ENG 495

Research Project:

Ethical Implications of Aristotle's Influence on Technical Communication

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April 26, 2010

Due to a gradual focus away from communication that is strictly based on clarity, objectivity, and logic (long held focuses of style and rhetoric), writers and creators of technical communication textbooks have developed more complex ways of talking about and teaching the ethical implications of technical communication over the past century. Although technical writing textbooks have moved toward more complex practices and instruction over the decades, the writers and creators of these textbooks have not done enough to counteract the tendency toward dehumanization of audience, users, and writers involved in technical communication. Technical communication textbooks and approaches to practice have had a logic-centered and expediency-focused past (and present), mainly due to their beginnings exclusively in the areas of science and technology: "Defined initially as the objective transfer of information, technical communication has long been privileged in its affiliation with science and technology" (Lay 348). This focus is problematic and has taught technical communicators to not focus on the humanization of individuals involved in technical communication (from the audience to the writers). Due to past teaching and professional practices in the field of technical communication, based on where technical communication began and its basis in Aristotle's (and other classical rhetoricians) writings on rhetoric, technical communication has not yet been able to completely shed itself of the focus on logic and expediency, and thereby, shed itself of the tendency to dehumanize of audiences, users, and writers.

I will use Aristotle's writings on ethics, expediency, and rhetoric to analyze how the application of Aristotle's teachings has informed technical communication's tendency to focus on logic and expediency as the essential means of persuasion in technical communication. I will suggest that this practice and teaching serves to dehumanize, other, and ignore the individual audience member, consumer, user, and others with which technical communicators communicate (from ethnic groups to people who are differently-abled). I will be analyzing three textbooks from the past thirty years: 1978, Mills and Walter, *Technical Writing* 4th ed.; 1991, Huckin and Olsen, *Technical*

Writing and Professional Communication 2nd ed.; and 2010, Johnson-Sheehan, *Technical Communication Today* 3rd ed. to demonstrate how technical communication has developed over the past thirty years: this analysis will show that technical communication pedagogy and practice has moved toward a more complex understanding of the ethical implications of technical communication, which has led to a better understanding of audience, user, writer, and the "humanity" of technical communication. However, it will also show what even the newest textbooks, practice, and pedagogy have left something to be desired in regard to ethical considerations. I will use Steven Katz's article, "The Ethic of Expediency: Classical Rhetoric, Technology, and the Holocaust," as an example of one of the ways Aristotle's writings have influenced technical communication in a way that assists in the logic-centered and expediency-based dehumanization of individuals; I will also use the article as a demonstration of how technical communication pedagogy and practice has the power to humanize. I will provide a historical perspective that supports Katz's claims about the basis of technical communication. Because logic and expediency based dehumanization is not necessary to effective technical communication, I will also suggest what current technical communication instruction and practice could use and do to further humanize individuals involved in technical communication.

I will explore the following questions for each textbook: What do each of these technical communication textbooks teach about ethics, expediency, logic and other pertinent issues? Does what they teach dehumanize, other, or otherwise dismiss/ignore individuals (audiences, users, communicators, etc) in the discussion of ethics, diversity, logic, etc? How does their teaching directly or indirectly reflect Aristotle's views of ethics, expediency, and logic, as well as reflect the basis of the historical growth of technical communication? And, if they dehumanize, other, or dismiss/ignore individuals, why? Then I will explore why these issues should concern technical communicators today: How is this dehumanization problematic? And, I will explore some of the ways that technical communicators, audience members, users, and teachers can use theory from

other areas and work together to balance the need for logic and practicality in developing and creating technical and professional communication that focuses on humanity and ethical implications.

Mills and Walter: Technical Writing, Fourth edition

The issues I focused on in the rhetorical analysis of this textbook were how Gordon H. Mills and John A. Walter dealt with the ethical issues of technical communication: emphasis on logic (Katz), treatment of cultural diversity, equality, and issues of representation. I then linked those back to the treatment of those issues by Aristotle and throughout the history of technical communication.

Gordon H. Mills and John A. Walter created *Technical Writing* for "primarily the technical student who has had enough training in the fundamentals of composition to be ready for consideration of some of the more specialized problems of technical writing" (3). Their audience is for engineers and other technical writers who have has experience with writing, but need guidance in how to go about their writing process. This intended audience is even further narrowed with their definition of technical writing: "Technical writing is exposition about scientific subjects and about various technical subjects associated with the science" (4). This audience leaves out many that might benefit from technical writing instruction (those not in the science and technology fields that may, today, be considered technical communicators). This narrow audience is a product of the focus of technical writing that has existed for most of the past century.

