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Cover Page Footnote

Catherine L Hobbs is associate professor in the Composition/Rhetoric/Literacy program in English at the University of Oklahoma. Her research is primarily in eighteenth- and nineteenth- century history of writing instruction. She is particularly interested in women s writing and has edited the book *Nineteenth Century Women Learn to Write*, U of Virginia P, 1995.

The Architectonics of Information: Ancient Topical Thought and Postmodern Information¹

Catherine L. Hobbs

It has been said that we are entering a new economic era in which the scarce commodity will be that of attention. Yet this scarcity of attention is not really entirely new. After all, reality for William James at the century's birth was that "blooming, buzzing confusion" with its attendant attention demands, and the vagaries of human attention have been noted since the birth of cognitive studies in the eighteenth century.

Nonetheless, rather than the benign and buzzing world of the early century, the information environment today is more often characterized as hostile or aggressive. Richard Lanham likens the stream of information turned our way to a firehose hitting us smack in the face. If information is so abundant, attention is at a premium. Anyone who understands how to structure attention in such a society will rule. Perhaps more, anyone who understands how to structure her own attention—who is capable of finding and capturing meaningful information and experiences and producing effective personal and shared meaning—must surely have a good chance for a satisfying life. If this last statement is not a provable proposition, it may yet be a relevant starting point for a 21st-century higher education mission statement.

Victorians complained last century about the swiftness of change and the volume of books to be read. Before that, as early as the first quarter of the eighteenth century, the Neapolitan rhetoric professor and philosopher Giambattista Vico was already feeling the first pressure from the "firehose of information" described in late twentieth-century electronic culture. Vico, an early modern living during the consolidation of the era of the printing press, relied on the

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¹ An earlier version of this paper, first delivered as part of a panel at the Rhetoric Society of America meeting at Tucson in May 1996, was delivered and published as "The Architectonics of Information: Ancient Topical Thought and Postmodern Cognition" in *Proceedings of the Mid-America Symposium on Emerging Computer Technologies*, October 1996. (The published papers are available in "Information Problems" at <http://www.ou.edu/cas/english/agora/>.) I would like to thank Jana Moring and Dianne Juby for their collaboration on the panel.

ancient arts of speech and memory championed by Aristotle and Cicero. Having internalized these arts, he bragged that he had written his masterwork *The New Science* from his own memory and reflection, “as if there were no books in the world.” This statement seems to protest a bit too much. Perhaps the problem was that there were just then too many books to maintain the older Renaissance ideal that every man was a walking university representing the sum of knowledge in the world.

What was needed in those early days of accumulated book literacy, when arts and knowledge were carried in the head, were classifications and structures to chunk information, or architectonic arts. Architectonic arts are structuring arts: the architectonic system Vico claimed enabled this feat were the rhetorical arts, particularly that ancient art called “topics.” Topics were places in the mind where arguments were stored to produce an oration, or places in the mind where hooks for memory were created. Internalized after long usage, Vico’s topical arts of rhetoric enabled him to make connections between disparate fields and elements to produce singular insights resulting in a structural-historical view of human civilization. An architectonic art is creative, productive of or able to structure other arts. Perhaps that helps explain why Vico has been called the father of the social sciences and an inventor of modern historiography.

It may be that what we need today to manage our attention, to enable us to drift, surf, or dive through our postmodern ocean of information, is a similarly flexible system of inquiry or language arts that allow us to locate, internalize, and manipulate information to produce meaning. If such heuristic systems could allow us to float in the information stream without becoming disoriented, if they could help us produce knowledge from information as if there were no tsunami-force wave hitting us full in the face—this would indeed be refreshing and relevant and surely worthy of learning and teaching.

Such systems—heuristic guides, sets of “rules of thumb”—may be as pertinent as they are intriguing and seductive to consider. Such a set of highly portable internalized “arts” would be the best imaginable human-computer interface. This system—or systems determined by places or fields—would be organized by topics, by “terms,” and serve as aids to focusing an inquiry, helping both eliminate and elucidate possible moves. They are thus, in the rhetorical theorist Kenneth Burke’s language, “terministic screens,” sets of terms that focus our attention, both screening out and structuring in what they can and will. They are also “architectonic” in Richard McKeon’s Aristotelian sense: “A productive, architectonic art produces subject-matters and organizes them in relation to each other and to problems to be solved.”

