Chapter 3: Turn Spotting: The Discipline as a Confluence of Words

> What is the nature of this turn we are taking? (Corder, 1995, p. 114)

Declarations of turns, such as the global turn for rhetoric and composition/writing studies (RCWS) noted by Wendy Hesford (2006), run counter to Stephen North's (1987) lamenting a "chaotic and patternless" quality of disciplinary emergence in the late 1980's (p. 3). Because turns name temporarily stabilizing attention structures, it comes as little surprise that numerous additional turns have emerged and circulated in recent decades both for the field and for the broader domains of the social sciences and humanities. Turns seek to pinpoint cohering ideas, values, and focuses for intellectual activity, suggesting patterned thought as it fans out, expands, and accumulates salience and uptake. Some of these turns have expanded into wider-spread transformations in thought and action—what some would identify as *paradigm shifts*, recalling Thomas Kuhn's (1996) phrase for widespread, lasting diffusion and acceptance of new concepts in the sciences. Among the major turns of the past 50 years are the *linguistic turn*, which accepts language as significantly (though not exclusively) constitutive of epistemology; the *social turn*, which locates fundamental interdependencies between writing and the junctures of human sociality and materiality; and the *process turn*, which recognizes as situational and idiosyncratic the irregular unfolding of any document's development as fits with time-based activity. Each of these greater turns has been elaborated sufficiently in scholarship over the past several decades that their shorthand references, *x* turn, function as slogan-like, metonymically glossing the principle's complex, gradual development and reducing its history to something much quicker and sufficiently recognizable. Successful turns take hold. They grow and expand myth-like as they accrue assent. These epistemological formations might also be understood as widely held beliefs, or *doxa*. And this, to some degree, explains why contemporary scholars are posing more and more turns.

In addition to major, well-established turns, several lesser (or emergent, yet-becoming) turns have come to light—some blinkering in fleetingly, others circulating with acute sponsorship indicative of newness and recency. Consider these 13, which I have gathered from various publications and from searches in CompPile:

- Apocalyptic turn (Lynch, 2012)
- Archival turn (Brereton & Gannett, 2011; Clary-Lemon, 2014; Morris, 2006)
- Digital turn (University of Northern Iowa, Meryl Norton Hearst Lecture Series, n.d.)
- Ecological turn (Shepley, 2013; Tinnell, 2011)
- Ethical turn (Barton, 2008; Flynn, 2007)
- Multimodal turn (Sheridan, 2010)
- Public turn (Farmer, 2013; Mathieu, 2005)
- New material turn (Pilsch, 2016)
- Sociocultural turn (Johnson, 2006)
- Spatial turn in rhetorical genre studies (Reiff, 2011)
- Queer turn (Alexander & Wallace, 2009)
- Turn to design (Marback, 2009)
- Turn to social class (Zebroski, 2007)

The list is not at all meant to be comprehensive, but posing it nevertheless offers a suggestive point of departure for the portion of this book concerned with a relationship between tracing vocabulary as particular terms rise and fall in a disciplinary corpus. After all (holding off temporarily several important and critical questions about turns, whether they are big or small, tentative or more deeply rooted), turns function as cohering, directional metaphors—*named* arrows of change that capture trends or shifts that at least some consider substantial enough to offset an otherwise "chaotic and patternless" development (North, 1987, p. 3). For the field of RCWS, articulations of turns respond to the concerns expressed by North. Turns are *discursive attention events*. Large-scale, well-established turns have gained footing as successful and long-lasting attention events, whereas small-scale and nascent turns may be primings for attention events that are perhaps localized among specialists or that are hoped by some to become more expansive and widely influential. Multiple, simultaneously developing turns are possible; a disciplinary domain, such as RCWS, can support many such attention events—as many as those who identify with the field can themselves entertain. Even so, with an influx of turns, we might inquire—as this chapter does—into how many turns a discipline can take while at once sustaining its coherence.

In his 1995 essay, "Turnings," Jim Corder explored from a personal perspective the disciplinary tension I've begun to set up here between anchored, coherent *doxa*, which turns admittedly acknowledge as open and adaptive, and patternless chaos as a tension between convergence and divergence. Corder wrote,

> When divergent, non-isomorphic rhetorics come together—that is to say, when any two rhetorics come together—the consequence is sometimes happy. Insight and learning occur, and sometimes love and marriage. Sometimes, however, the consequence is not happy; or habits of competition are too strong. Sometimes one rhetoric expands to fill all available space, prevailing as the other is compressed into submission. Sometimes two rhetorics compromise, to no one's complete satisfaction. Sometimes they are paralyzed, as practitioners are unable to choose. Sometimes they go to war. (pp. 105–106)

Corder's characterization of non-isomorphic rhetorics (sometimes they work together; sometimes they are incompatible) aids our focusing on the phenomenon of multiple co-occurring turns, some new and some old, some veering in compatible directions and others opposed, clashing, crossing paths. The point of Corder's essay is that rhetoric has helped him cope with seeming incommensurable positions, to celebrate paradoxes for their inventional possibility rather than to "call the whole thing off" (p. 106). And this is an insight appropriate for what follows in the remainder of this chapter—a chapter that regards words as a commanding ontological basis for disciplinarity. The field of RCWS is constituted to a large extent by its discourses. Setting out with this focal premise refreshed and reasserted, the chapter inquires into selected means of doing things with concentrations of keywords as they rise and fall in published scholarship. In pursuit of a network sense of the field rooted in its terminologies, the tracing of these rising and falling rates of usage carries out distant and thin methods that highlight the life cycles of turns, which can become threshold concepts, and that circumscribe turns and threshold concepts with semantic networks.

Word Watchers

The role of the word watcher is especially relevant in this context of continuing consideration of turn spotting, of turns as substantiated by patterns in disciplinary discourse. I first heard about word watchers from Tim Diggles, coordinator of the Federation of Worker Writers and Community Publishers in Staffordshire, England, who visited Syracuse University in Fall 2005 to lead a colloquium on working class writing and publishing. Diggles noted that in parliamentary governance, a designated word watcher would attend to terminological slippages, request etymological depth, and gather by way of real-time note-taking and tracing various usages as they inevitably fan out in any session's exchanges. Among the word watcher's purposes are

to shift the focus with calm remove, especially when interchanges become heated (though perhaps this is no less valuable when exchanges become complacent, when words operate unchecked, unquestioned, or too coolly, underexamined). The point isn't to domesticate the meanings or to reduce usages merely to standard and official denotations, but to mediate. The word watcher seeks to make explicit the tacit and unexplored subtleties, admitting these intricacies to the discussion. To bring this back to rhetoric, think of the word watcher as loosing *stases*, as a wise and conceptually agile referee who aids the stream of discourse by adding perspective that hopes to unstick, ease, and differentiate. Word watchers are important not only in parliament and political debate. The word watcher's disposition is likewise valuable in other situations, such as where evolving cultural, professional, and disciplinary discourses play out, as well as in many contexts for teaching and learning, which I will address more fully in the concluding section of this chapter. Further, word watchers model practices suited to turn spotting—to noticing, differentiating among, and lending an evidentiary basis to so-called turns. After all, what does a turn require more than a narrow lexicon, or semantic network, to foster its circulation and uptake? A means of modeling that lexicon, making it directly accessible. Later sections of this chapter model an affirmative response to this question more formidably and with concrete examples.

In addition to the *real-time* performance of word watchers in parliamentary discussions, several books and articles have attempted to trace terms and inquire into vocabularies. Well-known among these attempts is Raymond Williams's (1985) *Keywords: A Vocabulary of Culture and Society*, a monograph that elaborated 127 terms, selected and explored by way of Williams's "starting point," which he characterized as a "cluster, a particular set of what came to seem interrelated words and references, from which my wider selection then developed" (p. 22). Williams's method is self-consciously idiosyncratic, directed largely by his own curiosity and sense of associative groupings. Choices include *country*, *ecology*, *hegemony*, *materialism*, *taste*, *science*, and *sex*—and each selection accompanies a brief definitional essay that sets out to orient readers by addressing what he distinguishes as "particular and relational" meanings (p. 23). His accounts established how these meanings combine antecedent (historical), highly situated (contextual), and intertextual usages through the use of boldfacing to an internal reference to other terms featured in the collection. Addressing the value of the project, Williams noted that "what can really be contributed is not resolution but perhaps, at times, just that extra edge of consciousness" (p. 24). He wrote,

> In practice many of these [word watching] processes begin with the complex and variable sense of particular words, and

> the only way to show this, as examples of how networks of usage, reference and perspective are developed, is to concentrate, 'for the moment', on what can then properly be seen as internal structures. (p. 23)

Williams's meandering methods are only reproducible insofar as another could inquire into a vocabulary by similarly identifying a rich cluster and then tracing outwardly its associations and resemblances in pursuit of "particular and relational" meanings. But by bringing the "internal structures" of word watching to light, Williams's demonstrates a distant–thin methodology (p. 23).