In the introduction to the first chapter, Mills and Walter set out with their definition of technical writing as "characterized by the maintenance of an attitude of impartiality and objectivity, by extreme care to convey information accurately and concisely, and the by absence of any attempt to arouse emotion" (4). They further state that "[t]echnical writing is impartial and objective, clear

and accurate in the presentation of facts, concise and unemotional" (4). From the outset of their textbook, the authors make it clear that the textbook's focus is on the use of logic above all other rhetorical strategies, and they immediately strike any appeal of pathos from the goal of technical writing. In discussing style in technical writing they expand on a definition of technical writing as strictly for the sciences when advocating the use of the "scientific attitude" (29). This evolves into a discussion of the use of the pronoun "I" in a technical document and the use of passive or active voice, where they discuss how "there has been a tendency to doubt the old idea that science should be considered a monolithic, impersonal method" (30). This discussion highlights how the use of "I" has been used by some technical writers, how effective the passive voice is, and how these present or does not present a "scientific attitude." They conclude that "the scientific attitude is not achieved by either the use or the avoidance of a particular pronoun," but rather "it is achieved through: honesty, care in handling the facts, dignity, and restraint in manner" (32). Although the authors place more emphasis on the content of the text than the specific formation of the sentences, they urge against using "I" in a piece of technical writing. Deemphasizing the author of the text for the purposes of "objectivity" subtly suggests how unimportant the human(s) behind the text are to the meaning in the text, and it is also a way to deceive the audience into not being aware of the subjectivity of the text, which always exists. The authors also state that the question of style is "whether to seek a style permitting what is usually called self-expression, instead of concentrating attention on the needs of the reader" (2). This suggests that anyone concerned with "selfexpression" in any form is not meeting the reader's needs, which dismisses creativity as something that has a place in technical writing (this has now proved simplistic and dismissive).

Mills and Walter also spend about two paragraphs discussing the issue of using gendered pronouns in a technical document, stating, "do what you can to prevent offense by using language that avoids the problem or by using both masculine and feminine pronouns" (36). Although they

admit that this is an issue that needs to be dealt with, and they express "sympathy with the motives underlying feminist objection to an unvarying use of masculine pronouns," (vi) they don't explain the ethical implications of the use of exclusively masculine pronouns and categorize it as a "feminist" rather than a human issue. Avoiding the ethical implications and reasons why this practice needs to change, the authors are subtly (even if not consciously) reinforcing the patriarchal system that has ignored the issue for so long.

Mills' and Walter's discussion of the reader focuses almost exclusively on a general reader without much discussion on the different kinds of readers a writer might be writing for; they give some time to the level of the reader's intellect when they tell the writer to "assume reader is intelligent, but uninformed" (16), and tell the writer to put themselves in the place of the reader (18), but do not mention the value of cultural challenges or diversity of the reader or the writer. This was a glaring omission from the point of view of someone who is now being educated in the field of professional writing. Mills and Walter published this textbook originally in 1954. Going through to its fourth edition in 1978, it is clear that the book was popular and prevalent in the field of technical writing. We can conclude, then, that this omission means that this issue was clearly not something that technical writing instructors or writers felt was important for themselves or their students to know.

Although Mills and Walter do not explicitly mention Aristotle in this text, it is clear that much of their attitudes and approaches to teaching technical writing can be traced back to Aristotle's *On Rhetoric*. Their attitude and approaches to teaching technical writing also comes from the historical events that happened in the development of technical writing pedagogy. On the subject of clarity, Aristotle states, "let the virtue of style . . . be defined as 'to be clear' (speech is a kind of sign, so if it does not make clear it will not perform its function) . . ." (*On Rhetoric* III. ii. 1404b). In *Technical Writing*, Mills and Huckin repeatedly stress that the text needs to be "clear," "accurate,"

"concise" throughout their instructions on style and technical writing as a field. This emphasis on clarity is something that has been around since ancient Greece and before, and it is still something that most instruction manuals and guides to style focus on as an important aspect of writing. However, new developments have moved away from this focus because of the increasing acknowledgment that nobody can really determine one "clear" language. Clarity depends on the audience and their cultural situation, and this nearly impossible to determine, even through complex analysis. The issue of clarity is so subjective, just general style guidelines on one person's idea of clarity does not provide many answers, and the answers they do provide are often so generalized they leave out the complexities of the rhetorical situation (leaving out voices, audience and writers alike).

Deliberative discourse is where technical writing is understood to be located because it is concerned with future events (*Rhetoric* I. iii. 1358b). The persuasion in deliberative discourse is mainly concerned with what is most advantageous for a given audience, but the main emphasis in *On Rhetoric* is how advantageous it is for the specific audience the actions are directed at; the only concern of the speaker (writer) is the audience that he is most concerned with convincing, and no one or nothing else. For example, in *On Rhetoric*, Aristotle states that "for the deliberative speaker [the end] is the advantageous [sympheron] . . . and he includes other factors as incidental: whether it is just or unjust, or honorable or disgraceful . . ." (I. iii. 1358b). He continues that the question of whether it is just or unjust is up to the courts of law. The deliberative speaker has only the interest of one audience in mind, and this could be anyone from the business the writer works for (disguised as the audience it is directed at) or the writer him or herself. This is a problematic way of looking at rhetoric and persuasion, however, because it does not ask the technical communicators to focus on the human, emotional, or ethical implications of their writing.

Katz suggests, in the article "The Ethic of Expediency: Classical Rhetoric, Technology, and the Holocaust," this emphasis on "expediency and the resulting ethos of objectivity, logic, and narrow focus that characterize most technical writing . . .", as emphasized in Mills' and Walter's textbook, comes from Aristotle (257). He argues that because Aristotle's writings were so influential on all of rhetoric, and especially so on deliberative discourse, this emphasis on logic, objectivity, and science influenced the field of technical writing. Also, as Connors points out in his article, "The Rise of Technical Writing Instruction in America," the engineering schools were where technical writing instruction began (330). Having this historical basis in both deliberative rhetoric and science, it is easy to see why the importance is placed on logical, objective, rational arguments within the field of technical writing.

