



University of Applied Sciences and Arts.
Hannover, Germany July 2004

Professor Gerald Alred Lecture: "Essential Works on
Technical Communication: Academic and Practitioner
Perspectives in the U.S. (text of lecture follows photos)



University of Applied Sciences and Arts.
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Faculty, students, and members of *Tekom*
attend Professor Gerald Alred's Lecture



University of Applied Sciences and Arts.
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Paula Pape displays UWM Certificate in
International Technical Communication.

Essential Works on Technical Communication: Academic and Practitioner Perspectives in the U.S.

Hannover, Germany ~ June 14, 2004

Handouts: Tufte Page 59 from *Visual Explanations*
Quotes from Presentation
Examples of Popular Works
Bibliography of References

First, I want to thank you and Professor Baumert for inviting me to speak. It is an honor for me to be invited to speak to you today! I can say that "tekomp" is becoming very well known in the U.S.

I must also apologize that I cannot speak to you in German, but like too many Americans, I can only speak in one language.

My topic is "Essential Works on Technical Communication: Academic and Practitioner Perspectives in the U.S." I do not know how closely these perspectives may relate to your experiences in Germany -- but even if they do not, you may find it useful or at least interesting to learn about some problems that we face in the U.S.

My own perspective on a particular challenge we face starts with something of a mystery.

In the Fall of 2002, George Hayhoe, editor of the Society for Technical Communication's primary journal *Technical Communication* said that he was working on the 50th anniversary issue of that journal. And he asked me if I would be interested in preparing an article that would list and describe the current "essential works on technical communication."

Even though I was busy, I could not resist.

First, it was an honor to be asked to contribute to this special issue, but second I was fascinated at what I might learn: What

works would I include? how would I gather them? and, most of all, what could "essential" mean? I felt like a detective who must solve a mystery.

To solve this mystery, I gathered the titles from many sources, as I describe in the finished article:

- Lists of recommended works posted on the Web by local chapters the Society for Technical Communication.
- Lists of award-winning books and articles
- Collected lists and individual recommendations posted over the last seven years on two Internet discussion groups
- And, perhaps most importantly, personal lists of recommended works that I solicited from both new and experienced practitioners, educators, researchers, and consultants in the U.S. and elsewhere.

As I began to narrow this huge list and create categories, I discovered something that I did not expect. And that was a dramatic difference in the works valued by practitioners (that is, working technical writers and communicators) and academics (that is, professors and researchers).

Of course, as the examples of popular works on my handout demonstrate, some works are valued by both practitioners and academics. (Handout: "Examples of Essential Works")

However, for the most part, I found a clear dividing line between works recommended by academics and those recommended by practitioners.

This dividing line reminded me of a recent observation by Professor Stanley Dicks of North Carolina State University. Professor Dicks, who has spent over 13 years in academia and 16 years as a practicing technical communicator in industry, says that the "cultural differences" between academic and workplace professionals are so pronounced that "operating in these two worlds can be like traveling between countries" (p. 23).

I describe some of these differences in the article itself, titled "Essential Works on Technical Communication," which was published in November 2003 issue of *Technical Communication*

But let me give you an example of this cultural difference between academic and practitioner perspectives that I didn't include in the article.

Last year I attended a conference for educators. During a reception at this conference, a young academic colleague asked me about my article soon to be published on "Essential Works," and specifically what works I had included in my list on the subject of "design."

Since I was standing at a reception and drinking a glass of wine at the time, I could not recall all the titles in that category.

However, I did recall one author whose works were very popular among practitioners, and I mentioned his name to her. The author I mentioned is Edward R. Tufte, a professor from Yale University who is well known in the U.S. for several books on graphic design. Perhaps some of you have heard of him.

If I were asked to describe Tufte's books, I would say that reading them is something like visiting a museum with beautiful paintings that entertain and inspire. Tufte's books are wonderfully produced with high quality paper, printing, and binding -- and contain fascinating and often artistic graphic illustrations.

I have distributed copies of one page (page 59) from Tufte's book titled *Visual Explanations: Images and Quantities, Evidence and Narrative*.

It is easy to appreciate why anyone might enjoy reading these books. (Handout: "Tufte Pages 59 from Visual Explanations")

However, when I mentioned to my young colleague that several of Tufte's books were included, I can still recall the look of distaste on her face. She even made a gesture of sticking her index finger in her mouth, as if to say "how disgusting!"

As I told her, of course, I had no choice but to include his works if I were honest and consistent with the method that I describe in the introduction to the article.