Nearer to the disciplinary locus of RCWS, Paul Heilker and Peter Vandenberg's (2015) *Keywords in Writing Studies* (updated from a first edition in 1996, *Keywords in Composition Studies*) enacted an approach similar to Williams's, with the distinction that the set of terms they featured is much smaller and specialized—at just 36—and that the accounts were written by 31 different contributors. Here, too, entries include boldface to distinguish terms elaborated elsewhere in the collection, enhancing the impression of the set's interconnections. The editors' methods for selecting the terms were understated, like Williams's, perhaps because the set was built by a tacit process, assembled by the intuition of well-established scholars whose experience in the field has provided a felt sense of vocabulary that warranted definitional footing. Some of those keywords included *agency*, *design*, *ecology*, *network*, *queer*, and *silence*. But their qualifiers echoed the 1996 edition of their project, noting as "essential criteria for inclusion" each term's belonging to "general disciplinary parlance" and each being "highly contested, the focal point of significant debates about matters of power, identity, and values" (2015, p. xvii). These criteria extend the connection of this disciplinarily situated undertaking and thicken the collection's accordance with word watching for RCWS.

A more specialized example of a disciplinarily situated collection of terms, *A Handlist of Rhetorical Terms* by Richard Lanham (2012), has been in print and circulating since 1962, and was re-issued as a second edition in the early 1990s. In the preface to the first edition, which was republished as part of the second edition, Lanham (2012) imagined his primary audience as "students of English literature" (p. xiii), but in the preface to the second edition, nearly three decades later, he wrote that "the handlist has found both a more numerous audience . . . and a more varied one" (p. ix). Like the collections of keywords from Williams and from Heilker and Vandenberg, the methods underpinning Lanham's handlist are similarly focused on intertextual cross-referencing and qualified by spirits of additive exploration and openness: "No attempt has been made to single out terms that any one rhetorical or critical body of opinion might favor, or think important" (p. xiii). In his preface to

the first edition, Lanham went on to account in some detail for the various sources he collected terms from, decisions he made about what to include and to exclude, and choices about synonyms and inconsistent spelling, amounting to a glossarist's rationale statement, and yet he also reasserted with humility the list's unavoidable incompleteness. Lanham's handlist contributes to this heaping up—*accumulatio*—of terminological collections that have endured into revised or second editions yet another variation on word watching, a decades-developed index of a highly specialized vocabulary whose bounds he expressed numerous challenges about locating and maintaining.

The words-focused collections I've described so far have emphasized openness, ongoingness, and fluidity while nevertheless building a reference suited to epistemological footing in narrower and narrower *loci* of specialization. Their methodological orientations are comparable: These are collections for the most part forged out of individual or tandem (in Heilker and Vandenberg's case) perspectives informed by lived professional experience within a definite scope—most broadly construed with Williams, most narrowly with Lanham. As variations in word watching, they model a range of approaches that will prove instructive as the remainder of this chapter builds toward a methodological framework for attending to turns and threshold concepts by tracing the families of terms mobilizing such turns and concepts.

Before we move to this methodology in action, I present one final example to illustrate word-watching projects at multiple scales: Claire Lauer's "Contending with Terms: 'Multimodal' and 'Multimedia' in the Academic and Public Spheres," a 2009 article that compared the uptake of just two keywords by looking closely at usage in academic and professional writing settings. Comparable to Williams's (1985) "particular and relational" rationale for *Keywords*, Lauer's (2009) study accounted for each term's *longue durée*, or historical and etymological accretions, as set up in relationship to contemporary, situated instances of usage. "Contending with Terms" also reflected the gains in watching words at a finer (i.e., zoomed-in) scale: intricacies of evolving usage, detailed examples, and hairline tracings that locate these terms in specific contexts all enter into the differentiating account, an account that generally finds multimedia as more common and familiar in industry and workplace contexts and multimodal as occurring predominantly in academic settings. For two terms supposed by many RCWS scholars to be interchangeable, this highly nuanced degree of word watching locates compelling consequences, particularly for rhetorical considerations of *ethos* and audience, and for the political and economic implications of adopting one term or the other to identify one's area of expertise or to name courses or academic programs. Among the salient points in extending word watching to such a refined granularity as this is that broad, general, and provisional inquiries into vocabulary catalyze potentially more

refined distinctions with tangible, pragmatic consequences.

While these examples of deliberative word watching, glossary building, and usage comparison lend much to an emerging inquiry into the epistemological gravitas of words *qua* concepts, my purpose here includes inviting questions about how to foster disciplinary word watching for newcomers to the field and what is gained from it. In the following section, while continuing to regard as useful and even exemplary the keywords projects sketched in this section, I will consider contemporary word-watching gestures in digital environments (e.g., a preponderance of readymade word clouds) and thereby deepen an argument for the value in more systematic disciplinary word watching, particularly as it chances to advance insights into the nature of turns and the convergence and dissipation of threshold concepts.

Contemporary word watching practices in digital environments have gravitated toward readymade word clouds, which usually form as oval clusters, nebulous frames within which weighted lists of words or phrases are distinguished in frequency of occurrence using combinations of type size and hue. Word clouds operate according to thin and distant methods in that the text itself falls away and what stands in its place is an assortment of recurrent words and phrases. Precedents for this form might be traced to experimental visual poetics and concrete poetry, examples of which are discussed in Johanna Drucker's (1998) *Figuring the Word* and Craig Saper's (2001) *Networked Art*. The Wikipedia entry on "tag cloud," which includes as variations, "word cloud, or weighted list in visual design," attributes the earliest instances of this practice to "subconscious files" in Douglas Coupland's (2008) *Microserfs*, but there is also a passing attribution of similarity to Doug Lang's 1980 poem "Lester Leaps Out." And while there are nuanced distinctions between tag clouds and word clouds, when it comes to word watching, they function similarly, synechdochally presenting a lesser selection of parts as a stand-in for the whole.

Word clouds are by no means exclusive in the domain of word watching in digital environments. Word watching traces to wiki-based glossaries (e.g., the Threshold Concepts in Digital Rhetoric hub at the Digital Rhetoric Collaborative) and the participatory (if frequently not-safe-for-work) vernacular lexicon Urban Dictionary. But I am focusing on word clouds here because their presentational bases foreground an associative, network logic that corresponds to this chapter's concern for databased infrastructure related to disciplinary usages. Further, word clouds are distinctive as word watching because they display as visual models, and they leave behind from some of the essayistic depth that Williams, Heilker and Vandenberg, Lanham, and Lauer used. In fact, although word clouds lend themselves to exploratory definitional plumbing, they do not in themselves bother with definition, only with association and reduction, coalescing as a generative *gestalt* in combination.

The production and circulation of word clouds are a yet even thinner and potentially more distant attempt at word watching in that they are quickly and easily rendered by copying and pasting blocks of text into an input field at sites such as Wordle, Tagcrowd, or Tagxedo. These are visually compelling counterparts to prose text that offer a complimentary presentation: Words are weighted and arranged *paratactically* (or on all sides), lending contour and relief to the comparably unidimensional presentation of *syntactic* (or linearly ordered) prose. Further, word clouds reduce the text; much of it falls away and what remains is a temporary abstraction, though an abstraction both empirically verifiable and one that due to its metaphoric association with clouds imparts a roiling openness, an ongoing quality, incomplete and vaporous. Such clouds attract visual attention which is also among the reasons they have become popular as surface glosses on a variety of text sets, from curricular materials related to first-year writing (e.g., Eastern Michigan University's custom textbook uses curricularly based Wordles) to short-form writing in bounded timeframes (e.g., memes based on the 2015 "What Are Your Most Used Words on Facebook?" quiz). Comparable clouds have also appeared in media accounts of language comparisons, such as a 2016 analysis of Canadian and United States word usage on Twitter, which concluded that Canadians were more polite (Craggs, 2016).

Academic treatments of word clouds have appeared, as well, such as in a project I developed, "Views from a Distance: A Nephological Model of the CCCC Chairs' Addresses, 1977–2011," which uses a viewport and slider to present more than 30 chairs' addresses from the Conference on College Composition and Communication, introducing the series as "a string of word formations sized and weighted with meaningful visual cues, somewhat like a lexical heat map" (2012, para. 5). Numerous pedagogical applications have turned up also, including word clouds as an aid to interpretation for reading (i.e., rendering clouds as a preliminary inroads to gaining a sense of a complex text) and as an aid to invention and revision in writing (i.e., rendering clouds wrought from one's own writing at any stage of development).

