Ethics and Graphic Design: A Rhetorical Analysis of the Document Design in the *Report of the Department of the Treasury on the Bureau of Alcohol, Tobacco, and Firearms Investigation of Vernon Wayne Howell also Known as David Koresh*

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Abstract— The subject of ethics in graphic design has been only lightly treated in the literature regarding issues in technical communication. Because there is great potential for deception, conscious or unconscious, through graphic design, readers and writers of technical communication should develop an ethical sense and apply it to technical design.

IN ADDITION to the long tradition of rhetorical analysis of text, a number of writers have analyzed the rhetoric of graphic design [1]–[4]. Charles Kostelnick, in "The Rhetoric of Text Design in Professional Communication," illustrates how "visual language transforms the rhetoric of a message" through its "intra-textual variations" [1, p. 190]; Ben and Marthalee Barton, in "Postmodernism and the Relation of Word and Image in Professional Discourse," explore the point at which the visual and verbal elements of a document overlap; and Jimmie Killingsworth and Scott Sanders in "Complementarity and Compensation: Bridging the Gap between Writing and Design," explain the functions and applications of complementarity and compensation in choosing visual designs within which to incorporate text. Choices in visual design in the form of typography and graphics are beginning to receive attention because designers are aware of their rhetorical power for creating non-neutral, sometimes manipulative, and even deceptive communication. The ethical issues surrounding the incorporation of design features into written work are also important because just as verbal communication can deceive, so too can graphic design obscure truth.

A number of articles treat the issue of ethics in the production and analysis of technical communication: a 1985 issue of the *Journal of Business Communication* [5] and an anthology on ethics published by STC, *Technical Communication and Ethics* [6], include several articles on ethics; a special *IEEE Transactions on Professional Communication* [7] highlights ethical issues primarily surrounding areas of legal interest, and there is an essay on ethics in the STC/NCTE joint publication, *Technical and Business Communication: Bibliographic Essays*

for Teachers and Corporate Trainers [8]. Other treatments of ethical issues surrounding technical communication include articles whose authors consider teaching and workplace writing [9]–[13]. A number of articles analyze the ethicality of annual reports [14]–[16]. In addition, James Porter's "Developing a Postmodern Ethics of Rhetoric and Composition" [17] and Carolyn Miller's "Rhetoric and Community: The Problem of the One and the Many" provide a postmodern framework that situates ethics within the study of rhetoric [18].

These articles are valuable for laying a groundwork from which to understand and analyze ethical issues regarding technical communication. In addition, many provide an effective grounding from which to teach new technical communicators how to analyze and respond to the ethical issues they may encounter in the workplace. However, minimal attention has been devoted to ethical issues surrounding the production and analysis of graphic design [19]–[20]. In the computer-literate age of the 1990s, with desktop publishing widely available to writers of all levels of sophistication, it is important to consider the ethical aspects of graphic analysis as well.

In the discussion below I will discuss the current issues surrounding ethics of text in technical communication and develop a basis for analysis of visual design and graphics in technical documents. I then apply the analysis to Figs. 33–35 of the *Report of the Department of the Treasury on the Bureau of Alcohol, Tobacco, and Firearms Investigation of Vernon Wayne Howell Also Known as David Koresh* [21] (hereafter, ATF Report), which provide graphic display of the deaths and injuries to Bureau of Alcohol, Tobacco, and Firearms agents and Branch Davidians that resulted from their gun battle near Waco, TX, on February 28, 1993. The skirmish described in this ATF report is the first of the two confrontations that occurred at the Branch Davidian compound. The graphics depict the results of this battle alone, not the Branch Davidians' cremation that occurred after the second confrontation.