In fact, as I look back, Edward Tufte's works were recommended by as many sources as those by any author on my list!

Specifically, Tufte had 17 recommendations. However -- and this is what is significant -- only one of those recommendations was from an academic source! All the rest were from practitioner sources.

So, I became very curious to know why Tufte's works are so valued by practitioners in the U.S. but apparently viewed so differently by our academics. Obviously, because I am not a practitioner, the answer was not immediately clear to me.

I certainly can give you a common academic perspective of Tufte. In fact, let me read a brief section from a review of his book *Visual Explanations* that was published in the academic journal *Technical Communication Quarterly*. (Hold up a copy!) Among other statements, the reviewer writes the following (which I have distributed):

"Taken as a whole, *Visual Explanations* is an eclectic mix of information designs about motion, time, process, cause and effect, narrative, and explanation. Because of its familiar principles and its lovely integration of text and image in the book's design (including before and after designs visible by the lifting of a flap), Tufte-ites will find it compulsory reading."
(341)

Translation of polite academic language: Tufte's book is a clever mix of pretty pictures and simplistic ideas that only fanatics and practitioners who do not think too deeply will appreciate!

The reviewer continues:

"What is good about any Tufte book is that it challenges us to see what can be done--an admirable goal. But his emphasis on positivistic ideals can sometimes prove problematic." (345)

Translation of polite academic language: The book might be good for brainstorming and Tufte means well, but his simple-minded and simplistic advice can get you into trouble!

What I find remarkable about this review is that it never quotes Tufte's Preface, which might give readers insight into Tufte's goals. For example, Tufte states,

"The idea is to make designs that enhance richness,

complexity, resolution, dimensionality, and clarity of the content... to extend the depth of our own knowledge and experience." (10)

I do not intend to take the time here to defend Edward Tufte, but I wonder if these are the simplistic or "positivistic ideals" that concern the reviewer. I invite you to read the review, but you will find that much of the review is condescending and (in my view) suggests that, to be academically respectable, Tufte's work should offer more than, and something quite different from, the author himself had in mind for the book.

However -- and this is a key point -- despite such academic criticisms and despite the reaction of my young academic colleague at the conference, practitioners somehow find his work extremely valuable.

So, I have looked again more closely at Tufte's book to try to understand why practitioners find his works so valuable. And I think I have found an answer to this question, at least in part.

I can imagine that if I were a practitioner writing a manual or creating a Web page, Tufte's books could definitely serve me as an inspiration. That is, a Tufte book might inspire me to think creatively and develop useful ways to communicate with my readers -- or as Tufte would say "help enhance the ... clarity of the content." Tufte's clear-cut advice and sharp opinions might help me solve everyday technical communication problems.

However, as an academic, I can understand why Tufte's books contrast with academic writing in both textbooks or articles. For example, in *The St. Martin's Bibliography*, I summarize an academic article on design by Ben and Marthalee Barton titled "Ideology and the Map: Toward a Postmodern Visual Design Practice." In this article, the authors describe

how maps illustrate that visuals are not simply neutral representations, but are "complicit with social-control mechanisms inextricably linked to power and authority" [...] "Rules of inclusion determine whether something is mapped, what aspects of a thing are mapped, and what representational strategies and devices are used to map those aspects." (137)

You may appreciate that this article concerns very much the philosophy of design and how design relates to large social and

political issues. Further, it reflects the practice of many academics to complicate issues beyond what is readily apparent or straightforward.

Well, I can tell you that few practitioners in the U.S. would find this article by the Bartons helpful to their immediate needs as professional technical communicators.

In fact, many practitioners would find such philosophical perspectives completely irrelevant to their work.

I can say that is true because I believe I understand the practitioner perspective a bit better than many academics. And that is because for nearly 30 years I have worked with a practitioner as one of my coauthors of the *Handbook of Technical Writing*.

My coauthor and friend Charles ("Ted") Brusaw has never been a college educator. During his career, he has been a professional writer of fiction, a technical writer, and a trainer. Ted Brusaw was, for many years, the manager of technical publications at NCR Corporation, which was the world's largest manufacturer of cash registers and a major producer of mainframe computers. He is now semi-retired and is an author of biographies and historical works.

In fact and coincidental with the D-Day events, one of his biographies, titled *Soldat*, is about a German Soldier who was captured by the Russians in World War II. Let me say that Ted is an outstanding professional writer.