As tempting as it is to level critique toward word clouds for their veneer, they nevertheless stand in as an evidentiary substitution for something else. Certainly there risks a triviality in the practice of creating word clouds; they are, after all, fun and easy readouts on something usually more elaborate and complex, and a site such as Wordle, which touts itself as a "toy," does not advance much more than cursory insights into the computational operations and semantic structures coursing through it. Contemporary word watching in many cases leads into a thicket of methodological limitations, but these limitations—the obscurity of how the clouds are rendered, for instance, or the withholding of the processes by which words are stemmed, combined, and

counted, much less the actual counts—need not be a basis of criticism alone. Quite the opposite. These aspects of word watching via cloudmaking inform inquiries into (a) language processing methods and (b) tropology, which names a junction between rhetorical studies and theories of the feed-forward interdependencies of language on other language for meaning.

To expand upon these briefly, word watching in easy-to-render word clouds stands as a simple alternative to more rigorous and robust methods for processing and analyzing language. That is, the word cloud does not usually have the methodological sophistication one would find available with the Natural Language Toolkit, currently the go-to platform in computational linguistics for parsing and classifying corpora. Comparably, software such as NVivo, which supports quantitative data analysis, aids researchers who seek patterns in data collections usually associated with interviews, site observations, and manually coded text. For the purposes of the approach to language processing modeled in the following section, it is enough to acknowledge that the current research landscape includes numerous alternatives for in-depth computational language processing. While these approaches are important to regard as commensurable with the goals of word watching, simple word clouds are every bit as likely to elicit—for beginners—insights into the relationship between a readymade concordance and the comprehensive text(s) under analysis. We must be careful *not* to dismiss or downplay word clouds because they are also fun, playful, or methodologically casual.

Simply, word clouds are methodologically basic, but they function as powerful setups for the sort of word watching that helps us understand turns and threshold concepts so that we can more wittingly participate in the cultivation of them. Word clouds make possible what I describe as a nephological attitude toward the relationship between disciplinary language and epistemology—between the words we use and what we claim to know. Word clouds extend word watching to grasps of language that recognize it as billowing, vaporous, at the edges of signification, connotatively flexible, fluid-like, and ever-shifting in time. These qualities accord with theories of deconstruction, intertextuality, and heteroglossia that underscore more than four decades of poststructural thinking that has influenced the humanities and social sciences. And although it is beyond the scope of this chapter's focus to delve much more deeply than this, some acknowledgement of this relationship is warranted because it operates across the sequence that locates a relationship between word watching, word clouds, disciplinary turns, and threshold concepts. Practices of noticing and creating these formations position us—all of us, including newcomers to field—at the juncture between rhetoric, change, agency, and writing.

Thus positioned, and as a final point of emphasis before transitioning

next to illustrations of word watching that are methodologically grounded in semantic fluctuations and that therefore lend insights into the emergence and formation of turns, I want to characterize this array of activity as venturing into the sort of tropospheric play mentioned in the previous chapter in relationship to the *planeur*, or glider whose perspective is incisively scalar, adjudicating between local, up-close ways of knowing and their distant, thin, and removed counterparts. In rhetorical studies, tropes are another name for words and phrases that turn or that signal turns, and thereby change concepts and introduce complementary schema. Not coincidentally, in meteorology, the troposphere names that layer of the atmosphere in which weather events happen. I don't mean to suggest that a discipline is astir with language precipitations only; rather I want to point out that looking toward a disciplinary troposphere anticipates further insights into articulation, assent, and diffusion as open, participatory, agentive processes. Gazing into these clouds—word watching—and bearing down on definitional etymologies, tracing terms as they shift and move through disciplinary resources—by these practices, we can begin to grasp more firmly an interrelationship between turns, threshold concepts, and the terminologies that mobilize them. Such an endeavor is advanced farther by the development of an animated index featuring terms mined from several hundred articles in one of the field's most prominent journals.

Turn Types in an Animated Index

In between the unsystematic selection processes behind the deep definition keywords collections by Williams and by Heilker and Vandenberg and the playful, exploratory enigmatics in web-based word-clouding platforms and practices, there arises an opportunity for developing more systematic and methodologically reproducible inquiries into an ongoing relationship between words and the emergence and maturation of RCWS. Word watching performs important work, especially for newcomers to disciplinary specializations and to stakeholders whose engagement is quick or circumspect, oftentimes lacking a nuanced handle on the field's discursive subtleties. In response to this opportunity, this section introduces what I call an animated index, a playable Google motion chart (Fig. 5) populated with data mined by computational processes from more than 500 articles published over 25 years in *College Composition and Communication* (*CCC*), one of the most prominent and long-established journals in the field.

The motion chart is animated in that it presents data points as part of a year-by-year time series whose elements change position with each passing increment. And it is an index due to its indexical relationship to the cor-

pus under consideration; the words appearing in it come directly from the scholarship published in the journal—a set of 507 articles, or 3,943,528 words, published in *CCC* between 1989 and 2013. The changing positions of the bubble-shaped markers displayed in the motion chart correspond to rates of occurrence. Direct interaction with the animated index contributes greatly to the discussion through the second half of this chapter. That is, for the surest grasp on the arguments advanced here and for the details invoked as rationale for the connection between word watching and turn spotting, I encourage readers to spend time exploring the animated index, which is accessible online at http://www.derekmueller.net/turn.html.

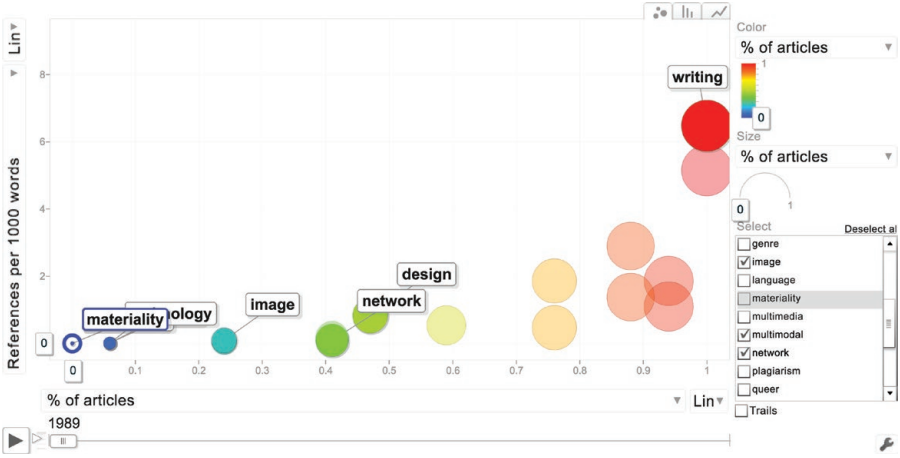

Figure 5. A screenshot of an animated index developed using Google Motion Charts. The interactive version of this screenshot can be viewed at https://wac.colostate.edu/docs/books/network/fig05-desc-video.mov.

This screenshot (Fig. 5) provides a cursory orientation to the animated index. Upon visiting the index online, clicking the playhead (grey) in the lower left-hand portion of the frame will begin its play process, as the bubbles rise and fall or shift right or left depending on the instances rate per 1,000 words (y- or vertical axis) and on the percentage of articles in which the term appeared that year (x- or horizontal axis). For example, in 1989, the word "network" appeared 10 times (.09 per 1,000 tokens) and in 7 of the 17 articles (41%) published in *CCC* that year. By comparison, "writing," which was also the most frequently occurring unigram (or one-word phrase) in *CCC* in 1989, appeared 699 times (6.48 per 1,000 tokens) and in all 17 articles (100% published that year). As the animated index plays, terms that shift up or to the right reflect an increasing presence in the journal, while terms that shift down or to the left reflect declining presence in the journal.

The 25 terms collected here are a modest representative sample whose rational for selection will become clearer before the end of the chapter. Note, as well, that while the animated index could feature myriad additional terms (e.g., several hundred unigrams or bi-grams [two-word phrases]), it operates here purposefully and as an indicator of possibilities yet underexplored at the crossroads of semantic networks and disciplinary emergence and stabilization. Further, the same data underpinning the animated index could be engaged through a textual account, comparable to the deep definition essays collected by Heilker and Vandenberg, or through a visual representation, such as a word cloud drifting freer from the concordance metrics (i.e., the quantitative basis for the chart). The motion chart, however, provides a fortuitous frame for exploring the data, rewinding it and playing it again to consider different dimensions and to notice coordinations that might initiate new questions.