CURRENT ISSUES REGARDING ETHICS AND TECHNICAL COMMUNICATION

Developing a definition of what is ethical is problematical because there is no one negotiated definition upon which to rely. Mike Markel, in "A Basic Unit on Ethics for Technical

Communicators" [19], points to the difficulty of creating a single definition. He explains that some people equate legality with ethicality: legality is the only requirement for ethical action. Others, he says, have more demanding expectations of ethical acts; some determine what is ethical by how they feel, some by a set of religious rules. Markel cites an approach to an application of ethical standards in Manuel G. Velasquez's outline of three moral standards as a means for facing such questions. According to Velasquez, there are three kinds of moral standards with which to confront ethical choices: 1) rights, which focus on the well-being of individuals; 2) justice, the positive or negative effects that an action has on society and how they can be distributed among a societal group; and 3) utility, how society might mitigate the necessary harm done to an individual in order to serve the group. In applying Velasquez's framework, finding the balance among the competing needs of society and the individual should produce ethical outcomes. But as is apparent when examining the process of balancing the needs of the individual and of society, there is no set answer for determining ethicality since the standard for application to each individual situation must be negotiated by members of society in which the questionable action was produced. In a democratic society, "diversity, incoherence, and absence are always in play and at work; difference and resistance are always possible" [18, p. 90].

In fact, many people are unclear about what is or is not ethical until they are asked to respond to actual case scenarios. Even then, not everyone will agree because the determination of what is ethical is socially constructed, and therefore varies from one discourse community to another and from one rhetorical situation to another. James Porter argues that communicators should not view ethics as "a set of fundamental abstract principles to be applied to situations but as a process of inquiry necessarily tied to the act of composing" [17, p. 208]. Porter provides a postmodern view of ethics: although some writers view rhetoric as separate from ethics, the process of communicating is dialectic; since ethical judgments are determined through dialectic, ethics and rhetoric are fused. Porter's postmodern view holds that communicators cannot simply apply a static set of ethical rules to fit all questions of ethics [17, p. 213].

In the postmodern view of ethics, communicators' responses to their rhetorical situations determine whether their actions are ethical; thus, when a rhetorical situation changes, so does the ethicality of an act. For example, from early in our American legal history up until the late 1970s, the American Bar Association as well as the legal community considered it unethical to advertise legal services in print, on radio, or on television. Today, the advertisement of legal services is considered completely acceptable by members of the legal community. Acknowledging that the ethicality of an act differs from one rhetorical situation to another is not, however, the same as arguing that what is considered ethical should be based on a utilitarian philosophy of contingencies. Markel defines utilitarianism in "An Ethical Imperative for Technical Communicators":

> Utilitarianism is the philosophy of contingency; that is, in assigning value to an act according to the good or

harm that it does, without an overriding principle that rules out certain actions unconditionally, it fosters an atmosphere in which all actions are negotiable [22, p. 82].

Those who follow the utilitarian philosophy can justify almost any act through balancing in favor of a benefit against a cost. Application of this philosophy could be used to justify the inclusion of misleading or masking communication concerning a minimally harmful action deemed "necessary" in the course of everyday business. For instance, an accounting firm might decide to mask a gross overspending in one year that was intended to enable a company to make a proportionally larger profit in the next. Based on the rationale that a *slight* deception might protect them from unnecessary inquiry by unsophisticated readers, the writers might feel justified in masking the whole truth. To some, this minor indiscretion could be considered normal and even expected in everyday business. However, as Herbert Michaelson points out in "How an Author Can Avoid the Pitfalls of Practical Ethics," "Such violations of practical ethics can defeat your purposes . . . and will eventually expose you to criticism" [23, p. 58].

Arthur Walzer's "The Ethics of False Implicature in Technical and Professional Writing Courses" [24] examines the standard of "existing practice" in workplace writing, often considered a basis for deciding ethical issues. Technical communicators who apply the litmus test of "existing practice" justify ethically questionable communications by arguing that the same communications have been used unquestionably before. Walzer explains that among the list of writing activities encompassed with the "existing practice" label are fostering false inference and the production of false implicature. Walzer complains that these practices, although common, are not ethical and should not be excused. He describes the act of fostering false inference:

> Intentionally fostering false inference has considerable appeal to writers who want to avoid writing what is demonstrably literally untrue, but also want, in order to achieve their ends, to imply what they know to be false; that is, it is common when writers intend to mislead but not to lie [24, p. 150].

The practice of fostering false inference (which encourages false implicature) allows the writer to be technically accurate while encouraging the reader to reach inaccurate conclusions.