As you might conclude from what I've said, I respect my coauthor very much as both a writer and thinker. However, I can also tell you that we have struggled at times over the years because of what I would call the "cultural differences" between practitioners and academics. I can remember, as we were developing the first editions of the *Handbook*, that Ted Brusaw would often say about a topic, "well, that never happens in the real world" or "you always write [something] in this way" and then he would suggest that we provide a simple, quick, and absolute rule.

However, because of my academic perspective, I would often feel a chill go up my spine when Ted would give what I thought was an "easy and absolute answer" to a complex issue.

I would often see such answers as almost simplistic and even troubling because -- in the words of the academic reviewer I quoted earlier -- "positivistic ideals can sometimes prove problematic." At the same time, I knew he was a successful writer and manager of technical communicators.

It took me *years* to fully realize that in his environment at NCR Corporation, Ted Brusaw and others had worked hard to construct "shortcuts" or practical techniques to solve complex problems so they could produce documentation within very tight deadlines.

Some of these shortcuts were often built into their ways of thinking. Ted Brusaw would say, though certainly not in this way, that he had contextual constraints at NCR Corporation that were a part of his workplace and that required a

shorthand based on a complex historical process of examining rhetorical variables.

Well, that's how an academic might say it!

One of the things I have learned in the process of working with my coauthor for so many years is that those of us in the academy can all too quickly reject the seemingly easy and apparently superficial comments of practitioners. At least I was guilty of just that when I made judgments about Ted's suggestions for the *Handbook*!

Well, Ted has told me that his relationship with me has also helped him appreciate the academic perspective as well.

Ted and I have both discovered, I think, that we have different perspectives because we have had different goals in our work.

- Ted's goal as a technical communicator was to produce usable documentation for very specific products and within tight deadlines.
- My goal as an academic has been to prepare students for life-long careers in technical communication that may involve them with tasks that none of us could imagine.

Ted has had to think in very practical and immediately applicable ways, while I have had to think in more abstract and conceptual and long-term ways.

Let me give you an illustration.

I teach a class at the University of Wisconsin-Milwaukee titled "Advanced Technical Writing," which is intended for students who wish to become professional technical writers.

I have taught this class for over 25 years. As I look back now, I realize that I could have not imagined what my students 25 years ago would produce today as technical writers and communicators.

Imagine, twenty-five years ago --- that was before the Web and even before the personal computer! Yes, we used something called a typewriter!! ("die Schreibmaschine")

So today, I am glad that I taught students conceptual ways to think about document problems, to develop a writing process for documentation, and general principles of clarity and organization that have transcended time. I hope I have been able to teach students how to think about tasks in ways that might apply to any project and over time as the field changes!

Although my perspective has been somewhat different than that of my practitioner coauthor, we have learned that our different perspectives are most valuable in making the *Handbook of Technical Writing* useful for students both in the classroom and later on the job.

But, frankly, I think it is important for ALL ACADEMICS AND PRACTITIONERS IN THE U.S. -- and perhaps elsewhere as well -- to begin to understand and appreciate each other's perspectives because we really do need to cooperate in our work.¹

We need to cooperate because:

- Academics need the advice of practitioners to help us educate students who can succeed in the workplace today as well as 25 years from now.

¹"This was precisely the subject at a recent translation conference I attended; it's a new organization provisionally called ATSA (American Translation Studies Association), and has a clear aim to marry the academy with the industry. For so long there has been friction -- even enmity -- between the two areas, yet both are critical to the field in general. And especially to teaching future translators!" Lorena Terando, Assistant Professor and Coordinator of the Graduate Certificate in Translation, Univ of Wisconsin-Milwaukee.

- And Practitioners need academics because we can develop a base of knowledge that will help working technical communicators do their jobs well and at the same time gain respect in their workplaces.

Let me give you a small example of how that can happen.

Four years ago, an advanced graduate student from the University at Giessen came to our technical communication program at the University of Wisconsin-Milwaukee. Her name is Ulrike Mueller. As a part of her studies at UWM, Ulrike developed a research project for a Milwaukee technical documentation company that, as it happens, produces documentation for a manufacturing company named Festo, which is based near Stuttgart.

For this research project, Ulrike observed the management of this documentation company, gathered documents and information, and interviewed technical communicators.

One result of her research was an academic paper -- but she also wrote a report to the President of this company that recommended specific steps to improve its operation.

Those of us at the university were pleased with her work ****and**** the President of the technical documentation company was very pleased because Ulrike helped him improve his operation.

Ulrike Mueller is now a technical writer at SAP here in Germany. And I believe her experience is most valuable for SAP as well.