Engaging directly with the motion chart, you will notice several customizable options. The play locator can be selected and dragged manually to exact locations in the series, which may aid in focusing on comparative moments. The playback speed is adjustable, as well, by moving the vertical indicator immediately adjacent to the play button. Individual words or clusters of words can be selected in the "Select" box on the right side of the playback frame, and just below users can turn on trails, which function as time series traces. Additionally, three tabs in the upper right-hand corner of the playback frame allow toggling between three different chart types: bubble, bar, and line.

The flexibility of the playback frame is among its most salient qualities for word watching, and for interacting with the semantic data set featured here. The platform, originally called Gapminder, was popularized by Hans Rosling, a world health researcher who in 2006 delivered a TED Talk based on an elaborate United Nations data set connected to birth rates, life expectancy, and distributions of income. Rosling's dance with data attracted widespread attention, not only to the correlations he so masterfully put on display between health and economics but also to the Gapminder playback frame. Rosling went on to craft and deliver presentations on a range of issues, including cancer statistics, swine flu, overpopulation, and child mortality—all of which expanded the impression of Gapminder's presentational intricacy for complex, multivariable data sets. Soon thereafter, Google acquired Gapminder and its availability widened when its coding infrastructure became a part of Google Charts. What this meant was that everyday users could easily build playback frames similar to Rosling's. It is now possible to create a Gapminder motion chart with a couple of clicks from any data set in Google Sheets—and this accessibility expands the possibilities for connecting the word-based animated index linked above to pedagogical applications sketched in this chapter's concluding section.

As noted before, batch processes for creating concordances are numerous. By batch processes, I am referring to the use of a computer script to sift, sort, and select designated words or phrases from a large collection of texts. Concordances are alphabetical lists of words appearing in a text, much like an index. The process involved here was run from the command line, a simple interface where users initiate programming operations. For the *CCC* articles, I executed a Perl script to render a collection of individual text files into individual concordances and a cumulative concordance for the set. To prepare for running the Perl script, I converted each article into a text file—a process that included manually removing abstracts, works cited, repeated details in headers and footers, and pull quotes, as well as searching and replacing hyphenated line breaks that in some instances split words into two separate strings of characters. Although some refer to this as cleaning the data, I have consistently referred to the process vernacularly as smoothing the text. I smoothed the 507 articles, organized them into year-based folders, and ran the Perl script that converted each folder's contents into a two-column list, words in the first column and frequency counts in the second.

Next I developed a simple spreadsheet in Excel for collecting and compiling lookup data. That is, after running several early, provisional operations on more than 100 terms commonly appearing in the top 200 words in multiple years, I gradually decided upon the set of 25 words to be featured in this iteration of the animated index. My rationale for choosing this list of 25 terms was based on a manageable scope and on the relevance of specific clusters for illustrating different turn types discussed next. I opened each year's cumulative concordance, one by one, and searched on each of the 25 terms, transposing the frequency count into the tallying spreadsheet. Second, I searched the contents of each year's folder for each word, which returned a list of the articles containing the string (e.g., searching the 1989 folder for "assessment" yields four files, indicating the word appeared in four different articles out of the 17 articles published in *CCC* that year). Together, these steps constituted 1,250 lookups (each word requiring two per year covered in the chart). Finally, I counted words and articles (per article and cumulatively) for each year-based folder and added those values to the spreadsheet. With these established, basic Excel formulae calculated the two most prominent values used in the playback frame: (a) the rate of appearances of x per 1,000 words published that year, and (b) the percentage of articles in which x appeared that year. This dual variable input contributes more nuanced insights into the circulation of a term. That is, some terms appear infrequently but with great breadth (e.g., once per article but in most articles); other terms appear thickly in just one article.

With the data assembled into the spreadsheet, matching it to the code specifications required by the Google Charts API involved precise sequencing

and removal of blank spaces (using TextWrangler, a free text and code editor for Mac OS X). Following spacing and syntax guidelines, each data point in the animated index looked like this:

['assessment',(1989),4,0.04,4,0.24],

['audience',(1989),58,0.54,10,0.59],

['class',(1989),119,1.10,16,0.94],

['composition',(1989),313,2.90,15,0.88],

['computer',(1989),1,0.01,1,0.06],

Consider the last line of the code shown here in more detail. The first and second variables are clearly enough established as the word (computer) and the year (1989). Variables three and four are the raw word count (1) and ratio per 1,000 words in that year's articles (0.01). This means that the word "computer" appeared just 1 time out of 107,870 words published in the journal that year. The fifth and sixth variables are the raw article count (1) and the percentage of articles (0.06) in which the term appeared that year. This means that the single instance of "computer" appeared in just 1 of the 17 articles published in 1989, or 6%.

The unit of code is specified within the Google Motion Charts API, though it is flexible insofar as it can accommodate classes of data and additional elements within a single line. (It is entirely possible to develop a yet more elaborate set of variables to associate with each key data point.) In addition to a few lines of code to set defaults, name axes, and stylize the typefaces, the animated index required 625 lines of code like the ones shown above. Assembling the playback frame is in itself a function of word watching, yet by interacting with the animated index—looping its playback with different selections—patterns become clearer. This move, from word watching to noticing patterns, is akin to what I call *turn spotting*. The accretion and avulsion of selected terms and small clusters of terms constitute turns, and more than turns, they make possible a series of different turn types. In this case, distant and thin methods support inquiry into a vast data set (nearly 4 million words published in 507 articles over 25 years), aiding invaluable perspective on the discipline as a confluence of words. This perspective would be difficult to achieve by any other means.

Having freshly played and replayed the animated index, and with more granular, direct, and reproducable evidence of the ways terms rise and fall over 25 years in a prominent disciplinary corpus, an inquiry into turn spotting takes on greater nuance. The rise and fall of any keyword reports, to some extent, the magnitude of its operation in the thought and action of scholars in the field, and each individual term that appears in the animated index plots

a possible turn. The words we use are thickly, inextricably linked with the ideas we sponsor (see, e.g., Bazerman, 1992; MacDonald, 2010; Prior, 1998), and some of those ideas have transitioned to *goddess*[7] turns, whose gulfs are so well carved and widely known as to circulate unquestioned (e.g., linguistic, social, process). The animated index proves generative for differentiating among turns and zeroing in on a series of different turn types, including goddess turns. Next, I consider four additional turns the animated index helps us see: non-turns, gradual turns, micro-turns, and amnesic turns.

Non-Turns: Students and Writing

Non-turns are associated with terms that appear stable or constant, having plateaued in the time series. Recalling the partiality of this data set's anchorage in but one journal, the non-turns reflected in *College Composition and Communication* from 1989 through 2013 emerge as *writing* and *students* (Fig. 6). Setting aside stop words—a collection of words the batch processing script ignores because of high rates of recurrence (e.g., parts of speech such as articles and prepositions)—writing and students stand out as the top two terms in every year but one. In 2012, the leading terms shift to *writing* and *research*, with *students* slipping to third, due in large part to a special issue of the journal dedicated to research methods. Based on this pattern, one could argue that *writing* and *students* operate for the field, or rather the field as read through the lens of *CCC* as a prominent locus for scholarship, attention, and discussion. Whatever else our words engage with, writing and students consistently reappear in that mix.

Extending this thin, distant methodology to other journals would broaden consideration of non-turns like these to include other terms. Cue the question: What in addition to writing and students do we never turn away from? If comparable word frequency data were available from even one additional journal in the field (e.g., *College English*, *JAC*, *Composition Studies*, *Rhetoric Society Quarterly*, *Rhetoric Review*, *Written Communication*, *Kairos*, *Composition Forum*, and *Research in the Teaching of English*), we could document these indexical stabilizers even better. Such work may eventually come to pass, and although it is beyond the scope of this study, my hope is for this work to pique extensions and continuations that dig further into the questions motivating turn spotting—questions about the relationships between published scholarship, terminologies, and turns.

7 I've grown accustomed to feminizing god references, almost entirely as a tribute to my late mother, who taught me never to accept unquestioned the status quo gendering of abstract deities that serve patriarchal interests, and, as such, also as an acknowledgement that my daughter, who will never meet my mother, deserves to see this worldview gain traction in the world.