Those who see this practice as ethical and just hold readers responsible for arriving at false implicatures. And in fact, in some rhetorical situations, readers are expected to protect themselves by invoking the power of critical reading. Consider the situation in which the used car salesperson describes the late model Corvette's rollover accident as one in which "the ground just kissed the fender." A consumer who believes this outrageous claim might be ridiculed rather than protected by society. But if the consumer were young and new to sales talk, or mentally impaired and not able to comprehend the nature of the exaggerated claims inherent to sales pitches, the ethical situation would take on a different character. The totality of the rhetorical situation determines what is ethical:

For example, in permitting lawyers to promote false inference, the ABA Code clearly does not sanction its use. The Bar has reason to hope that a rival lawyer, during the courtroom debate that the Code also mandates, will work to dispel the jury's ignorance and break down in the jury the trust required to have them accept false inference. In effect, the Code allows false implicature but within a rhetorical situation that makes false inference unlikely [24, p. 154].

The rhetorical situation creates the parameters within which the ethicality of a particular communication may be judged. Rather than a utilitarian balance, what may be considered ethical, then, rests on the balance between the capabilities and knowledge of the reader/consumer and that of the communicator, for "false implicature is possible only when one of the parties knows something that the other does not" [24, p. 153].

The rhetorical situation makes possible a relative imbalance of knowledge, and thus power, between the parties to a communication. As a result, the communicator has the responsibility to choose ethical action:

Ethics in the postmodern sense, then, does not refer to a static body of foundational principles, laws, and procedures; it is not to be confused with particular moral codes or with particular sets of statements about what is appropriate or inappropriate behavior or practice. Ethics is not a set of answers but a mode of questioning and a matter of positioning. That questioning certainly involves principles—but it always involves mediating between competing principles and judging those principles in light of particular circumstances. Ethics is decision making—but it is decision making that involves question and critique. It is informed, critical, and pluralistic decision-making. [17, p. 218]

In order to make ethical decisions within rhetorical situations, communicators must balance in favor of social good rather than expediency or utility.

Markel offers an alternative to the application of utilitarian philosophy for technical communicators. He supports the use of Immanuel Kant's categorical imperative that tests whether an act is universalizable. The test of universalizability is whether the act, if repeated universally, would retain its justification. For example, murder would not pass the test of universalizability because if it were applied universally, the human race would end. The effect of a rhetorical situation on a determination of ethical duty, then, is not the same as balancing contingencies. The question is not whether a communicator can justify an unethical act by balancing the benefit of the act against the threat of uncovering the deception. Instead, the ethicality of a communication may differ within the parameters of different rhetorical situations and differing discourse communities. A contentious rhetorical setting does not, however, justify deception. It determines, instead, the parameters within which the reader can be deceived. If those parameters are such that the result is to deceive, or that the communication *could* deceive, the act is unethical and should not be supported.
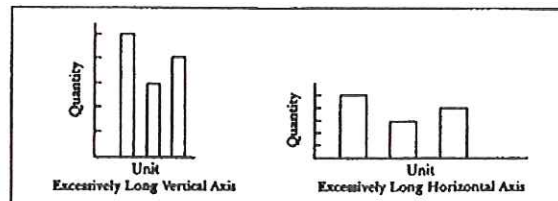

Fig. 1. Bar graphs with excessively long axes.

J. J. C. Smart, in *Ethics, Persuasion, and Truth,* points out that "There is a distinction between the rightness and wrongness of an act and the goodness or badness of the motive from which it sprang" [25, p. 2]. But motive becomes immaterial if a document does or could, in fact, deceive. A deceptive document, at best, defeats the purpose of providing clear, accurate, and factual communication, and, at worst, misleads the reader. A deceptive communication, regardless of motive or utilitarian justification, is unethical and should have no place in acceptable technical communication.

Argument over definitions of what is ethical will continue, and determinations of the ethicality of communications within given rhetorical situations will require situationally specific discussion. However, technical writers must have a pragmatic framework from which to determine whether a document is ethical. Readers and writers of technical communication should be particularly attuned to ethical issues surrounding the understanding and production of document design because readers bring less sophistication, and thus less skepticism, to the comprehension of graphic representation than they bring to the comprehension of textual material. The possibility for deceiving the unsuspecting reader who is unaccustomed to or even *unaware* of the need for critical reading of graphics is heightened. Because graphic capabilities, commonly available in inexpensive desktop publishing and word processing software, allow every writer to develop a physical command of graphic design, the opportunities for knowledgeable as well as accidental misuse are ever present.