So what does this emphasis on logic, objectivity, and expediency in Mills' and Walter's textbook teach future technical communicators? The detailed implications of this kind of transmission model of communication based almost solely on logic and objectivity will be discussed further later, but it is important to first understand why technical writing textbooks and instruction consisted of these approaches in order to see how technical communication has grown. As already demonstrated, this de-emphasis on the human element in front of, behind, or otherwise involved in the text dismisses/ignores individuals within the process. The reasons why Mills, Walter, and technical writing instruction is understood as a way of trying to get across what they feel is the most important part of deliberative discourse and technical writing: "a communication to somebody from somebody" (29). This communicative model of discourse, transmission, is the simplest and easiest form of technical writing information from one person to another. In Mills' and Walter's textbook, this transmission model was complicated by issues of style and the rhetorical situation, but it did not go much further than that. Although there is probably no malicious intent to such

approaches to communication, this basis in logic and objectivity has profound effects on the ways that technical communicators understand their role: "[t]echnical communicators are taught . . . that the highest goal they can achieve is 'clarity and brevity,' which suggests a transparency that belies what they really do" (Slack, Miller, and Doak 85).

Olsen and Huckin: Technical and Professional Communication, Second edition

The issues I focused on in the rhetorical analysis of this textbook were how Leslie A. Olsen and Thomas N. Huckin dealt with the ethical issues of technical communication: the mode of communication they use (translation), and the treatment of cultural diversity, equality, and issues of representation. I then linked those back to the treatment of those issues by Aristotle and throughout the history of technical communication.

Although Olsen and Huckin went far in increasing and acknowledging the complexity and power of technical communication from where Mills and Huckin were, there are still a few areas where they fail to fully explicate the complexity of certain issues: when discussing diversity issues, in the communication model they chose, their focus on logic and clarity, their discussion of audience and writer, and the ethical implications and intricacies of technical communication.

Olsen and Huckin open their textbook, with a discussion of how technical and professional writing affects the world. This aspect of the textbook shows how much technical writing instruction and practice had changed from Mills' and Walter's *Technical Writing* in 1978. In fact, the textbook deals with the issues of cultural diversity and international challenges on a level that Mills' and Walter's textbook barely acknowledged. This greater emphasis on how cultural diversity can affect a piece of technical writing helps the readers of the text understand better their role as technical writers in an increasingly diverse world. However, there is still a great deal of complexity that is left out of Olsen's and Huckin's discussions of cultural and international issues. To start, when

discussing the new additions to this edition of the text, they mention that they offer a companion text for nonnative speakers of English (xx). Although this is certainly a step forward, requiring nonnative speakers of English to have a separate text than everyone else is excluding specific English speakers from other English speakers; this separation, while acknowledging that there are actually different ways that people from different cultures learn, brings into question how exactly this companion text differs. Does it cover all of the same areas? Or does it only focus on the "problems" that nonnative speakers face when communicating with native English speakers? Also, it is assumed that all of the readers of this original text are native speakers, and that nonnative, "foreign," speakers do not have "full command of the language," and they, therefore, need a separate text to help them to become as adept at the English language as "we" are (64). Also, what version of the English language do they not have full command of? It is important for any technical writing instructional text to be inclusive and not make assumptions about the readers of the text without in-depth analysis of that audience. Authors of instructional texts, such as technical writing textbooks, should be more sensitive and inclusive by realizing and embracing that, in an increasingly diverse world, technical writing classroom would have both native and nonnative speakers sharing one text.

It is clear that Olsen and Huckin have moved away from the outdated transmission model of communication with their textbook. Their approach to technical and professional writing and communication is more accurately referred to as the translation model of communication. This communication model is "characterized by a fundamental concern over the constitution of meaning in messages in which power is negotiated between sender and receiver . . ." (Slack, Miller, and Doak 85). Olsen and Huckin bring a great deal of attention to technical communication as "a social process" (xviii). They point out that collaboration, cultural challenges, bringing readers/users into the invention process, and the importance of "negotiating solutions" are the best ways to create an

effective text (30). These issues are as important, if not more, than they were in 1991 when the textbook was published. The emphasis on interpretation, negotiation, and collaboration is vitally important to creating an effective document and to better understand the power relations between writer and reader: "meaning is not the exclusive property of the writer (or speaker), meaning is negotiated between writer (or speaker) and the reader (or listener)" (39).

The few causes for concern in this communication model are not with their obvious increase in understanding of the complexities of the audience and writer relationship, they are for the few places they fall short and still effectively dehumanize and simplify the audience and the writer in a few ways that could be improved upon. For example, when discussing international and cultural aspects of communication, it is set up as an othering binary between "us" and "foreign culture/languages": they suggest that you "seek out opportunities for studying foreign culture and languages" and "learn *how to deal* with people who may not share your cultural norms" (*emphasis added* 11). Although the former may be good advice, this way of constructing people that are different from "you" brings into question the hidden and subtle power relationships that deal with *who* the reader and writer are, *who* decided that those people got which position in the relationship, and *who* decides what information is negotiated. These issues have since been more prevalent in technical communication instruction, but were not as well-known in 1991.

