progress and something that I'll be presenting on in a short time at the Writing Research Across Borders conference in February.

JR:    The digital is dynamic; experimenting with coding and scripting languages, tools, and spaces that operate in temporal or ephemeral time. I asked Derek about digital lifespan—not just in terms of the speed of technology, but the durability of these digital texts, how they age and who cares for them.

DM:    I guess for me it's maybe in part due to the time intensivity of these tasks, and also...there's a certain sort of *mundane* dullness, if you will. There's a certain dullness to

the chore of maintenance. I forget who wrote about this not too long ago—maybe a couple years ago that everybody wants to create the new thing, but nobody wants to maintain it. I think this is a problem for a lot of things in higher ed. You know, I've talked with other scholars, academics at other institutions about how we don't necessarily end things in a planned way. They just tend to decay or fade. And so you know, I think that's getting used to ephemerality. The ephemerality of these digital projects has a lot in common with our own ephemerality. Learning as much as we can, I suppose, about coding and script languages—that's maybe as good as it gets. You can certainly make some other gestures toward preservation. Those can be resource-intensive, and they're still, I think, awfully hard to see through, even as much as we care for the question about lifespan, aging, curation.

There's still—I don't know, maybe this is [*laughs*] maybe branching out almost to kind of a religious scope that I don't hope to do in this interview—but it has really almost to do with attitudes to, or worldview toward, [*pause*] the bigger picture of what lasts, what stays, and what has kind of a reliable enough persistence. For me, again, much of it comes back to getting comfortable with ephemerality but not relaxing on it. You know, making a best ethical attempt to see projects through in a way that they carry on, but I just don't know it's something that I can resolve very well beyond that in terms of durability and aging. And certainly that's cropped up for a lot of different projects, you know. Like I mentioned at the outset, this tension between that which can be printed in a fairly recognizable 8.5x11 and that which cannot. Sometimes the things that can't— their shelf life may be shorter, but I don't know whether that leads us to a place where inevitably the logical choice then is to avoid that kind of work because it might be sort of fleeting or temporary. I don't know. But it's certainly something we should pay attention to and be mindful of and carry with us as we do this kind of work or attempt it.

*Cue music: "Mario Bava Sleeps in a Little Later Than He Expected To" by Chris Zabriskie.*

BK:     This Rhetorical Life is brought to you by graduate students in the Composition and Cultural Rhetoric program at Syracuse University. Executive producers of This Rhetorical Life are Ben Kuebrich and Allison Hitt, with additional production and editing from Karrieann Soto, Tamara Issak, and Jana Rosinski.