How these portable interfaces and architectonic arts will work we can only imagine from our previous and current uses of topical systems in composition studies, some of which have already been incorporated into computer software and pedagogy. Rather than the old saw in the sixties that topics represented classical thought that arrived out of its time, too late, this information and attention-structuring view of topical systems may be just in time. They may also prove to be helpful for better indexing the web or creating intelligent agents that help limit our information overload by selectively presenting us with what we request.

Rhetoric and Topical Thought

I have been working on the history of this sort of “topical thought” for more than a decade. Today, the older metaphors in literary and composition theory have manifested themselves in the literal world of the Web and on-line databases. Previously, revolutions in information and thought were contrasted with the past in images of the multistemmed bush form taking precedence over the tree; the rhizome over the bush—the rhizome being that networked structure of crabgrass, or if you prefer, the root-branching strawberry plant. Cyberspace has now become the sixties’ “strawberry fields forever.” In such a network of free-floating information, a postmodern art may be needed to serve as a useable human- computer interface for information retrieval as well as information manipulation and knowledge construction.

As a former journalist and communication specialist, I have always been interested in the lateral thought processes and everyday logic described by the field of rhetoric, the classical arts of speaking and writing that were the center of education for more than 2,000 years. Unlike more linear formal thought, such as analytical academic philosophical argument represented in programlike if not programmable formula, rhetoric has always been used informally, flexibly, and pragmatically in the public, civic sphere. In fact, there was an ancient battle between the philosophers and the rhetoricians over the two thought styles. Philosophers were concerned with universals and the certain, while rhetoricians were concerned with the everyday, the situated, the contingent. To give importance to such an ancient battle of the humanities may seem, again, oddly anachronistic. However, it is just these sorts of seemingly off-beat, out-of-time connections that we may need to encourage in the present age, connections that may prove enormously productive, if surprising and unsettling.

Deferring the question “productive for what?” the issues closer to home in the writing classroom include:

- Can nonlinear patterns of classical topical thought be used helpfully to describe approaches appropriate to navigating through and finally successfully creating knowledge from networked information?
- If topical thought is helpful, how is it so, and what can and ought we to do with it and how?

These are some of the questions I have been asking as I teach writing and online research in my advanced composition classes. I aim to help my students be more flexible and diligent inquirers and to be more independent, able to take on ill-defined problems rather than the pre-digested problems offered them in much of their college work. I want to help them hold onto the tail of their inquiry long enough to turn information into insights and useful knowledge. I believe that teaching them some thought processes from the topical arts really helps.

History of Topical Thought

My teaching efforts drew me back to the Neapolitan professor of rhetoric I studied in the history of rhetoric class I took in 1985 with Prof. Janice Lauer at

Purdue University.² Vico, professor of Latin eloquence at the University of Naples in the early eighteenth century, reinterpreted the classical arts as appropriated by Renaissance humanism. His thought was based in the art of classical invention, especially two arts, those of topics and status. He describes flexible ways of using networks of information, writing about solitary and social inquiry as well as the speaker's performance of public persuasion. Vico's networks were in his memory and in the books he surrounded himself with, but his emphasis on creating new knowledge through making connections seems pertinent to the present issues.

What is a topical system? The Greek term *topos* and the Latin *locus* are often translated as "places" or "lines of argument." They refer to considerations that might possibly arise in disputation, and they existed to serve as flexible touchstones for helping advocates in classical courtrooms. Aristotle and other classical writers also discuss *topoi* of the legislative forum and public ceremonies. Vico later expands the Aristotelian system of court, forum, and public ritual to encompass more and more situations of human thought, including scientific inquiry.

Vico also is worthy of examination for his alternative conception of mind, alternative to the earlier "black box" computer model. As semiotician Marcel Danesi has written, Vico's model is based on the mind's ability to capture and manipulate imagery. This capability can be linked to the Web revolution based on capturing and manipulating images, making the Web environment more conducive to Vico's model of how the human mind works. For Vico, the ability to capture and manipulate images is the fundamental process that allows the external world to be internalized and the body and mind to be brought together. This ability can explain why we have anything "in mind" on which to reflect, with which to think at all (Verene). The image is in this sense a "middle term," an important technical term in Vico. The "middle term" originally referred to the middle term in a syllogism, the key statement linking the first and final propositions, but Vico uses it at times metaphorically as encompassing all linking.