For all of Olsen's and Huckin's focus on negotiated, collaborated, and cooperative meaning and products, they also make frequent mention of the importance of the use of logic and clarity when creating a technical writing text. Like Mills and Walter, Olsen and Huckin direct their text to people in scientific and technical careers and the intermediate and advanced student (xvii). This basis in scientific and technical careers and experience leads to a focus on the use of logic, clarity, and objectivity: technical communication is based "overtly on logic and reason" (Olsen and Huckin 76). However, Olsen and Huckin are quick to mention that "sometimes technical communicators

need to base arguments on emotion" (77). This is an important admission and shows how technical communication and practice has realized the importance of the use of pathos when making an argument or considering the ethical implications of an argument. They do, however, put emphasis on how the use of emotion should not be the technical writers' first choice because "arguments based on expediency, advantage, or use are much more frequent in most types of technical writing" (81). Here, Olsen and Huckin make a direct reference to "expediency" and "advantage" being a direct goal of arguments, as previously mentioned, this is an issue that deserves more attention and analysis because it can be problematic.

The ways that Olsen and Huckin approach the audience and writer relationship and the preoccupation with being clear and concise (11), connects to the ways that they explore the ethical implications and intricacies of technical communication within their textbook. When Olsen and Huckin frame the audience and author relationship as one of negotiation without recognizing the ways that power dynamics are not equal in those negotiations, they have missed the ethical implications that inequality create. Olsen's and Huckin's main focus in their consideration of the ethical implications of technical writing is on legal issues, misunderstandings, and the impact of these texts on the individuals within the company the technical writer works. For example, they elaborate on the ways the technical writers within a company can work with each other, clients, and their audiences (36-7). However, they focus very little on audiences outside the company (the impact of their texts on unintended audiences). Also, they refer to "misunderstandings" as the cause of most of the legal and human consequences of unethical practice in technical writing (7). A misunderstanding insinuates that the technical communicator(s) and the corporation involved had no manipulative or unethical intentions and that the reader simply "misunderstood." Although this is most often the case, it does not recognize or deal with the issues involved in *intentional* unethical

business practices, nor does it attempt to understand the reasons for and consequences of those practices.

Olsen's and Huckin's discussion of "whistle blowing," however, does bring up some of the ways that technical communicators and corporations make unethical decisions that have varying degrees of effects on audiences inside and outside the company. They discuss the ways that "you" (as a technical communicator) should react when faced with a serious situation that could cause harm, asked to violate ethical standards, or in need of a solution to an ethical problem (91). Once again, other than a mention of a couple specific cases where people have been harmed due to poor, ineffective, or unethical technical communication, the focus here is on how technical communicators (assumed to not be directly affected by the poor communication) and the company that they work for need to react to the ethical implications of this technical communication: technical communicators are "permitted" to blow the whistle "if harm is serious," if they "make concerns known to their superiors," and if they "exhaust all other channels"; technical communicators are "obligated" if they have "documented evidence" and if "going public will prevent the harm" (93). Their simplistic treatment of the ethical issues tied to when to "blow the whistle" on unethical action demonstrates how much further it is necessary to go in order to understand the powerful ethical implications of professional and technical communication.

Sexism in language is something that is also brought up in the textbook. It seems to be one of the only aspects of this textbook that did not change much from Mills' and Walter's *Technical Writing*. Their only suggestions are to constitute "fair treatment" and avoid using strictly male pronouns (488). They suggest ways to counteract this sexist language by using plurals, alternating between male and female pronouns, and avoiding other sexist language. Olsen and Huckin only spend a short paragraph discussing the reasons for the need for these changes or supporting their suggestions with any background on the ethical issues that surround our patriarchal society. And

this information is especially important in a field that has been predominantly seen as male-centered since its exclusive engineering days: "It was said in the thirties that many English teachers 'appear to their critics as not sufficiently masculine type or enough experience in the world outside their books to command the respect of engineering students'..." (Connors 337).

Olsen and Huckin, unlike Mills and Walter, directly refer to Aristotle as an underlying basis of their instruction on rhetoric in technical communication. They begin with a discussion of deliberative rhetoric which, they state, "tries to convince its audience by appeals to fact or to practical advantage or inherent goodness" (30). Aristotle's explanation of what is advantageous is "the preservation of existing good things or acquisitions of those we do not possess or rejection of existing evil or prevention of harmful things expected to occur" (On Rhetoric, selections from Rhetoric for Alexander i. 1421b7). This focus on advantage (shown in Mills' and Walter's Technical Writing) is a concept that is common both in Aristotle's On Rhetoric and Olsen's and Huckin's textbook. In fact, as previously discussed, it is a concept that occurs through most of technical communication history. Aristotle states that in "each kind of speech the projected 'end' is a good-for example, the advantageous [in deliberative rhetoric] . . ." (On Rhetoric II. ix. 1393a). Here, Aristotle identifies a direct link between the discourse and the "end" of the discourse; this would correlate to technical communication of today connecting to what is advantageous of expedient to the speaker or audience. Indeed, Katz argues that "in most deliberative rhetoric, the focus is on expediency, on technical criteria as a means to an end" (257). Katz article demonstrates that because of Aristotle's focus on expediency and advantage, technical communication, as well as modern society, has a preoccupation with expediency and advantage. The problem that occurs from this preoccupation with advantage, what Katz calls "ethic of expediency," is what has produced a world where "expediency outweighs compassion in government and cost/benefit analyses are applied to human

welfare and technical considerations outweigh human consideration in almost every field of endeavor . . ." (273).