Markel responds briefly to the need for discussion of ethical issues surrounding the production of visuals [24]. He explains the ease with which digitized photographs and drawings can be altered to exaggerate claims, and also echoes Walzer's discussion regarding false implicature:

A misleading statement or visual, while perhaps not actually being a lie, enables or even encourages the reader to believe false information. For example, a product-information sheet for a computer system is misleading if the accompanying photograph of the unit includes a modem but in fact the modem is sold separately and is not part of the purchase price listed on the sheet [24, p. 342].

As shown in Figs. 1 and 2, a number of technical writing textbooks also provide examples of deceptive graphics; most advise against creating bar and line graphs that contain disproportionate axes [26, p. 91], [27, pp. 320–321], [28, pp. 311, 317].

Just as written communication should not be used as a tool to victimize the unsophisticated, neither should visual rhetoric be so used.
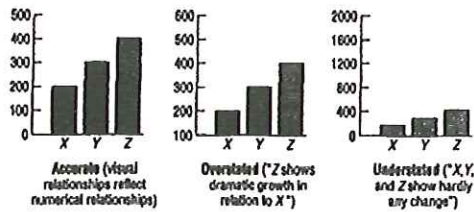
Fig. 2. An accurate bar graph and two distorted versions.

FRAMEWORK FOR ETHICAL INTERPRETATION

Research developed by Ng and Bradac [29] in communication studies provides a practical framework for ethical interpretation and makes clear the means by which communicators can wield subtle deception to create false inferences by their readers. Ng and Bradac's research applies not only to textual reference in documents, but also to graphic communication. These authors explain that writers mislead when they are placed in a position in which they have to guard their own interests while simultaneously fulfilling a duty to inform the reader. According to Ng and Bradac, communicators use deception in ". . . situations in which revelation of one's true attitude or opinion can be dangerous, and in which nevertheless one must say something . . . " [29, p. 119]. Writers will then try to influence readers by depoliticizing the information they are obliged to communicate: "Essentially, to depoliticize an influence message is to camouflage it as something else; in doing so, communicators render their influence attempts more palatable to the targets of influence and at the same time lessen their own accountability" [29, p. 7].

The primary ways to depoliticize a message, thereby making it more palatable and more influential, are to mislead and mask. To mislead a reader, the communicator must not lie outright, but tell the truth. However, that truth must be read in such a way that the reader misunderstands its relevance or relationship to the reality represented. ". . . [S]peakers may mislead their hearers by presenting one model of reality while suppressing alternative models" [29, pp. 118–199]. For instance, the secretary who tells the waiting telephone sales representative that the boss is out of the office when he or she is only in the next room, makes an accurate statement, but also allows the caller to assume that the boss is not even in the building. Masking is also a common method of misrepresentation:

[M]asking can be thought of as the rendering of reality so as to make it appear different from the "actual" way of the world. Masking does not withhold true information or present false information as if true, rather it presents true information in an incomplete or partial way under the cover of one or more literary masks. The formation of a literary mask consists of . . . the concoction of special phrases and expressions, . . . the removal of cues that may otherwise encourage a more critical reading of the masked reality, . . . and [a] reduced level of cognitive activity in comprehending the presented reality. [29, p. 145]

Masking can be accomplished by underrepresenting factual information that would provide a full view of reality or by emphasizing insignificant information in order to divert attention from reality. For example, many marketers of "fat-free" foods highlight the lack of fat in their products, often masking these foods' high calorie content. Many "diet" food producers also overemphasize the significance of their products' zero cholesterol content to divert attention from the foods' high vegetable fat content. Where text can misrepresent reality by masking and misleading, graphic representations can do the same, as discussed in the following section.

A CLOSER LOOK AT ETHICS AND GRAPHICS

According to Ng and Bradac, "Language is the primary instrument for achieving influence" [29, p. 17]. However, graphics may actually be more influential than text because readers are less skilled in graphic analysis, and thus less suspicious of the potential for the communication to mislead.