This is only one example of how the academic community can do its work and help practitioners at the same time.

I will tell you, however, that I am concerned that the practitioner-academic differences could become greater over time. I worry, for example, about academic programs and research becoming too removed and too self-conscious as we in the U.S. develop Ph.D. programs in technical communication. As advanced students work to find topics for dissertations, it will be easy to become further and further disconnected from the realities of the workplace professional.

One answer for those of us in the academy is to keep our research grounded, like Ulrike Mueller's project, in actual workplaces.

But another, as I suggest at the conclusion of my introduction to "Essential Works," is for those of us in the academic world to avoid dismissing the works of someone like Edward Tufte and work to understand why they are so valuable to technical communicators.

Of course, as I also say in "Essential Works," some undeniable "cultural differences" in perspectives may not need to be fully understood by each side.

Let me put it another way: At the end of an article I wrote after I first taught at the University in Giessen in 1994, titled "Teaching in Germany and the Rhetoric of Culture," I conclude that for national cultural differences:

"Perhaps all we can do, perhaps all we should do, is view our cultural differences as differences--nothing less and nothing more."

Having said that, however, I would further argue that practitioners and academics in technical communication need to do more if our field is to prosper. We need to respect the perspectives that are reflected by works -- that is the books, articles, and other resources -- that are essential to helping each of us reach our goals.

I like especially the way Ulrike Mueller put it in a recent message to me about what I planed to say in this presentation. She said that:

I agree that it is dangerous if both sides stick to their own side of the fence. This fence needs to have holes and needs gaps where one can pass through. I have the working perspective now and do not spend much time thinking about the academic world I have to admit. But I think that is probably true for most technical writers out there. So coming to a compromise, accepting both sides, certainly [benefits practitioners and academics] since both sides have valuable input that they can provide for each other.

I agree with Ulrike, but what she says reminds me that we may find that it is the students who come to our academic programs in Milwaukee, in Hannover, and in Giessen -- and then become practitioners -- who will help us maintain balance in our perspectives.

And balance is essential because I believe that the strength of technical communication grows from the combination of and a respect for both the academic and practitioner perspectives.

Thank you for listening to me!!

Bibliography

Alred, Gerald J. "Essential Works on Technical Communication." *Technical Communication* 50.4 (November 2003): 585-616. (<http://www.uwm.edu/People/alred/EssentialWorks.pdf>)

Alred, Gerald J. *The St. Martin's Bibliography of Business and Technical Communication*. New York: St. Martin's Press, 1997.

Alred, Gerald J. "Teaching in Germany and the Rhetoric and Culture." *Journal of Business and Technical Communication* 11.3 (July 1997): 353-378. (<http://www.uwm.edu/~alred/Germany.pdf>)

Alred, Gerald J. Interview given to *Gießener Anzeiger* (Wednesday, 12 August 1998) (<http://www.uwm.edu/~alred/Anzeiger.html>)

Alred, Gerald J., Charles T. Brusaw, and Walter E. Oliu. 2003. *Handbook of Technical Writing*. 7th ed. Boston: Bedford/St. Martin's, 2003.

Association of Teachers of Technical Writing Discussion List: ATTW-L (<http://www.attw.org/ATTWEmailList.asp>).

Barton, Ben F., and Marthalee S. Barton. "Ideology and the Map: Toward a Postmodern Visual Design Practice." *Studies in Technical Communication: Selected Papers from the 1991 CCCC and NCTE Meeting*. Ed. Brenda R. Sims. Denton, TX: U of North Texas, 1991. 35-71.

Brasseur, Lee. Review of *Visual Explanations: Images and Quantities, Evidence and Narrative*. Edward R. Tufte. *Technical Communication Quarterly* 7 (1998): 344-345.

Siegfried Knappe (with Ted Brusaw). *Soldat: Reflections of a German Soldier 1936-1948*. New York: Dell Publishing, 1992.

Dicks, R. Stanley. "Cultural Impediments to Understanding: Are They Surmountable?" In *Reshaping Technical Communication: New Directions and Challenges for the 21st Century*, edited by Barbara Mirel and Rachel Spilka. Mahwah, NJ: Lawrence Erlbaum, 2002. 13-25.

Raycom Discussion List: TECHWR-L (<http://www.raycomm.com/techwhirl/>).

Tufte, Edward R. *Visual Explanations: Images and Quantities, Evidence and Narrative*. Cheshire, CT: Graphics Press, 1997.