The essential issue that arises from this focus on advantage and expediency over other concerns (emotional, ethical, or human) is the question of *whose* advantage the deliberative speaker/writer is considering. This is part of the issue that Katz explores in his article, and it is vital that the issue be analyzed in order to see any way out of it. When Olsen and Huckin emphasize the equality of the reader and the writer in the rhetorical situation of writing a technical document, they state that "meaning is negotiated between writer and the reader" (39). Although their statement is about equality for some (the identified author and audience), their focus on a communication model that leaves out groups of people who are not represented in this equation (they are not the audience and they are not the writer) can create a subtle but persistent othering of those who are different from the normative view of "what is human."

Analysis of this subtle framing of those with power as the only ones who can participate in the negotiation of meaning is also important in understanding why technical communication instruction and practice has adopted this approach to communication and ethical implications. Olsen and Huckin state that "ethical communication means more than just providing complete and accurate information; it also means trying to present that information in a way that allows the reader to fully understand it" (39). Olsen and Huckin took a small step toward what is necessary in understanding communication as a complex power and meaning negotiation and in understanding the ethical implications of technical communication. They also state that "[c]ommunication is successful when the interpretation the writer intends is similar to the interpretation the reader constructs" (39). What is problematic with both of these statements is that it still focuses on how much power the writer has in deciding what the meaning should be in the text; these statements perpetuate the dehumanization of those left out of the creating of the text. However, it is difficult

to see those who we do not recognize. Those who have been left out of power and negotiating processes throughout history did not have much, if any, opportunity to make their voice heard. Even twenty years ago, there was little discussion of giving a voice to the voiceless in the fields of engineering, science, and technical writing; these fields were (and often still are) dominated exclusively by Caucasian men with little influence from theory that has been exploring these issues: feminist theories, queer studies, disability studies, and many more social and philosophical areas. And these are exactly where technical communication needs to look in order to get where it needs to be.

Johnson-Sheehan: Technical Communication Today, Third Edition

The issues I focused on in the rhetorical analysis of this textbook were how Richard Johnson-Sheehan dealt with the communication process and the ethical issues of technical communication in the textbook: the mode of communication used, treatment of cultural diversity, equality, and issues of representation, and how far technical communication instruction and practice has come from 1978 to 2010. I then linked those back to the treatment of those issues by Aristotle and throughout the history of technical communication.

Johnson-Sheehan frames the third edition of his textbook around the use of technology in technical communication, specifically the computer and how it is used globally (xxii). This basis on technology and global issues is an example of how far technical communication instruction and practice has come over the past thirty years. Johnson-Sheehan sets out to make "international and cross cultural issues . . . integrated into the main discussion rather than shunted off into special sidebars, because issues of globalization are no longer separable from technical communication" (xxvii). And this is demonstrated by the exploration of global and cultural issues throughout every chapter in the textbook. It is also important to note that Johnson-Sheehan frames the cross-cultural

and international issues within technical communication as positive: he refers to them as "exciting" challenges for the technical communicator. The multiple perspectives that are gained from working in cross-culturally or internationally dynamic situations are important to creating a complex and considerately reflective text that embraces difference rather than ignoring it, and this textbook helps elaborate on why this is.

An important focus within Johnson-Sheehan's analysis of the cross-cultural and international issues is how technical communicators can work with readers and other writers from different cultures. Johnson-Sheehan tells technical communicators to "keep in mind the communication practices that North Americans might consider 'normal' or 'common sense' can be strange or offensive to people from other cultures" (11). This is an important aspect of technical communication practice because technical communicators are not only working with more and more diverse audiences but technical communicators themselves are becoming a more and more diverse group of people from many cultures within and outside of North America. Johnson-Sheehan's analysis of international and cross-cultural communication involves separating ethnicities into groups that explain the way their cultures view communication. For example, he divides the differences into issues of content, organization, style, and design (53-6). This detailed explication of the differences in communication practices in different cultures, while very helpful to the individuals who may be working with someone from this culture, gets close to stereotyping based on their nationality or ethnicity. It is simply not complex enough to just give information on how different these communication approaches may be. However, Johnson-Sheehan alleviates some of this concern when he suggests strategies for the technical communicator to use when working with someone from any culture that is different from the technical communicators: "listen carefully," "be polite," "research the target culture," and "talk to your colleagues" (57-8). These suggestions are very important to any technical communicator who wishes to have an effective and ethical

relationship with their audience, fellow writers, or any of their colleagues. The only aspect of Johnson-Sheehan's analysis that is problematic is in continuing to assume that is it only native-born, English-speaking, North Americans of the same culture who are reading this textbook. This is problematic because it is still a subtle way of leaving out anyone who does not have this specific cultural background of the intended audience. It also suggests that the cultural background of technical communicators is not as diverse as it actually is, and is increasingly becoming more so. Not acknowledging this could be a huge omission in future technical communication textbooks.