Edward Tufte, in *The Visual Display of Quantitative Information*, states that "graphical excellence begins with telling the truth about the data" [30, p. 53]. But questioning the graphic qualities of a document involves more than merely providing data in a form that achieves excellence.

Tufte does point to readers' wariness of material presented in statistical form. He states, "For many people the first word that comes to mind when they think about statistical data is 'lie.' No doubt some graphics do distort the underlying data, making it hard for the viewer to learn the truth. But data graphics are no different in this regard, for any means of communication can be used to deceive" [30, p. 53]. However, even readers who may be aware that statistics can lie are generally unaware of the power that type sizes, textual font and style choices, and placement of text can have on readers' understanding of text. For this reason, writers are charged with a heightened responsibility to present information clearly without manipulating readers' understanding of text in ways of which they are unaware.

James Craig, in *Designing with Type*, explains that choices in type size, fonts, backgrounds, bolding, and leading have an effect on the attention the reader gives to information presented in textual form. According to Craig, text set all in upper case is difficult to read [31, p. 23]; thus, a combination of upper and lower case is preferable for use in tables where readers are likely to access information randomly and quickly. In addition, serif fonts are easier to read than san serif fonts [31, p. 123]. Again, to aid accessibility of text, effective graphic design includes serif font for ease of reading. Craig also explains what most readers understand tacitly but may not analyze closely in most reading; that bold type highlights information, making it stand out and attract attention. In addition, larger type sizes are easier to read and stand out more than smaller type sizes. White space that surrounds a piece of text also adds emphasis to that text and makes it easier to read than that which is presented in a large textual block. Large items demand more emphasis than small ones.

Placement of text and graphics is also important in attaching emphasis to information highlighted by its location in a

document. Material that is placed first after a heading is usually read first and material that comes later may be skimmed instead of carefully read. Because readers of English read left to right, material placed at the left receives more emphasis than that placed to the right.

ANALYSIS OF THE ATF REPORT

A close analysis of type choices and graphic design using some of Craig's and Tufte's analytical maxims is revealing. The seemingly innocuous visual designs used in the ATF's tables reporting casualties in the Branch Davidian raid are far from innocent. In the remainder of this article I compare several tables from the *Report of the Department of the Treasury on the Bureau of Alcohol Tobacco, and Firearms Investigation of Vernon Wayne Howell Also Known as David Koresh* [21], which refer to the first of two confrontations between the ATF and Branch Davidians at the compound near Waco. (Please refer to Figs. 3–5, which accompany the discussion below.)

Similarities

The graphics describing deaths and injuries to ATF agents and those depicting deaths and injuries to Branch Davidians exhibit several similarities. Both sets of graphics are displayed in table formats, including three sets of text in boxes. All the tables include a sans serif text used in the body of the tables, and all use a serif text heading. In all of the tables the headings are set in upper case. These similarities seem to be superficial, but the effect creates a sense that the tables are one unit, thereby making the last table, depicting the Branch Davidian deaths and injuries, seem to be merely a continuation of the first two. The effect is to mask the information in the third table. The differences between the graphic representations of this data also point to the potential to deceive through graphic representation.

Differences

The headings in the ATF tables are set in bold 14 point type; nonbold, 12 point type is used in the headings for the Branch Davidian tables. In addition, the body text in the ATF tables is set in 12 point type in upper and lower case, whereas the body text of the Branch Davidian tables is set in 10 point text, all in upper case.

The authors of the ATF tables use white space to surround the text used in the subheadings. This contrasts with the lack of white space used around the subheadings of the Branch Davidian tables. This use of larger type and white space contributes to the visual effect that causes the ATF tables to be more than one page long while the Branch Davidian tables fill only one page. Other factors contributing to length and, thus, to the spatial importance of the tables, are the list of sources of information, numbering of deaths and injuries, and notation of minor injuries in the ATF table. These notations are not present in the Branch Davidian table, making it shorter and less visually commanding than the ATF tables.