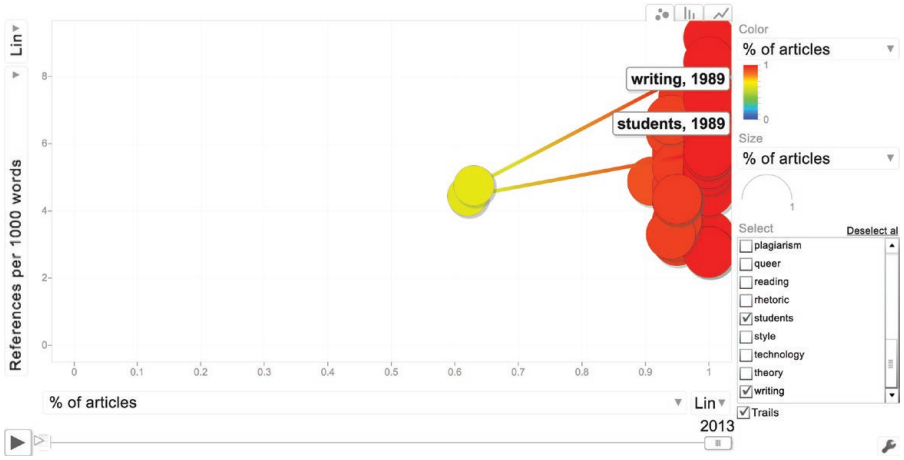

Figure 6. A screenshot of the animated index set to display non-turns as modeled by the frequencies of "students" and "writing" (trails on). The interactive version of this screenshot can be viewed at https://wac.colostate.edu/docs/books/network/fig06-desc-video.mov.

Gradual Turns: Assessment

Gradual turns coalesce slowly, ascending into broader circulation, though perhaps without a defining moment of catalysis or without being declared explicitly as a turn. Consider *assessment* as an example. Assessment names a range of practices that seek specific alignment between goals and performances. There is much more to assessment work than can be accounted fully here, although rising pressures to make teaching and learning activities accountable (reducibly so) have propelled assessment into common pedagogical practice. For instance, assessment has become a priority for writing program administration, spawning new academic journals with assessment in the title and compelling academics to identify assessment at all scales, such as formative/generative and evaluative, among their specializations. Even with a gradual increase of reference to assessment, what complicates this creeping tendency is that no one has, as of yet, declared an *assessment turn* in RCWS.

Nevertheless, assessment keeps turning up (Fig. 7). And so it is with this gradual turn—an assessment turn—that, even though it has not been declared a turn, the appearance of the word in *CCC* has increased across both variables reported in the animated index. More articles are using the word assessment more often. Its expanding circulation hints at questions that are posed all the more forcefully: How is assessment operating in the field? What are some of the narrower disciplinary domains—intellectual, curricular, programmatic,

instructional, professionalizing, political, or economic—where assessment signals a shift? Distant and thin methods applied to the creation of concordances from disciplinary corpora provide equipment for varied turn spotting. And although the turns spotted are limited as answers in and of themselves, noticing a gradual turn initiates many more questions for yet further exploration. The animated index and the batch processed data set underpinning it combine as a compelling, suggestive question-generating technology: The index projects terms on arrows that lead into the future, what we might think of as ellipsing into a "possibility space" (Volk, 1995, p. 190). Word watching of this sort springs more promising questions about the continuing emergence and maturation of the field than it resolves.

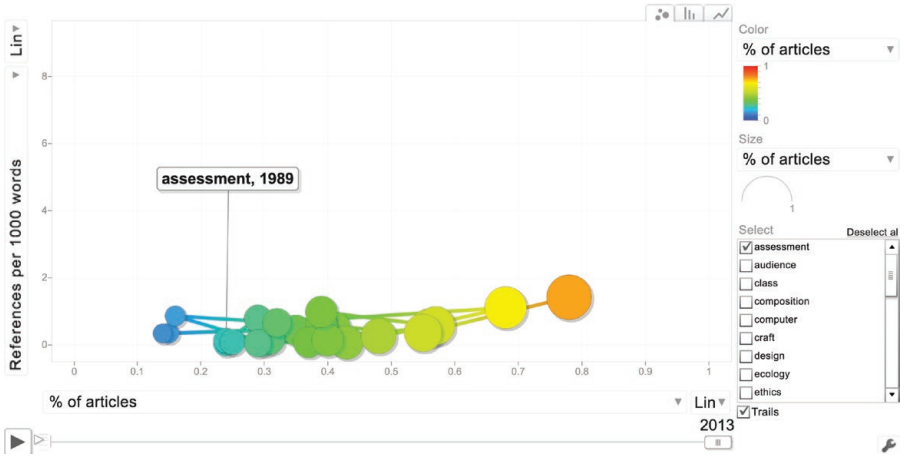

Figure 7. A screenshot of the animated index set to the frequency of "assessment" (trails on), which displays a gradual turn in this model. The interactive version of this screenshot can be viewed at https://wac.colostate.edu/docs/books/network/fig07-desc-video.mov.

Micro-Turns: Multimodal

Following non-turns and gradual turns, micro-turns are those niche turns, small and not necessarily sustained over a long period of time. They blinker into disciplinary discourse, sometimes fleetingly, with a comparatively smaller circulation than their larger or longer-sustained counterparts, appearing only for a few years or boosted temporarily perhaps by a special issue or a watershed article. *Multimodal* is the first of the turn types plotted in the animated index to also appear in the list of 13 so-declared turns collected at the beginning of this chapter (see Sheridan, 2010). Multimodal—as was contrasted by Claire Lauer (2009) with multimedia—is a term more common in academic settings that

accounts for the dimensions of composing to include much more than text. Multimodal refers to the rhetorical interdependency of material and other extratextual qualities of effective written communication, including visual, textural, olfactory, affective–somatic, and aural qualities. Notice that the animated index shows "multimodal" rustle only briefly, forward and back again, not quite ascending to prominence compared to turns noted previously (Fig. 8).

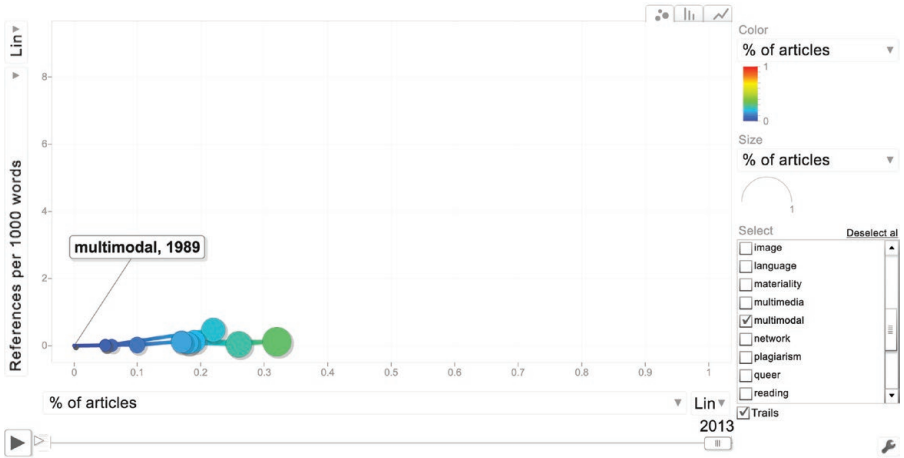

Figure 8. A screenshot of the animated index set to display the frequency of "multimodal" (trails on), which signals a micro-turn in the model. The interactive version of this screenshot can be viewed at https://wac.colostate.edu/docs/books/network/fig08-desc-video.mov.

Micro-turns are *turn kernels* with the potential to germinate into flourishing disciplinary conversations. In the following section, I will return to multimodality—as a term, a turn, and a threshold concept—to introduce a series of visual models designed to illustrate how turns manifest not only as singular words and concepts. As you will see, they also travel in clusters—mobilized by semantic networks, or families of terms whose named concepts weave together and whose collective ascendance makes longer-lasting and more formidable status possible.

Turns Away: Style, Language, Rhetoric

Finally, the animated index (Fig. 9) provides an alternative perspective on what has elsewhere been framed as *turns away*: lacks, gaps, omissions, and left-behind ideas in particular venues or in the field more generally (see, e.g., Bernard-Donals, 2008, on rhetoric; Butler, 2008, 2009, on style; MacDonald, 2007, on language). I have grouped these as turns away because such claims are often framed as a critical call for more of whatever has gone missing, and

the methods for noticing something has gone missing are not necessarily well suited to tracking it down elsewhere. In relation to the animated index, however, these three turns away—from language, rhetoric, and style—become more complicated when there surfaces parallel evidence that direct reference to each of these has continued, as is the case here. There is much, much more to explore with this matter of disciplinary turning away.[8] The animated index and the data set it presents intervene constructively into such claim-making, for turns away may very well be micro-turns elsewhere, and the locations of these elsewheres, if we can find them, not only deepen such claims, but they also project as dispersively connected the ever-shifting disciplinary landscape, which of course overlays a tapestry of inter- and transdisciplinary domains. This work sets up a needed practice akin to terminological ground-truthing, or continuously revisiting the critical, constitutive tension between a semi-stable disciplinary lexicon, published scholarship, and the discipline itself as it operates complexly across many different sites, locations, and publication venues.