The key imagistic move in Vico's model of mind is the human ability to produce metaphor. A metaphor is also a middle term, a point of intersection between two terms that produces new knowledge. When two images are brought together to produce a metaphor, a new node has been formed in a network of information. When we say the moon sailed across the sky, we have brought the images of a sailing ship and the moon in motion together in such a way as to make it difficult ever to see the moon in the night sky without thinking of a ship. We note with pleasure the whiteness of the moon, the specter of a sail on a summer lake.

Vico says through such processes, which operate alike in both aesthetic and scientific realms, we produce our worlds—although, like Marx, (or Marx like Vico), we don't make them just as we would like. We are constrained by our materials and our positioning within our technical/cultural networks. The existence of such net-

² Lauer's scholarship on invention is summarized in her recent entry "Invention," in *Theorizing Composition: A Critical Sourcebook of Theory and Scholarship in Contemporary Composition Studies*, in addition to practices outlined in the co-authored textbook *Four Worlds of Writing*.

works was the insight Vico came to from his topical pattern of thought—multiple, historically produced cultural networks, in motion. Structures in the process of producing themselves, perpetually in transformation or in catastrophe: this was the historical model Vico's own art of topics produced.

Vico's own contemporary cultural network was adjusting to the production of new instruments and methods—the telescope, the book, the Cartesian critical method. Vico liked his predecessor Bacon better than Descartes. Bacon was one of his four guiding lights—along with Plato, Tacitus, and the international natural law theorist Grotius. He liked Bacon's view of the total network of knowledge, but he didn't like Bacon's view of topics as useless for anything but memory retrieval. Vico also recemented Bacon's separation of classical arts of invention into two: scientific invention and invention of speech and arguments. As one who in young manhood flirted with Cartesianism, Vico knew and interacted with the Cartesians of Naples, who were primarily interested in natural phenomena, not in ancient texts or topical inventional strategies for discovery. Vico himself wrote on the circulation of the blood. But he wasn't happy that in the Cartesian paradigm the arena for the production of knowledge was shifting from the humanities to physics and mathematics, from moral philosophy to natural philosophy. We can never know the natural world because we didn't make it, he argued. He believed the paradigm for knowing should be the humanities: the study of human history, in particular, law, politics, and rhetoric. What humans have made, they can know with most certainty.

For Vico, a teacher of rhetoric, the premiere art of rhetoric was topics—an art he tried to refashion as relevant to the eighteenth-century world of sciences. In doing so, he made the sort of claims about topical thought we make here—that they are flexible and can be adapted for a variety of problems and times. Vico believed topics were valuable for surveying what other people have discovered about a matter as well as making humans more acute and quick in thinking on their feet in public persuasive situations. Vico thought they could even be adapted for scientific observation as well as the traditional invention of arguments. Applied thoroughly, this questioning became critical as well as creative, he claimed. They also could be used to validate, test or challenge knowledge. But their use to make connections that created new knowledge was their most important contribution.

Throughout Vico's literary corpus, which ended in his masterwork on human history, *The New Science*, his own topical thought functions to collect and recollect, make fertile and surprising connections, overcome divisions, and construct classifications having semipermeable membranes, or heuristic categories.

Vico had obtained his chair in rhetoric in 1699 by a disputation on Quintilian's *De Statibus Caussarum*, an etymology and explication of the term status. Status is a theory of judicial controversy that assists the rhetor in determining the point at issue or "center of gravity" of a case. This theory became a rich field of thought for Vico, incorporated in his topical scientific method. The Vico scholar Alessandro Giuliani argues that the classical theory of status made it possible to "go beyond an emotive and irrational rhetoric" because of its "objective, impartial, and neutral value" (38). With the structure of status, rhetoric becomes the "art of distinguishing" the nature of the problem. Understood as the center of argumentation, the judicial controversy can be seen in all its complexity as a site offering up a plurality of questions.