The ATF chart includes six cells of information across the top of the table, whereas the Branch Davidian tables include only five; the cause of death or injury is included within the description of death or injury. The effect is to make the ATF chart larger and more visually impressive. In addition, the Branch Davidian table includes the heading "Cult Members Killed by Cult Members," and underneath the level one heading, "Branch Davidian Deaths on February 28, 1993." Although the second and third tables in the figure are annotated with the headings "Cult Members Killed by ATF," and "Branch Davidian Injuries Sustained on February 28, 1993," the effect of the placement of the heading "Cult Members Killed by Cult Members" before the others is that the second and third headings are less noticeable.

These differences may seem minor at first glance; however, in addition to the effect of their spatial placement in the ATF report, they contribute to the overall deceptive effect created by the graphic elements of the document. The author's use of larger type size, white space, and bolded type in the headings of the ATF tables emphasizes that information, suggesting that it is more important than the information in the Branch Davidian tables. In addition, the use of upper and lower case text and larger type size in the ATF tables allows the reader greater accessibility and deemphasizes the information in the Branch Davidian table by making it more difficult to access.

The larger a figure is, the more visual attention it demands, thereby suggesting greater importance. Because the ATF tables are set in larger type and include more white space and more information, the information represented in these tables demands more attention and seems more important. The long list of minor injuries to ATF agents alone overwhelms the entire Branch Davidian table, in which *no* minor injuries are included. The overall effect of the visual elements used in the tables is to mask the information presented in the Branch Davidian tables, thereby misleading readers into an assumption that the effects of the battle were more harsh on the ATF than on the Branch Davidians.

Effects of Integration of Language and Graphics

The language used within a graphic communication is integral to the design of the graphic itself. The subject and tone of the text complements or reiterates the intent of the graphic. For that reason, it is important to note that the language used in the ATF graphic is much simpler and easier to understand than that used in the Branch Davidian table. For instance, the ATF table includes descriptions of wounds such as "gunshot wounds to both legs," . . . "gunshot wound to the hand," . . . and "wound to back and left shoulder" [21, p. 102]. Wounds to Branch Davidians, on the other hand, are described as "entry to post-lateral arm w/ exit of anterolateral arm," . . . "death due to (a) and (b) craniocerebral trauma," . . . and "(e) rt. supra-auricular region—exit rt. postior auricular surface" [21, p. 104].

The long list of minor injuries to ATF agents contributes to the size and visual importance of the ATF tables. This list includes a series of injuries such as "Severe irritation to left heel" caused by "ATF boots," "Sprain/pull to left shoulder" caused by "Warrant execution," and "Two top front teeth chipped" caused by "Moving for cover" [21, p. 103].

GUNSHOT RELATED DEATHS SUSTAINED BY ATF ON FEBRUARY 28, 1993
(according to CA-6 Forms submitted by ATF)

	Name	Team	Injury	Cause	Hospital where treated
1	Conway Lebleu	NO	Death	Gunshot	N/A*
2	Todd McKeehan	NO	Death	Gunshot	N/A*
3	Robert Williams	NO	Death	Gunshot	N/A*
4	Steven Willis	HOU	Death	Gunshot	N/A*

GUNSHOT AND SHRAPNEL RELATED INJURIES SUSTAINED BY ATF ON FEBRUARY 28, 1993
(according to CA-1 Forms submitted by ATF)