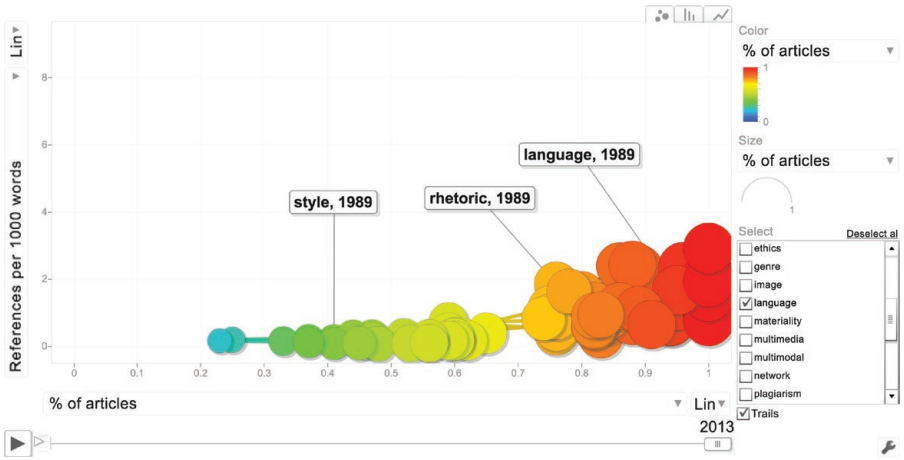

Figure 9. A screenshot of the animated index set to display the frequencies of "style," "rhetoric," and "language" (trails on), which shows turns away in this model. The interactive version of this screenshot can be viewed at https://wac.colostate.edu/docs/books/network/fig09-desc-video.mov.

8 This relates to what could be presented as *amnesic turns*, or forgettings. I don't develop the idea here, but it accords with linguistics research at University of Toronto on the declining range of unique tokens in Agatha Christie's late-career novels as a (possible) indicator of early onset Alzheimers (Lancashire & Hirst, 2009, pp. 8–10). The parallel between a field's turning away and an individual writer's declining lexical range is compelling though perhaps not quite relevant in the context of the animated index as applied to rethinking turns and threshold concepts.

In addition to motivating the turn typology sketched here, the animated index proves useful for systematic and data-driven word watching, for tracing the paths of an ever-unfolding disciplinary discourse due to its density and rate of advancement (i.e., recall the *internal problematic of disciplinarity*, which includes data sets, a reading problem, and appropriate methods). The value in this for newcomers can hardly be overstated. In addition to demonstrating potential for further work on the constitutive relationship between corpus analytics and turn spotting, the typology recalls what I established previously as a need for surer and more accessible methods—and the forms of evidence they produce—as bases for turn declarations that shouldn't only be possible after spending a couple of decades in the field. Among the reasons these methods and visualization practices are important *now* is that they open the practices of turn spotting to newcomers who themselves, by virtue of their emerging commitments to teaching and research in RCWS, *are turn makers*, sponsors of the discipline's future.

To illustrate this more fully, I will revisit and extend the multimodal micro-turn, exploring it more carefully in relation to visual models that can help us locate its ascendance as more broad-based than the path a singular term suggests. Multimodality has been boosted by the ascendance of a family of terms, a small semantic network. The multimodal turn, as it happens, stabilized from a micro-turn into a threshold concept, and, in the next section, a series of visual models will extend word watching from isolatable term-paths to clusters with the purpose of theorizing how such a stabilization happens.

Turns Dream of Becoming Threshold Concepts

I risk framing the relationship between turns and threshold concepts too simply when I assert that turns want to become threshold concepts. Threshold concepts have gained influence since 2003 when educational psychologists Jan Meyer and Ray Land first proposed them as a way to name disciplinarily situated principles that function as gateways for newcomers: "In certain disciplines there are 'conceptual gateways' or 'portals' that lead to a previously inaccessible, and initially perhaps 'troublesome,' way of thinking about something" (p. 373). Meyer and Land extended and refined their work in a series of articles, and attempts to articulate threshold concepts have subsequently begun to surface in several academic disciplines, including RCWS.

In 2015, an edited collection by Linda Adler-Kassner and Elizabeth Wardle, *Naming What We Know: Threshold Concepts of Writing Studies*, appeared as RCWS's first formal, published attempt to list and introduce an expansive set of disciplinary threshold concepts. The development of the project is elaborated in detail in the collection's introduction. It entailed proposals made by

45 teacher–scholars, which ended up becoming a group of 29 contributors who worked individually and in pairs (5 entries were written collaboratively) to define 37 concepts in approximately 1,000-word essays.

In their introduction to the collection, Adler-Kassner and Wardle (2015) acknowledged that their approach was admittedly only a beginning that would no doubt be "contentious" and require continual development "in the coming decades" (p. 5). With an interest in the generative overlaps between articulations of disciplinary turns and the data-driven animated index *qua* word watching, I extend this chapter's inquiry into turn spotting in the spirit of engaging with threshold concepts in the coming decades. Motivations include an interest in the life's arc of a threshold concept (i.e., in a historical build-up that eventually tips the concept from conjectural to an epistemological cornerstone) and also in further opening the process of naming what we know—postulating threshold concepts—as more than the purview of experts, specialists, or those with long-standing status in the field. Put yet more simply, I seek here to adapt word watching as a collection of methods for examining the ascendance of concepts into threshold concept status and to extend the invitation to generate threshold concepts so it reaches beyond the senior-scholar establishment to include newcomers to the field, particularly graduate students.

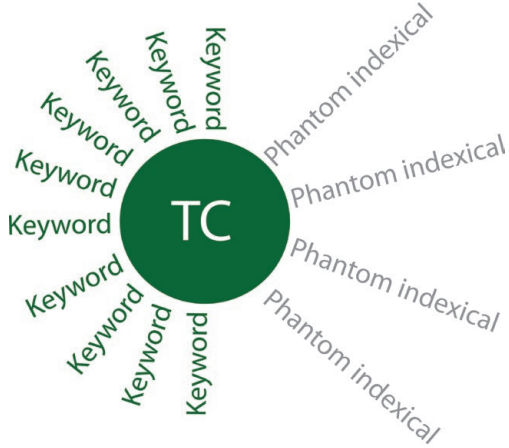

Figure 10. A simple radial model designed to illustrate the relationship between threshold concepts (TC) and keywords and phantom indexicals, as the terms that catalyze threshold concepts.

To more intricately describe threshold concepts as dynamic, morphing over time, and articulable not only on the basis of expert, experiential knowing but also on the basis of evidence-based word watching, I begin with a simple proposition: Threshold concepts are themselves mobilized by the ascendance

of semantic networks constituted by interrelated terms. Many (though not all) such terms can be traced in published scholarship; additional terms participate in the ascendance, even though they cannot in some cases be traced directly. I refer to these untraceable terms as *phantom indexicals*. From this, a simple visual model takes form as follows (Fig. 10). It depicts a circular center for posing the threshold concept; 10 keywords and 4 phantom indexicals radiate, surrounding it as setae-like mobilizers for the focal concept. Related models could use more or fewer terms, add term types (i.e., go beyond keywords and phantom indexicals), and perhaps also pose more complex and compelling visual arrangements. What I offer here is but a simple model: a start.

Figure 11. A simple radial model designed to illustrate the relationship between a specific threshold concept, "All writing is multimodal," and selected keywords and phantom indexicals relevant to the threshold concept's emergence.

Adapted to the threshold concept, "All writing is multimodal," the model reflects explicit attunement to terms whose associations with multimodality stand as speculative openings (Fig. 11). On the left side of the radial model, the 10 keywords are *computer*, *craft*, *design*, *image*, *genre*, *materiality*, *multimodal*, *network*, *technology*, and *writing*. Determining which terms to include substantiates its own generative inquiry into semantic networks as they coalesce around concepts, and this should be recognized as a heuristic (i.e., a series of choices whose felicities are inventive, not overly restrictive or exclusive). I chose these terms for their illustrative efficacy, aware that such clustering is informed by supplemental reading, an understanding of the historical development of related concepts, and the respective fitting together of these terms

as antecedents to multimodality. A related process of selection and differentiation goes into identifying the set of four phantom indexicals radiating on the right side of the circular model. Multimodality as an ascendant concept is boosted by *theory*, *media*, *method*, and *rhetoric*, although because these are looser, more expansive references, their operating on the ascendant concept is not necessarily explicit, direct, or traceable in the disciplinary corpus.