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EXAMPLES OF ESSENTIAL WORKS*

Mostly Academic Recommendations

- Dobrin, David N. 1989. "What's technical about technical writing?" Chap. 3 in *Writing and technique*. Urbana, IL: National Council of Teachers of English.
- Kostelnick, Charles, and David D. Roberts. 1998. *Designing visual language: Strategies for professional communicators*. Allyn and Bacon Series in Technical Communication. Boston: Allyn & Bacon. 455p.
- Miller, Carolyn R. 1979. "A humanistic rationale for technical writing." *College English* 40, no. 6: 610-617.
- Spilka, Rachel, ed. 1993. *Writing in the workplace: New research perspectives*. Carbondale: Southern Illinois UP. 332p.
- Wick, Corey. 2000. "Knowledge management and leadership opportunities for technical communicators." *Technical Communication* 47, no. 4: 515-529.

Mostly Practitioner Recommendations

- Boiko, Bob. 2002. *Content management bible*. New York: Hungry Minds. 966p.
- Bonura, Larry S. 1994. *The art of indexing*. Wiley Technical Communication Library Series. New York: John Wiley & Sons. 233p.
- University of Chicago Press. 2003. *The Chicago manual of style*. 15th ed. Chicago: University of Chicago Press. 956p.
- Laurel, Brenda. 1991. *Computers as Theatre*. Reading, MA: Addison-Wesley Publishing. 211p.
- Tarutz, Judith A. 1992. *Technical editing: The practical guide for editors and writers*. Reading, MA: Addison-Wesley Publishing. 454p.

Mixed Academic and Practitioner Recommendations

- Alred, Gerald J., Charles T. Brusaw, and Walter E. Oliu. 2003. *Handbook of technical writing*. 7th ed. Boston: Bedford/St. Martin's. 645p.
- Hackos, JoAnn T. 1994. *Managing your documentation projects*. Wiley Technical Communication Library Series. New York: John Wiley & Sons. 629p.
- Hoft, Nancy L. 1995. *International technical communication: How to export information about high technology*. Wiley Technical Communication Library Series. New York: John Wiley & Sons. 372p.
- Rosenfeld, Louis, and Peter Morville. 2002. *Information architecture for the World Wide Web*. 2nd ed. Sebastopol, CA: O'Reilly & Associates. 461p.
- Schrivers, Karen A. 1997. *Dynamics in document design*. New York: John Wiley & Sons. 559p.

*Taken from "Essential Works on Technical Communication" by Gerald J. Alred in *Technical Communication* 50.4 (November 2003): 585-616. [50th Anniversary Issue], which lists 115 titles. The titles in this list were among the most often recommended as essential.

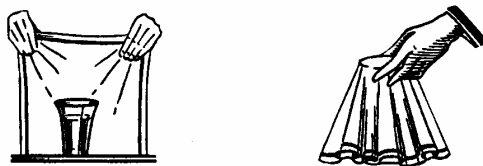
Tufte, Edward R. *Visual Explanations: Images and Quantities, Evidence and Narrative*. Cheshire, CT: Graphics Press, 1997. page 59.

EXPLAINING MAGIC 59



Lyle Douglas, *Complete Five-in-One Catalog* (Dallas, 1932), p. 101. Redrawn.

The Flying Glass of Water, from a 1932 magic catalog, illustrates a three-step sequence, reading left to right. This narration shows what the audience sees, rather than revealing the gimmick (send in \$1.00 for that). To begin, a glass and cloth are displayed, and then the cloth apparently covers the glass



and, then, a flourish and a magical moment



as the glass of water vanishes. On the silent and motionless flatland of paper, how smoothly **GONE** depicts voice, movement, the lightness of vanishing, the absence of weight—at least in this particular context. Vibrating stripes animate and lighten the word, making it airy and more active than a plain GONE.⁷ With text also serving as image, the idea, word, and drawing add up to a coherent and vivid whole.

⁷ Paul Rand, designer of the striped **IBM** logotype, writes: "Stripes are dazzling, sometimes hypnotic, usually happy. . . . Stripes attract attention. . . . The stripes of the IBM logo serve primarily as an attention-getting device. They take commonplace letters out of the realm of the ordinary. They are memorable. They suggest efficiency and speed." Paul Rand, *A Designer's Art* (New Haven, 1985), pp. 39–42. Usually the substantive meaning of visual devices is intensely contextual. Stripes suggest dazzle or deft speed when allied with a magic trick or computers but something else when marking the uniforms of military officers or prisoners.