	Name	Team	Injury	Cause	Hospital where treated
1	Clayton Alexander	NO	Two gunshot wounds - thigh in left leg; thigh in right leg	Gunshot	Providence
2	Roland Ballesteros	HOU	Gunshot wounds to the hand	Gunshot	Hillcrest
3	Bill Buford	NO	Gunshot wounds to both legs	Gunshot	Hillcrest
4	Samuel Cohen	DAL	Shrapnel fragments to lower right thigh	Shrapnel	Hillcrest
5	Eric Evers	HOU	Gunshot and shrapnel wounds to chest and shoulder area	Gunshot/ Shrapnel	Hillcrest
6	Mark Handley	HOU	Shrapnel wounds in right leg	Shrapnel	Hillcrest
7	Walter Glen Jordan	NO	Gunshot wounds to both legs	Gunshot	Hillcrest
8	Kenneth King	NO	Gunshot wounds to arms, chest and legs	Gunshot	Providence
9	Mark Murray	DAL	Buck shot wounds to left shoulder	Gunshot	N/A*
10	Gary Orchowski	HOU	Shrapnel wound to the right hand	Shrapnel	Hillcrest
11	Joseph Patterson	DAL	Shrapnel wounds to right cheek	Shrapnel	N/A*
12	Gerald Petilli	DAL	Shrapnel wounds to right hand, wrist, forearms and left upper arm	Shrapnel	Hillcrest
13	Clair Rayburn	HOU	Gunshot wound to the hand	Gunshot	Hillcrest
14	John Risenhoover	HOU	Gunshot wounds to both legs	Gunshot	Hillcrest
15	Robert Rowe	HOU	Shrapnel wounds to right hand, large abrasion on face	Shrapnel	N/A*
16	Michael Russell	DAL	Wound to back of left shoulder	Gunshot	N/A*
17	Larry Srever	HOU	Multiple shrapnel wounds to left lower extremity, tissue loss to left medial calf, soft tissue injury to left thigh	Shrapnel	Hillcrest
18	Steven Steele	DAL	Shot in lower lip and left hand; injured lower back and left leg	Gunshot	Hillcrest
19	Robert White	DAL	Bullet wound to left shoulder, neck and bruise to right shin	Gunshot	N/A*
20	Curtis Williams	HOU	Bullet fragments and puncture wound to upper thigh of left leg	Gunshot	N/A*

*N/A means Not Applicable, treated by EMT at scene, or by private physician.

Fig. 3.

SERIOUS NON-GUNSHOT RELATED INJURIES SUSTAINED BY ATF ON FEBRUARY 28, 1993
(according to CA-1 Forms submitted by ATF)

	Name	Team	Injury	Cause	Hospital where treated
1	Keith Constantino	NO	Broken hip, extensive injuries to both knees and legs	Falling from roof	Hillcrest
2	Terry Lee Hicks	NO	Torn ligament between 3rd & 4th vertebra in neck; possible ruptured disk between 7th and 8th vertebra in neck, bruised or crushed nerve between 7th and 8th vertebra	Moving for cover	N/A*

OTHER NON-GUNSHOT RELATED INJURIES SUSTAINED BY ATF ON FEBRUARY 28, 1993
(according to CA-1 Forms submitted by ATF)

	Name	Team	Injury	Cause	
1	Wendel Frost	N/A	Ears subject to extreme noise levels causing possible hearing loss	Noise of two .308 high powered rifles	N/A*
2	Felix Garza	N/A	Severe irritation to left heel	ATF boots	N/A*
3	Steven Jansen	HOU	Severe back pain - lower back and right leg, muscle spasms	Carrying dead & wounded from scene	N/A*
4	Kenneth Latimer	HOU	Sprain/split to right shoulder	Warrant execution	N/A*
5	Charles Meyer	N/A	Rib and back injury on left side	Diving for cover	N/A*
6	John Henry Williams	HOU	Two top front teeth chipped	Moving for cover	N/A

*N/A means Not Applicable, treated by EMT at scene, or by private physician.

Fig. 4.

The treatment of these and other minor injuries in the ATF tables creates a longer, more inclusive graphic than the Branch Davidian table. The longer length lends a visual importance, whereas the text, if read carefully, indicates otherwise. The exclusion of a list of minor injuries to Branch Davidians implies that there were none.

It may be that the ATF officials who produced the tables had no access to information that would have balanced the charts, but the result is to create a document that both misleads