With the semantic networks provisionally though adequately sketched, we can return to the animated index to inquire into the network's rising circulation, thereby honing in on a hypothesis: "All writing is multimodal" rose to threshold concept status only since the early 2000s, and its ascendance corresponded to the increased circulation and influence of related keywords (Fig. 12). Selecting the 10 keywords in the animated index and clicking 'play,' this slight ascendance becomes visible in the rightward movement of the bubbles for many of these terms. The pattern hints at multimodality's recency as a disciplinarily influential concept. Threshold concepts are not forever; like stars, they come and go, intensify and fade. The combination of these simple visual models and the animated index fed with data mined from a disciplinarily salient corpus provides a methodology for inquiring into how a threshold concept emerges, matures, and perhaps also how it eventually quiets.

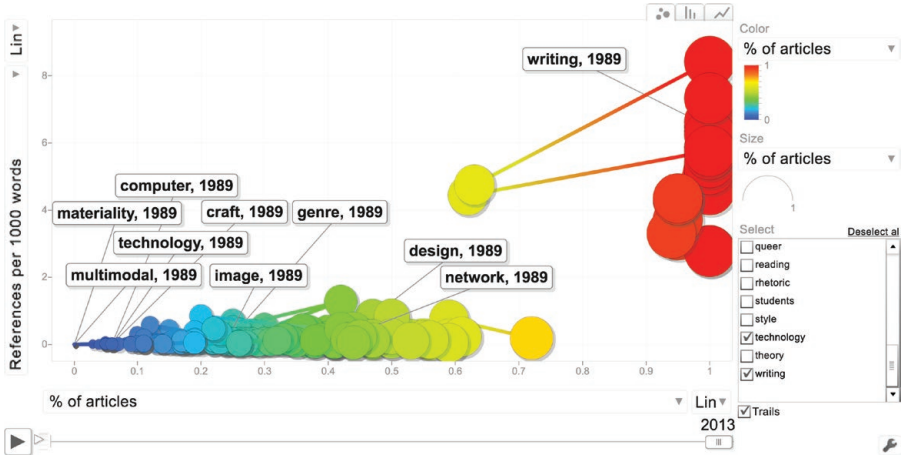

Figure 12. A screenshot of the animated index set to display the 10 keywords proposed in Figure 11 as catalysts for the ascendance of "All Writing is Multimodal" as a disciplinary threshold concept (trails on).

To emphasize yet broader possibilities for engaging with questions about threshold concepts mobilizing on the backs of relatively small semantic networks, consider the sparkline graph in Figure 13, which depicts the same data as the animated index screenshot in Figure 12. Here, the same 10 keywords

are assigned line graphs representing year-by-year frequency scores. This alternative strengthens the impression made by the animated index: All but two terms—genre and design—show peak frequencies in the most recent two-thirds of the graph (approximately the most recent 15 years). The pattern suggests that mobilizing terminologies have gained steam, and, with their rising circulation, laid way for the ascendant status of multimodality as a threshold concept.

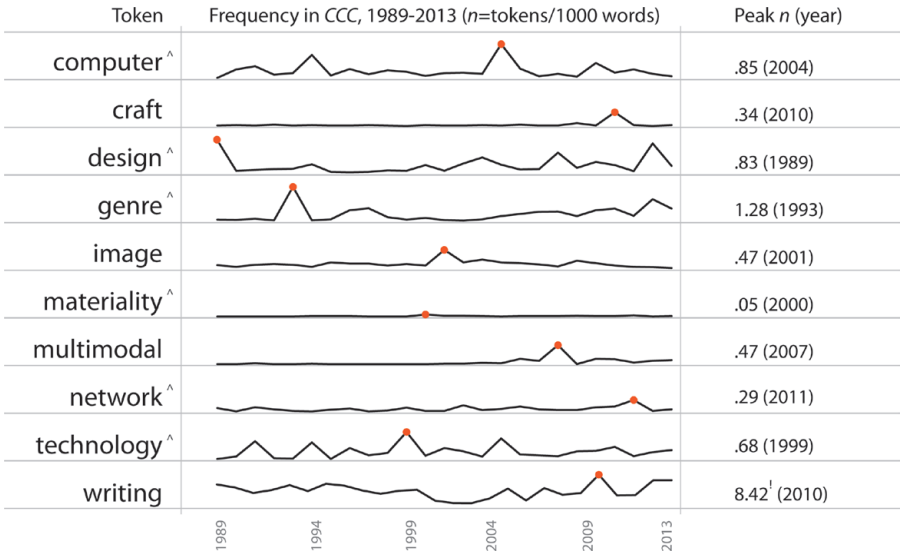

Figure 13. A comparative sparkline graph designed to illustrate the frequency patterns of keywords presented in Figure 11 as catalysts for the ascendance of "All Writing is Multimodal" as a disciplinary threshold concept. (Carots on certain words in Fig. 13 indicate keywords featured in Heilker and Vandenberg's [2015] Keywords in Writing Studies.)

These visual models underscore the temporal dynamism of keywords, turns, and threshold concepts and offer a thin and distant methodological intervention into contemporary word watching that directly serves inquiring into disciplinary emergence, stabilization, and maturation. In addition, the models also promote semantic network sense and reinforce many time-based rhetorical principles, such as *kairos* and *metanoia*, in the circulation of disciplinary discourses. As one more takeaway from this work, we might do well to revisit a 1926 lecture by Polish structural linguist and theorist Alfred Korzybski, "Time-Binding: The General Theory" (reprinted in 1962). Because Korzybski's work with the general semantics movement remains justifiably controversial (due primarily to its structurally normative overtures and incapacity to tolerate language diversity), invoking Korzybski presumes both

patience and generosity. His theory of time-binding promoted an annotation system that assigned time-based superscript notes to words. A similar premise has bearing on the distinctions emphasized in this section. For example, design[1993] is not quite the same as design[2013]. Neither are network[1989] and network[2012] exact replicas. As we participate yet more robustly in declaring turns or in sponsoring threshold concepts—by discussing them or by attempting to create new ones—flagging their temporality (e.g., What year is multimodality?) will serve as a salient reminder of the constancy of disciplinary change for newcomers and long-timers alike.

Turn-Making in Rhetoric and Composition/Writing Studies

This chapter's emphases up to now have addressed ways word watching informs turn spotting and, by extension, how contemporary word-watching practices aid in the tracing of the emergence and formation of disciplinary threshold concepts. Beyond this analytical and methodological groundwork—an application of distant and thin methods to one disciplinary corpus—I want to reassert the heuristic value of these processes for newcomers to disciplinary discourses. Word watching and turn spotting demand a refined attentiveness to language patterns at differing scales, and these practices are anchored in language itself—a well of evidence that as contemporary readers and writers of the field, we must never deviate too far from as long as we consider our work to be threaded through and dependent upon its influence. Word watching and turn spotting offer more than epistemological footing; they open inventively onto the creation of turns and the possibilities for articulating the shape of the field to come.

Thus, to complement the analytical and methodological apertures of this project, in this concluding section I offer four practical and pedagogical derivatives useful for engaging newcomers as turn-makers. These are projects that extend the work of word watching and involve newcomers in forging connections between established epistemological domains and the contributions their work makes to the course of knowledge-making as influenced by their research and writing.

Glossaries

Conventionally, glossaries are specialized collections of words, usually presented alphabetically and with brief definitions. The definitions need not essentialize the term; in fact, in many encounters with new vocabularies it is useful for newcomers to pose their own understandings based on experience,

association, and contextual clues from conversations and readings rather than to reduce glossary definitions to connotations pulled from dictionary look-ups alone. In nearly any course or program of study, glossaries operate as primers for provisional thinking about words that are curious, ambiguous, unfamiliar, or especially significant-seeming, important, and consequential. Glossaries may invite a great range of attempts to define, from formal to informal, constrained by length parameters (e.g., one-sentence or tweet-length definitions or much longer explorations). They also scale well, reducing in scope to a single reading or expanding to cover an array of texts, as well as adapting to individual or collaborative development.