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QUOTES FROM PRESENTATION

Brasseur, Lee. Review of *Visual Explanations: Images and Quantities, Evidence and Narrative*. Edward R. Tufte. *Technical Communication Quarterly* 7 (1998): 344-345.

“In *Visual Explanations: Images and Quantities, Evidence and Narrative*, Edward Tufte’s newest book, the well-known statistician and information designer attempts to make some significant departures from his earlier work in scope and rhetorical effect. At the same time, most of the same principles that guided his previous books reappear here, albeit often times in different terms. Taken as a whole, *Visual Explanations* is an eclectic mix of information designs about motion, time, process, cause and effect, narrative, and explanation. Because of its familiar principles and its lovely integration of text and image in the book’s design (including before and after designs visible by the lifting of a flap), Tufte-ites will find it compulsory reading.” (341)

“What is good about any Tufte book is that it challenges us to see what can be done—an admirable goal. But his emphasis on positivistic ideals can sometimes prove problematic.” (345)

Tufte, Edward R. *The Visual Display of Quantitative Information*. Cheshire, CT: Graphics Press, 1983.

“The idea is to make designs that enhance richness, complexity, resolution, dimensionality, and clarity of the content... to extend the depth of our own knowledge and experience.” (10)

Barton, Ben F., and Marthalee S. Barton. “Ideology and the Map: Toward a Postmodern Visual Design Practice.” *Studies in Technical Communication: Selected Papers from the 1991 CCCC and NCTE Meeting*. Ed. Brenda R. Sims. Denton, TX: U of North Texas, 1991. 35-71.

The authors describe how maps illustrate visuals are not simply neutral representations, but are “complicit with social-control mechanisms inextricably linked to power and authority” [. . .] “Rules of inclusion determine whether something is mapped, what aspects of a thing are mapped, and what representational strategies and devices are used to map those aspects.” (137)*

*Summarized in the following: Alred, Gerald J. *The St. Martin's Bibliography of Business and Technical Communication*. New York: St. Martin's Press, 1997.

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BIBLIOGRAPHY OF REFERENCES

Alred, Gerald J. "Essential Works on Technical Communication." *Technical Communication* 50.4 (November 2003): 585-616. (www.uwm.edu/~alred/pdf/EssentialWorks.pdf)

Alred, Gerald J. *The St. Martin's Bibliography of Business and Technical Communication*. New York: St. Martin's Press, 1997. (www.uwm.edu/~alred/biblio-smp/index.html)

Alred, Gerald J. "Teaching in Germany and the Rhetoric and Culture." *Journal of Business and Technical Communication* 11.3 (July 1997): 353-378. (www.uwm.edu/~alred/pdf/germany.pdf)

Alred, Gerald J. Interview given to *Gießener Anzeiger* (Wednesday, 12 August 1998) (www.uwm.edu/~alred/giessen/anzeiger.html)

Alred, Gerald J., Charles T. Brusaw, and Walter E. Oliu. 2003. *Handbook of Technical Writing*. 7th ed. Boston: Bedford/St. Martin's, 2003.

Association of Teachers of Technical Writing Discussion List: ATTW-L (<http://www.attw.org/ATTWEmailList.asp>).

Barton, Ben F., and Marthalee S. Barton. "Ideology and the Map: Toward a Postmodern Visual Design Practice." *Studies in Technical Communication: Selected Papers from the 1991 CCCC and NCTE Meeting*. Ed. Brenda R. Sims. Denton, TX: U of North Texas, 1991. 35-71.

Brasseur, Lee. Review of *Visual Explanations: Images and Quantities, Evidence and Narrative*. Edward R. Tufte. *Technical Communication Quarterly* 7 (1998): 344-345. (www.uwm.edu/~alred/pdf/brasseur-review.pdf)

Dicks, R. Stanley. "Cultural Impediments to Understanding: Are They Surmountable?" In *Reshaping Technical Communication: New Directions and Challenges for the 21st Century*, edited by Barbara Mirel and Rachel Spilka. Mahwah, NJ: Lawrence Erlbaum, 2002. 13-25. (www.uwm.edu/~alred/pdf/dicks-cultural.pdf)

Knappe, Siegfried (with Ted Brusaw). *Soldat: Reflections of a German Soldier 1936-1948*. New York: Dell Publishing, 1992.

Raycom Discussion List: TECHWR-L (<http://www.raycomm.com/techwhirl/>).

Tufte, Edward R. *Visual Explanations: Images and Quantities, Evidence and Narrative*. Cheshire, CT: Graphics Press, 1997.