The cross-cultural and international issues in Johnson-Sheehan's textbook relate closely to the ethical issues that are addressed in the textbook. In the overview of what "you will learn" from this chapter from chapter one, "the importance of ethical, legal, political, international, and crosscultural factors in technical communication" is named as one of the important things to learn about communicating in the workplace (2). Johnson-Sheehan states that "issues of ethics, legality, politics, and culture in technical communication are often much more tangible, because technology has such an immediate impact on people" (6). Here, he is emphasizing how the ethical implications of technical communication are increasingly important and affecting because technology has made technical and professional documents more widely available, available to more diverse and complex audiences, and more powerful because technology has such an important part in the way our society and most of the world lives their day-to-day lives. In other words, the increase in technology worldwide has made more decision-making responsibilities for everyone involved in the technical communication process (Johnson-Sheehan 11). Technical communicators now have ethical decisions to make that may have not been considered or understood before the technological advances of the computer and Internet. Analyzing these issues is important for every technical communicator because "all technical documents involve ethical issues of rights, justice, and fairness" (Johnson-Sheehan 11).

Johnson-Sheehan dedicates an entire chapter to the ethical issues that face technical communicators, "Ethics in the Technical Workplace." Once again, he emphasizes that "as we evolve into an electronic culture, the ethical boundaries are not as clear as they were only a few decades ago" (92). Although this is true, it does not excuse much of the dehumanizing and unethical practices of technical communication over the past thirty years. But the important aspect of this statement is that Johnson-Sheehan acknowledges just how complex these ethical issues can be in the field of technical communication. He acknowledges that it is an important part of the technical communicator's job to make ethical choices and solve ethical dilemmas. He emphasizes the importance of asking questions of yourself, balancing the issues involved, and what to do when you disagree with the company that you are working with or for (99). This is an important aspect of the ethical issues that Olsen and Huckin also recognize when discussing when to "blow the whistle" on unethical behavior. Johnson-Sheehan goes further on this issue and suggests that "the Information Age requires a new sense of ethics, or at least an updating of commonly held ethics" (108). He says that this is important because the previous commonly held ethics involved with writing and publishing were based on the printing press. Because the world has changed, the way we think about what we write and read needs to change in order for the technological world to also be an ethical one. We are in new territory and this means that how we understand the world needs to change with the territory.

Unlike Olsen and Huckin, Johnson-Sheehan does not specifically refer to Aristotle in his approach to rhetoric and technical communication. However, there is evidence that such a connection exists. When Johnson-Sheehan discusses the topics of planning and persuasion in chapter six, he emphasizes the use of reason or value based persuasion (124). He suggests that both work to persuade the audience, and the strongest persuasion exists when they are combined together: he suggests the use of a "blend of reasoning-based and value-based persuasion in

strategies" (126). This combination relies on a basis of logic and reasoning (previously identified as an emphasis of Aristotle's) and ethos (also an important aspect of Aristotle's Rhetoric and Nichomachean Ethics). George Kennedy describes Ethos as "the projection of the character of the speaker as trustworthy" (Rhetoric 15). And Aristotle asserts that "character is almost, so to speak, the most authoritative form of persuasion" (Rhetoric I. ii. 1356a). The emphasis on character and ethos in persuasion is seen in Johnson-Sheehan's discussion of persuasion as well: when discussing valuebased persuasion, he states that "confidence and trust go a long way toward convincing people what to believe and what to do" (129). He also advocates that technical communicators "convince your readers to identify with you" and to "show that you empathize with your readers' point of view" (129). It is clear that Johnson-Sheehan puts as much emphasis on the ethos of the speaker as Aristotle does. He also places very little emphasis on the use of emotional appeal (pathos). This is an area of rhetoric that Aristotle also puts very little emphasis on because he believed in the use of reason and rationality as the most "natural" way: "it is clear that the rule of the soul over the body, and the mind and the rational element of the passionate, is natural and expedient . . ." (Politics I. v. 6). There has been much debate over what place emotion should have in the persuasion of the text, Aristotle acknowledges that it works and is valid, but the problem is located in how much "logic" should rule over "emotions" especially in a situation that is extremely emotionally charges. Emotion is an aspect of the human mind that cannot be ignored, and, in many instances, it should be paramount in the consideration of issues of ethics.

Johnson-Sheehan, like Aristotle, places emphasis on persuasion through the use of reason. He describes reason-based persuasion as the "use of logic and examples" (136). He states that this appeals to the common sense or beliefs of the reader (126). And he uses Aristotelian *pisteis* (means of persuasion) when discussing the ways a writer can persuade through reasoning: "if . . . then," "either . . . or," "cause and effect," "cost and benefits," "better and worse" (126). Aristotle states

that "persuasion occurs through the argument [logoi] when we show the truth or the apparent truth from whatever is persuasive in each case" (*Rhetoric* I. ii. 1356a). Aristotle also spends nine chapters in *On Rhetoric* on these ways of using logical arguments and proofs. What is problematic about this focus in persuasion (which can also be said of value-based persuasion) is the question of what is *truth* or what is *valued*, whose truth, whose values, who determines which truth and values should be considered, and whether or not this is the best way to persuade an audience when other issues need to be considered. It may be logical to argue for a certain policy to be made because it will increase production, profits, or other positive factors for the company, but it may not consider the human individuals that will be affected by that policy. Also, how can a technical communicator persuade an audience based on their idea of truth and value when these are very complex and difficult issues to determine?