Vico's Topics in Process

Topical thinking to Vico was more and more closely identified with the construction of knowledge through language; from his earliest work it was set into opposition with the critical Cartesian philosophy of his day. In his 1708-9 *On the Study Methods of Our Times*, Vico protests the neglect of topical inventional arts for Cartesian critical thinking. Two years later in his treatise *On the Ancient Wisdom of the Italians*, he repeats his criticisms, advising a processual use of topics to generate questions to probe a matter, listing examples of his topical questions. Vico poses a number of questions which function not solely in law, but as a general heuristic for inquiry:

And first, he must examine the question "Does the thing exist?" so as to avoid talking about nothing. Second, the question "What is it?" so as to avoid arguing about names. Third, "How big is it?" either in size, weight, or number. Fourth, "What is its quality?" under which he considers color, taste, softness, hardness, and other tactile matters. Fifth, "When was it born, how long has it lasted, and into what [elements] does it break down?" On this pattern, he must take it through the remaining categories comparatively and set it beside everything that is somehow germane to it. The causes from which it arose and the effects it produces or what it does must be compared with other things like it, or different, with contraries, with things greater, smaller, and equal to it. (100)

These questions, based on transformations of Aristotelian dialectical and rhetorical loci as used in Cicero, cannot be criticized for being the narrow checklist for arguments into which topics are accused of degenerating. The first two questions are obviously from the determination of status, including the issues of fact or definition. Vico's third question reflects Aristotle's common requisite of degree or size, Cicero's comparison category. In the fourth, the question of quality, Vico's stress on the senses ("color, taste, softness, hardness, and other tactile matters") shows the influence of Aristotelian thinking as well as contemporary empirical science with its Cartesian and Baconian sensory emphasis.

Perhaps the most interesting question because of its manifestations in Vico's later work is that which highlights the temporal nature of Vico's thinking, the fifth: "When was it born, how long has it lasted, and into what does it break down?" This pattern of birth and decay shows up in *The New Science's* theory of corso and ricorso, in which the third era of human "progress" (following the "heroic" middle era) regularly degenerates, swept provisionally back into the barbarism typifying the first era. The fifth question also allies itself with the status issue of quality.

Vico's key insight was that humans have not simply changed by degrees over time, but have passed through qualitatively different transformations, evidenced by changes in their use of language and parallel institutions. The topos of quality also concerns historical narrative because it was the primary strategy for determining the narrative portion of a legal argument. Therefore, topics of argument may help a thinker tell a story from a mass of facts or make an argument. Another

set of topics from a speaker's arsenal assisted with memory, important in an oral culture, and adding up to a complex system of arts for managing the unwieldy lifeworld William James described as a "blooming, buzzing confusion."

Contemporary Linkages

So how does a discussion of these arcane ancient arts connect to online searching in the near-21st century? There are some interesting parallels with Vico's anti-modern approach to information management and our current interwoven information revolution. For example, Linda Calendrillo at Western Kentucky University has argued that the more information we accumulate, the more we will need memory topics just to navigate through our own accumulated external memory files to retrieve and produce our own knowledge. I think she is right. We may need new topics for both memory and rhetoric. Any new topical art must first, like Vico's, be an art that is both creative and critical, with a both-and view of the world and binary oppositions in general—and, as in classical topical arts, such opposites will remain key.

The concept of "opposites" and contradictories was itself a key rational topos, along with other concepts such as causes, actions and consequences, means and end, processes, definitions, classification, authority, and other logical lines of thought and argument (logos). In addition, sets of topoi traditionally set out to grapple with character presentation (ethos) of the message producer. They also attempted to identify lines of thought concerning attitudes and emotions of the interlocutors in or audience of the discourse (pathos).

Navigating through the transforming cyberspace of WWW or an online database may call for a related art of stasis, the art of standpoint that is used to ensure a narrative begins well by sketching out the particular direction it will follow. Sometimes, my students who can keep their own questions uppermost in their Web searching, who have a center of gravity to their activities, end up with the best insights and information. Stasis as an art also reminds me of John Bender and David E. Wellbery's definition of rhetoric as "the art of positionality in discourse." Not only does one need to know where one is and where one is going at any particular moment, but one needs to know where the sources he or she uses are located—in what discipline, what methodological orientation, what political orientation. Who speaks? From what place? What is at stake here? We all need to know, and yet these complex questions are even more baffling in emerging electronic media.