For newcomers to a disciplinary discourse, glossaries can also shed light on known-unknowns, terms that are circulating without acute familiarity that are taken for granted as givens or commonplaces or that perhaps fall beneath notice as insignificant, outdated, or uninteresting. To illustrate the importance of engaging known-unknowns, consider the following ranking exercise. In Fall 2015, I taught Introduction to Graduate Studies in Written Communication using Heilker and Vandenberg's (2015) *Keywords in Writing Studies*. Students completed a brief survey to rate their interest in the 36 keywords included in the collection. Instead of reading the entire collection as flat or regarding all terms as essentially the same, we focused on the aggregate top five choices from the class based on the survey results and read and discussed the entries for each: silence, literacy, identity, discourse, and community. But we also took special notice of the five lowest-rated terms. For the following week, we shifted our attention to these, reading and discussing them as terms that, for reasons important for us to explore together, registered the lowest interest ratings: other, ecology, queer, civic/public, and contact zone. What is gained in attending to the popular terms among the class? What is lost in neglecting the unpopular terms? Informed by word-watching principles sketched in this chapter, such pedagogical activities can productively renew attention to terms and re-invest terministic awareness as an ongoing function of disciplinary wherewithal.

Deep Definition Inquiries

In relationship to glossaries, deep definition inquiries embark on word watching as a more fully developed, sustained, and substantive undertaking. A deep definition account, much like the keyword essays collected by Heilker and Vandenberg, examines a word or phrase by detailing its etymology, tracing it into specific contexts, and suggesting salient associations and distinctions. Such profiles of terms afford newcomers a highly focused research question that may deepen understanding of a referent's complexity while also gen-

erating new interests at the edges of the specified concept. Like glossaries, deep definition inquiries accord with word watching, and they also scale well whether attempted by individuals or small teams, or presented in various delivery and circulation methods (e.g., posters, presentations, or small-scale anthologies) that may gather together a class-wide set of terms.

Prompting deep definition inquiries can begin with self-selected curiosity or with class materials available in lists of keywords or in indexes. Consider the value in turning to a textbook's index, spending time with students discussing explicitly the usefulness of indexes, both for mapping the locations of these concepts in the text but also for providing a thin description of the conceptual domain it inhabits. Deep definition inquiries may be initiated from such lists, both for what the lists include and—this is one of my favorite pedagogical choices—for what it leaves out or ignores. Posing the exigence for deep definition inquiries as making a case for terms to be included orients the purpose to argumentation, to making a case for the consequences of an additional term surfacing in a particular context. Additionally, deep definition inquiries might also begin with scholarship that has carefully differentiated between vocabularies, such as Lauer's (2009) "Contending with Terms: 'Multimodal' and 'Multimedia' in the Academic and Public Spheres." Such work proves a rich precursor for deep definition inquiries, and yet, as the preface to the updated Heilker and Vandenberg (2015) *Keywords* collection notes, such accounts are always due for updates due to the ongoing dynamism of these words as they age and as usage shifts. In light of this, turning to past treatments of keywords to ask "what has become of this term?" for specific entries indicates a regenerative capacity of word watching where it informs this suggested project framework.

Semantic Worknets

Whereas glossaries and deep definition inquiries take a predominantly textual approach to word watching, semantic worknets introduce a visual component to the gathering and tracing of a family of salient terms in the context of a scholarly article. The word *worknets* is a playful inversion of networks; I have elaborated the idea elsewhere in terms of a pedagogy that involves readers in creating a series of visual models (spokes emanating from a hub or center that stands in for the germinal article) that tease out aspects of sources (Mueller, 2015).

Semantic worknets aid readers in attending to a sample of phrases whose meanings—both as established internal to the source material and as extensible, connecting to experiences, situations, and references elsewhere—are regarded to be important, insightful, or thickly set to the article's focus. Noticing published articles as concentrations of specialized vocabulary and in-

ventorying the ways those vocabularies are linked and traceable produces a localized (here, in this one article) and immediate (now, in the time I am reading it) conductor of network sense that primes further inquiries into the interrelationship between disciplinary knowledges and the words we use. Along with the visual representation of the small cluster of salient words or phrases (Fig. 14), the semantic worknet accompanies a textual account that recognizes the situated significances of the terms and their relationships and that gestures speculatively to further possibilities for these terms as prompts for an emerging research question.

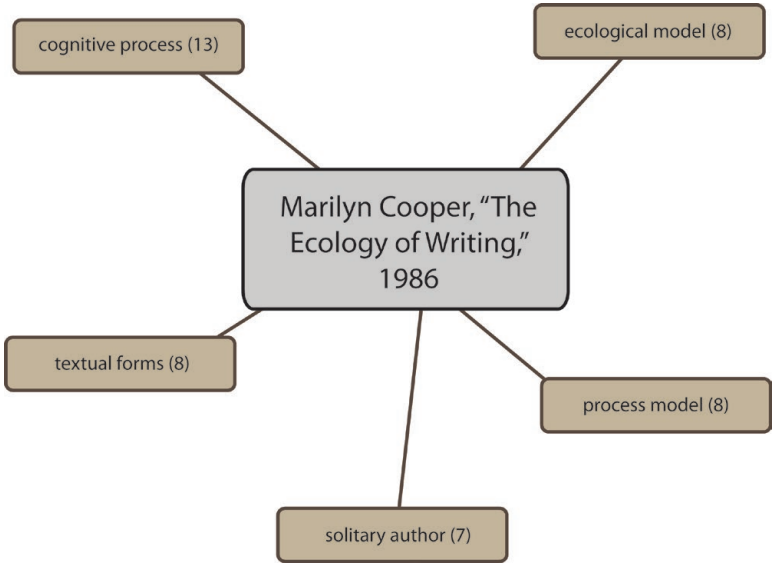

Figure 14. A semantic worknet, or radial model illustrating a selection of bi-grams derived from Marilyn Cooper's (1986) "The Ecology of Writing."

Semantic worknets offer but one phase of a more expansive framework for engaging sources. The other phases are complementary insofar as they attend to sources cited (bibliographic worknet), authorship and influences (affinity worknet), and world events or popular culture coincident in time and place to the source's production (choric worknet). The hub and spoke visual model offers a simple formulation of a connection between the article and salient words and phrases recurring therein. It would do well, however, to include a further extended periphery beyond the prominent terms that pose as possible keyword-led inquiries. To suppose dotted lines that extend orbits, and orbits removed from the core article is, in effect, to realize intertextuality and its traceability as generative for priming researchable questions and for articulating connections.

Animated Indexes of Tomorrow

One more pedagogical possibility comes in the form of prompting students to create what I consider animated indexes of tomorrow—futurecast, playable motion charts populated with sets of terms they believe their research will promote and mobilize over the next decade. Compared to glossaries, deep definition inquiries, and semantic worknets, which favor an interpretive–hermeneutic relationship to existing texts, animated indexes of tomorrow are positioned as the most experimental of the four pedagogical adaptations sketched here. These are especially promising for advanced undergraduates and for graduate students working on major projects or dissertations because students can locate in these more substantive projects a family of terms that are particularly load-bearing, whether due to frequency or distinctiveness.

Because animated indexes of tomorrow are speculative, the numerical values assigned to the keyword positions are conjectural. Even so, they are also suggestive, as they set up a hypothetical tomorrow that newcomers to the field—especially when they think of their work as mattering, as they should—may find generative and useful for focusing on what precisely they think their work will do, what ideas it will advance, and what difference it will make when it is taken up. An animated index of tomorrow sets up quickly in Google Sheets, with columns set aside for keyword, year, references count, number of articles, and percentage of articles in the given year. Simply, the purpose of the animated index of tomorrow is to recognize as explicit and foreseeable a relationship between one's own writing and the creation of future-oriented disciplinary focuses. Long-timers to the field already recognize this relationship in ways newcomers are still discovering: The discipline is written by us; its future shape is ours, by the force of language, to articulate.

Finally, across these four practical and pedagogical derivations lingers a deeply political question about the nature of disciplinary invitation—whether it should gravitate toward paying homage to established, pre-existing conversations (as is the emphasis of the well-known if highbrow Burkean parlor) or whether it ought to instead introduce change, even transgressively so. Extended word watching to speculative projections of a discipline opens onto the inevitably transgressive quality of invitation, a notion developed in Jacques Derrida's (2000) *Of Hospitality*. At its simplest, this means that upon accepting an invitation, upon entering the parlor, the order is transgressed, altered, and reconstituted. The degree of transgression has much to do with the entrant's heeding established practices *or not*. Every rhetorical choice is inflected with a tension between continuity and change. As such, I end this chapter on turn spotting with its impact on turn making as a priority. Within the conditions for change in a discipline lingers a paradox much like that

which motivated Jim Corder's (1995) concern for "Turnings," about how to honor divergent rhetorics, how to bridge separations that do not seem to compromise, to participate in the field's coherent maturation with the fullest possible command of its responsibilities, and at the same time advance change insistent on radical eclecticism.