Technical Communication Today is a powerful example of how far technical communication has come in the past thirty years. From the direct and simplistic "transmission" model of communication and a strict emphasis on logic, clarity, and objectivity to a model of communication that recognizes and embraces the complexity of the humanity and diversity and suggests ways that technical communicators can be ethical participants in our world, technical communication has seen a great deal of changes. Johnson-Sheehan provides a (mostly) comprehensive and complex approach to the ethical implications of technical communication in his textbook. He makes ethical, cross-cultural, and technological factors the main focus of the textbook. What this means for technical communication instruction and practice is that it has become more aware of and vigilant about ethical implications of the texts that are created for an increasingly diverse readers and writers. The few aspects of concern in Johnson-Sheehan's approach to technical communication instruction come from simply not going far enough out of the technical communication field and its past focus in engineering to recognize more complex ways of understanding power and society. These theories

are widely available, recognized as valid, and need to be incorporated into the current technical communication instruction and practice debate in order for technical communication to move further away from the focus on logic, expediency, and objectivity.

Ethical Implications: Overview and Analysis

Many important issues have been raised through this analysis of past and present technical communication textbooks. I have elaborated on some and asked important questions about others. But what are the most important of these issues that should concern technical communicators today? And, why is the dehumanization that these texts can do problematic for what technical communicators do? In other words, why should technical communicators care about these issues?

One of the ethical implications that is important for technical communicators to consider and embrace is the cross-cultural and international voices collaborating on a technical document. The multiple perspectives that are gained from working in cross-culturally or internationally dynamic situations are important to creating a complex and considerately reflective text that acknowledges difference rather than ignoring it. Increasing emphasis has been placed on the role of collaboration and cross-cultural factors in technical communication. In Mary Lay's article "Feminist Theory and the Redefinition of Technical Communication," she asserts that feminist theories' focus on "the celebration of difference," "acknowledgement of scholars' backgrounds and values," "inclusion of women's experiences," among others issues, has impacted technical communication and can help provide a way for technical communicators to understand difference in more complex ways (350). These issues impact the ethical decisions technical communicators make every day by adjusting their focus on the human aspects of their job.

Another important issue is how technical communicators react to ethical issues on the job, and considering why these ethical issues arise in the workplace. It is important for technical communicators to be aware of how the basis for their actions and words do or do not impact the world and the individuals in it. In Katz's article on expediency and the Holocaust, he makes sure to connect the reason for the actions that occurred during the Holocaust to the continuing theme of the "ethic of expediency" that exists in deliberative discourse. The example of the memo written for the purposes of making changes to a gassing van is a perfect example of how powerful technical communication is, and how important it is to have the social impact of technical communication as a defining basis for your decision and what, how, and why you advice others to do and believe certain things. Katz's analysis of Aristotle's writings is also important to this because it is always important to be critical of things that are just assumed to be true because they've been around a long time. A lot has been learned from Aristotle's writings, and his thoughts have played a powerful role in how everyone views rhetoric, politics, and ethics. Although there is no reason to advocate dismissing Aristotle's thoughts because of huge changes in the world since he wrote his thoughts, it's vital to be critical of how Aristotle's teaching fit into an increasingly diverse, complex, and global world that Aristotle could not have even conceived of over two thousand years ago. We must question what about Aristotle's influence no longer has any validity because of an overemphasis on expediency, advantage, and logic that has been used and appropriated (often wrongly) to enact dehumanization and other harmful effects on society.

Setting aside some of the most horrific of those effects, this emphasis on logic and objectivity also causes problems in the day-to-day decisions of technical communicators. The transmission model of communication that was used in Mills' and Walter's textbook has ethical implications that deal with power, representation, and the issues of "normalization." Jason Palmeri, in his article "Disability Studies, Cultural Analysis, and the Critical Practice of Technical Communication Pedagogy," refers to "technical communication's regime of normalization" (49). The communication models used in both of the textbooks from before 2010 presented normalized views of readers, writers, and their audience. They also did not recognize that there were also people that were being completely left out of the negotiations of meaning. Like the emphasis on logic and objectivity, it dismisses people, perspectives, and underlying power issues that *must* be a part of the communication process in order to facilitate communication that is effective and ethical.

The overarching theme to the ethical implications explicated in these textbooks and through this analysis is creating a more complex and dynamic understanding of the communication process, how this communication process affects human beings and their communities, and what technical communicators need to consider in order to be ethical and responsible communicators. This theme was addressed in the issues surrounding technical communication's history (from Aristotle to Katz to Johnson-Sheehan) and in the approach each of the writers of the textbooks took in instructing technical communication students and others. These ethical issues addressed the problem with expecting objectivity from a living and inherently subjective person, dividing or ignoring persons who do not fit a normative idea of "technical communicator" or "reader" or "user," and basing entire arguments strictly on questions of logic and expediency. Because technical communication is a deliberative discourse, the actions that technical communicators advocate, suggest, or direct for others to do can affect not only the person(s) performing the actions but everyone who is affected by those actions, directly or indirectly. This is why there are changes that need to be made in the approaches to instruction and practice, as well as changes in the textbooks and practitioners, which and who enact the approaches the affect the world and the individuals in that world.

Changing Approaches

Technical communication instruction and practice has come a long way over the past century, from a struggling field of study to a complex communication practice. The impact of these changes has been seen in the textbooks that were produced over the past thirty years. We have increasingly seen what Teresa Kynell asserted was a "discipline that bridged technology and humanism" that "was neither purely scientific nor purely humanistic" (149). An equal balance of these elements is what is needed in order to have an effective and ethical technical document as well as an effective and ethical pedagogy for technical communication. So, what are some of the ways that technical communicators, audience members, users, and teachers can work together to balance the need for scientific goals in technical communication with a focus on humanistic and ethical goals?