One "real-world" example of the complexity of positionality emerged in my women's studies class on method and theory, where we discussed the nature of expertise. I brought in an AIDS skeptic, who made his presentation on what he terms the Center for Disease Control's "AIDS terror campaign" (Wright, 1996). Then and for the rest of spring semester, we asked ourselves how he and his information were positioned. Were we more in danger of dying of AIDS or of living a life whose choices and resultant emotions were based on irrational fears? Was Wright an expert or a crank? Was he a gay-basher, a libertarian, an anarchist? What was the quality of his information? When the statistics he had presented came out later in an article in the *Wall Street Journal*, some class members' views of the information shifted. The press carried a story using the same facts to point to the

AIDS campaign as trying to frighten women away from lesbianism. Student services personnel used the same information to make students aware of the risks of their behavior. Who speaks, from where, and why? In times of crucial decision-making, on AIDS, in this election year, we need such abilities to parse information, intention, and location, and we could do worse than the topos of positionality.

Positionality: Who produced this knowledge? How do they present it? What is at stake? What is their orientation to the academy, to industry, to the public? This art begins on the Web with the domain—.gov, .org, .edu, .com. But as in all positions, these domain names are contradictory: the non-aligned League of Women Voters is not located under “.org,” but under “.com,” in the space of the politically conservative *Daily Oklahoman* newspaper. This seeming exception, however, is the rule. The gaps and contradictions in positions, even, or especially Rush Limbaugh’s, allow us to make judgments of position that are more than simplistic identity-politics or stereotyping.

Such topical arts from classical rhetoric already have been flexibly transferred from linguistics to technical writing and general writing instruction in the sixties. In the fifties, Kenneth Pike’s structural linguistics developed a set of topics as part of what was called tagmemics theory. This topical system has been used extensively by linguist/missionaries encountering isolated, oral cultures to orient themselves enough to write down the language and translate the Bible. In the sixties, Alton Becker and Richard Young collaborated with Pike to develop a “tagmemic rhetoric.” They produced a technical writing text from their work at Michigan, *Rhetoric, Discovery and Change*, which adapted the tagmemics strategy as a general heuristic aiming to lead students to creativity and insight. James Kinneavy’s *Theory of Discourse* used the stasis art to analyze, critique, and retheorize the teaching of writing in English Departments. Recently Allan Megill, a historian at the University of Virginia, has used stasis as a heuristic to analyze historical discourse, aiming toward a study of “historics.” These diverse examples show not only the flexibility of topical thought, but how they can provide perspective on location in various ways. They may help in translating, inquiring, indexing, analyzing, critiquing.

Metaphor may be the queen of the topical arts of thought, helping people make many types of surprising connections. In creativity theory, Alfred Rothenberg has described the process of creativity in science and in the arts as involving metaphor as well as maintaining or manipulating the tensions between oppositions. This is a more subtle way of positioning oppositions, and much more promising than that of the monolithically oppositional Sunday morning news shows. Romantic ideology has it that creative thought cannot be taught. The very complexity of most creative acts makes many today argue that writing, an exemplary case of the performance of thought, cannot be taught. So what function can topics serve? What exactly might a flexible topical system do?

Pertinent questions, among others, remain:

- Can topical thought help us in indexing, in retrieving information on the Web and in online data bases?
- Can topical systems or arts help us orient ourselves and others in cyberspace?
- Can they describe or prescribe possible cognitive moves through cyberspace, or through various problem spaces?

- Are they useful for surveying various aspects of a problem?
- Are they useful for defining a problem, seeing how others have defined similar problems, seeing that no one has?
- Are they useful for evaluating the political implications of working on a particular problem, or of not working on it?
- Are they useful for evaluating the position or worth of information or a source?
- What might a particular system do, and will it really do what it aims to do?
- How can its effectiveness be judged?

Perhaps most practically, is any topical system capable of remaining simple and portable, comprising a truly helpful human-computer interface? Importantly, an art with a critical as well as creative edge is needed because the seeming free play of the internet is not really free. As my library science collaborator Jana Moring has written, it is controlled by controlled vocabulary—of indexers at the purest, of those with axes to grind, be they (post)industrialists or their politicians or public relations and advertising folk. A user can't find anything that's not there. What's been left out? I remember how frustrating it was just a few years ago to research women's history in history indexes—when the major history indexes were not indexing that work. Knowledge was being produced, but was not accessible, even when I knew it was there. What if I hadn't known it existed at all? We do not ask questions about what is invisible or imperceptible, closing off our possibilities.

In addition, as we consider topos, where are the gaps, the silences? What's not being talked about? Who's not online? What remains unlinked?