BRANCH DAVIDIAN DEATHS ON FEBRUARY 28, 1993

CULT MEMBERS KILLED BY CULT MEMBERS

NAME	NUMBER OF WOUND(S)	WEAPON DISTANCE TO WOUND (RANGE)	WEAPON CALIBER/ TYPE OF AMMUNITION	LOCATION OF WOUND/ CAUSE OF DEATH
WINSTON BLAKE	1	TWO TO THREE FT.	.223	CRANIOCEREBRAL TRAUMA
PETER HIPSMAN	4	(a) ONE TO TWO FT.	9 MM. WINCHESTER SILVERTIP JACKETED HOLLOW POINT	(a) UPPER POSTERIOR NECK
		(b) LESS THAN 1 INCH	9 MM. COPPER JACKETED SOFT POINT	(b) RT. PARIETAL SCALP
		(c) MORE THAN 4 FT.	9 MM. COPPER JACKETED HOLLOW POINT	(c) LOWER LEFT ANTERIOR CHEST
		(d) MORE THAN 4 FT.	UNKNOWN (NOT RECOVERED) PROBABLY BULLET	(d) ENTRY TO POST-LATERAL ARM W/ EXIT OF ANTEROLATERAL ARM
				DEATH DUE TO (c) & (d) CRANIOCEREBRAL TRAUMA
PERRY JONES	1	WEAPON IN MOUTH	UNKNOWN (NOT RECOVERED)	CRANIOCEREBRAL TRAUMA- GUNSHOT WOUND TO MOUTH

CULT MEMBERS KILLED BY ATF

NAME	NUMBER OF WOUNDS	WEAPON DISTANCE TO WOUND (RANGE)	WEAPON CALIBER/ TYPE OF AMMUNITION	LOCATION OF WOUND/ CAUSE OF DEATH
PETER GENT	1	DISTANT	9 MM. HYDROSHOCK	PERFORATION OF AORTA- GUNSHOT TO UPPER LF. CHEST
MICHAEL SCHROEDER	6	(a) DISTANT	9 MM. HYDROSHOCK	(a) RT. ANTERIOR SHOULDER
		(b) DISTANT	9 MM. HYDROSHOCK	(b) RT. LOWER FLANK
		(c) DISTANT	9 MM. HYDROSHOCK	(c) LEFT THIGH
		(d) DISTANT	9 MM. HYDROSHOCK	(d) RT. TEMPORAL SCALP
		(e) DISTANT	UNKNOWN (NOT RECOVERED)	(e) RT. SUPRA-AURICULAR REGION - EXIT RT. POSTER AURICULAR SURFACE
		(f) DISTANT	UNKNOWN (NOT RECOVERED)	(f) GRAZING GUNSHOT WOUND OF THE LEFT CHEST. DEATH DUE TO MULTIPLE GUNSHOT WOUNDS
JAYDEAN WENDELL	1	DISTANT	9 MM. HYDROSHOCK	CRANIOCEREBRAL TRAUMA- GUNSHOT WOUND TO HEAD

BRANCH DAVIDIAN INJURIES SUSTAINED ON FEBRUARY 28, 1993

NAME	NATURE OF INJURY
DAVID JONES	*GUNSHOT WOUND TO GLUTEUS MAXIMUS
DAVID KORESH	GUNSHOT WOUND TO PELVIC RIM AND LEFT WRIST
JUDY SCHNEIDER	*GUNSHOT WOUND TO INDEX FINGER
SCOTT SONOBE	*GUNSHOT WOUND TO LEG

*ALLEGED WOUNDS

Fig. 5.

and masks the whole truth of the incident and contributes to a document that is ultimately deceptive in nature. Since this first confrontation led to the final standoff in which many of the Branch Davidians in the compound were ultimately cremated, the ATF Report is important. Readers who question the actions of the ATF will expect a clear, understandable account of what occurred. However, the overall effect of the representation of information in the ATF report is to manipulate readers in such a way that they may fail to notice the list of deaths and injury to Branch Davidians at all, and even if they do peruse the graphics from beginning to end, they may not realize that four ATF agents died, whereas the total deaths of Branch Davidians resulting from the skirmish near Waco was six.

CONCLUSION

As the analysis of the ATF's report suggests, choices in graphic representation can affect readers' understanding of the reality represented. The ATF document presents information regarding deaths and injuries to ATF agents and Branch Davidians in a manner such that readers might overlook or depreciate the numbers of deaths and injuries to Branch Davidians. Where untrained readers of technical documents may not judge critically the effect of graphic representation, writers and instructors of technical communication do have the opportunity to consider the ethical consequences of their graphic choices. For this reason, technical communication instructors and writers of technical documents should scrutinize

the possible effect of the graphic selections available and make considered judgments for their use.

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