Mary Lay suggests that we can redefine technical communication instruction and practice by using feminist theory to "expose the myth of scientific objectivity, adapt ethnographic research techniques, and study collaborative writing" (355). These concepts connect to important aspects of feminist theory that celebrate difference and encourage new sources of knowledge (Lay 350). The myth objectivity is something that needs to be directly addressed in technical communication practice and instruction because of the deceptive and harmful nature of this myth on humanity: "[t]echnical communication . . . offers culturally based perception to the audience, rather than objective information and data" (Lay 356). The use of ethnographic study is important because it demonstrates how subjective any analysis of "audience" is and how it can "incorporate into the canon research methods and subjects that were excluded by scientific positivism and a quantitative focus, and the ethnographer questions the binary opposition that excluded these research methods and subjects in the first place" (Lay 361). Which leads to how collaboration skills are a necessary part of the technical communicator's job: "[e]thnographic studies of the workplace reveal that effective collaborators have good interpersonal skills, the ability to connect and maintain

connections with collaborators even in times of conflict over ideas . . ." (Lay 362). Johnson-Sheehan in *Technical Communication Today* does much to incorporate many of these ideas, but he does not state any of them explicitly. In order for students to truly understand why, for example, objectivity is a myth, they must understand their subjectivity and "let go of the ethos of objective technical writer who simply transfers information and accept that writers' values, background, and gender influence the communication produced" (Lay 365). This can be done by incorporating these theories in the classroom and in practice, which many technical communication teachers do. But the practice must be more wide-spread in order for students and practitioners to understand how these past ideas were problematic and how to move forward, this could be done by including it in the technical communication textbooks.

Rhetorical analysis and an understanding of where these ideas have come from and how to be critical of them is also important to this process. An understanding of how Aristotle's writings have influenced technical communication, both the positively and negatively, is important for students to be aware of because it encourages them to be critical of ideas that have, in the past, been accepted as truth. For example, Aristotle's ideas about what parts of the human mind should rule over other parts have been part of the rationalist understanding of humanity for centuries. The importance of emotions and other aspects of humanity outside of logic and rationality have been shown to be much more important to the way we think than ever before. But this is an area of rhetoric that Aristotle puts very little emphasis on because he believed in the use of reason and rationality as the most "natural" way: "it is clear that the rule of the soul over the body, and the mind and the rational element of the passionate, is natural and expedient . . ." (*Politics* I. v. 6). As Katz has demonstrated, this focus in deliberative rhetoric and technical communication has proved to have serious consequences in society. These ideas need to be reconsidered and analyzed in order to get beyond this kind of thinking. Johnson-Sheehan made a step in the right direction when he

emphasized the importance of identification and empathy when writing for an audience, but it is important to go even further to make students and practitioners have a better understanding of how the human mind works in order to facilitate ethical and effective technical communication.

Katz elaborates on the ways that technical communication teachers can counteract the "ethic of expediency" that has subsumed our society, saying that "we can and should teach the whole panoply of ethics in deliberative discourse in our rhetoric and writing courses" (272). He suggests that teachers can start with teaching Just's memo in order to emphasize how powerful and important technical communication can be; thereby, emphasizing the importance of understanding the ethical consequences of a too narrow focus on objectivity and logic. The ethical issues inherent in technical communication should be taught, and reiterated in practice, in order to reach Carolyn Miller's goal for future technical communicators: "the future technical communication practitioner must promote 'both competence and the critical awareness of the implications of competence' supplemented 'with prudential judgment, the ability (and willingness) to take socially responsible action, including symbolic action' to the good of a larger community" (Staples 159).

Questioning the ways that audiences, users, and others are put into strict categories in the process of developing technologies, which is often a part of the technical communicator's job, is also important to acknowledge and analyze. In Huatong Sun's article, "The Triumph of Users: Achieving Cultural Usability Goals with User Localization," she explains how much more effective a technology can become when the audience is a part of the development process. She outlines how developers and technical communicators can access the power of the audience and, thereby, enhance the understanding of the audience through getting users involved at the beginning of the process. This is also an important aspect of Jason Palmeri's article on disability and technical communication, which insists on integrating people that are differently-abled in order to counteract the stigma, negative representation, and normalizing features of technical communication. This

involves being aware of our ableist language and encouraging equality of users by changing the way technologies are developed. Both of these articles demonstrate the importance of acknowledging the humanity in every user, reader, and writer and embracing difference in order to incorporate as many perspectives as possible. Not acknowledging these issues is a huge omission in any technical communication textbook or practice.

Johnson-Sheehan states that technical communication "requires mastery of a complex body of knowledge and specialized skills" and an "exercise of judgment that is required to fulfill responsibilities" (108). These are both vital aspects of the technical communication process and need to be a large part of any instruction and practice. In an increasingly global, technological, and diverse world, technical communicators now have ethical decisions to make that may have not been considered or understood before the technological advances of the computer and the internet. Analyzing these issues is important for every technical communicator because "all technical documents involve ethical issues of rights, justice, and fairness" (Johnson-Sheehan 11). These ethical issues cannot be subsumed by this technology. The effects of such an ethic of expediency can be seen throughout history after the industrial revolution, throughout the history of the development of technical communication instruction, and in the everyday decisions of those who choose the words that shape the actions of the world.

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