Vico's metaphor for the totality of knowledge was the university. He remembered when Socrates contained the wisdom of a whole university. Hermann Hesse's *Glass Bead Game* describes the unity of knowledge as a game with moves encompassing and relating all fields, all knowledge. Today the metaphor for the totality of knowledge may become the electronic network of all knowledge in digital form. But we should be careful not to confer on this age-old ideal of a unity of knowledge any more than a virtual reality. The free play of the totality of knowledge in cyberspace is neither free nor total (and neither is any heuristic or topical system of managing information and creating knowledge). Yet, as Vico admits of Cartesianism even as he critiqued it, it has its advantages, which should not to be dismissed or ignored. Mathematical thought has succeeded wildly, both inside and outside its own realm, as Vico acknowledged and predicted it would. Partly as a consequence, we have our currently exploding network of digitized information that, along with our existing print systems, may soon mean that the average citizen can find out more information more easily than ever before.

The implications for democratic culture are great, but only as great as people's ability to understand and reposition as well as to create information for their own uses. Democracy will succeed only as well as our ability to collect actively and connect knowledge and tell our own narratives from our own locations. Classically, a topos signified a "place," and the concept of positioning and place remains important in producing effective discourse.

But what if most people can't position themselves in cyberspace? Will this leave them in u-topia—literally, no place? To consider yet another danger of place, let us hope that teaching public discourse with the new technology means more than teaching an inert population simply to know their place. An active and effective

tive critical literacy will be crucial in the next century. What is happening today suggests that the place of those without active and productive language arts and available technology will be determined by others more adept in the quickly evolving arts of focusing and structuring human attention in a variety of media. ☺

Works Cited

- Bender, John, and David E. Wellbery. "The Ends of Rhetoric: History, Theory, and Practice." *Rhetorality: On the Modernist Return of Rhetoric*. Stanford, CA: Stanford UP, 1990, 3-39.
- Danesi, Marcel. *Giambattista Vico and the Cognitive Science Enterprise*. New York: Peter Lang, 1995.
- Giuliani, Alessandro. "Vico's Rhetorical Philosophy and the New Rhetoric," *Giambattista Vico's Science of Humanity*. Eds. Giorgio Tagliacozzo and Donald Philip Verene. Baltimore: Johns Hopkins UP, 1976, 31-46.
- Lauer, Janice M., et al. *Four Worlds of Writing*. New York: Harper & Row, 1985.
- . "Invention." *Theorizing Composition: A Critical Sourcebook of Theory and Scholarship in Contemporary Composition Studies*. Ed. Mary Lunch Kennedy. Westport, CT: Greenwood P, 1998, 163-67.
- Kinneavy, James L. *A Theory of Discourse*. New York: Norton, 1971.
- Lanham, Richard A. *The Electronic Word: Democracy, Technology and the Arts*. Chicago: U of Chicago P, 1993.
- McKeon, Richard. "The Uses of Rhetoric in a Technological Age: Architectonic Productive Arts." *Rhetoric: Essays in Invention and Discovery*. Ed. Mark Backman. Woodbridge, CT: Ox Bow Press, 1987.
- Megill, Allan. "Jorn Rusen's Theory of Historiography: Between Modernism and Rhetoric of Inquiry." *History and Theory* 33 (1994): 39-60.
- Rothenberg, Alfred. *The Emerging Goddess: The Creative Process in Art, Science, and Other Fields*. Chicago: U of Chicago P, 1979.
- Verene, Donald Philip. *Vico's Science of Imagination*. Ithaca: Cornell UP, 1981.
- Vico, Giambattista. *The New Science of Giambattista Vico*. Trans. Thomas Goddard Bergin and Max Harold Fisch. Ithaca: Cornell UP, 1984.
- . *On the Most Ancient Wisdom of the Italians Unearthed from the Origins of the Latin Language*. Trans. and intro. L. M. Palmer. Ithaca: Cornell UP, 1988.
- . *On the Study Methods of Our Time*. Trans. Elio Gianturco. Indianapolis: Bobbs Merrill, 1965.
- Wright, Michael. Class presentation. Method and Theory in Women's Studies, University of Oklahoma, Fall 1996.
- Young, Richard E., Alton L. Becker, and Kenneth L. Pike. *Rhetoric: Discovery and Change*. New York: Harcourt, 1970.
- Young, Richard E. and Alton L. Becker. "Toward a Modern Theory of Rhetoric: A Tagmemic Contribution." *Harvard Educational Review* 35 (1965): 450-68.