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## Evidence

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It seems implausible that three decades ago the literature on the use of evidence in persuasive messages would foster the impression that "reactions to argument may have little or nothing to do with whether the argument includes fully documented or completely undocumented evidence, relevant or irrelevant evidence, weak or strong evidence, or any evidence at all" (Gregg, 1967, p. 180). The reasons for such conclusions, ironically, were later seen to be due to faulty theory and research data (see Kellermann, 1980; Reinard, 1988, 1998; Reynolds & Burgoon, 1983). We are now able to say with little reservation that when an advocate "quotes" information in support of an argument and the recipients of the message process the information as legitimate evidence, the advocate will be more persuasive than if the information was not presented or was not processed by receivers. In short, there are at least three conditions for the effective and persuasive use of evidence: The receivers must be aware that evidence is being

presented, they must cognitively process the evidence, and they must evaluate the evidence as legitimate. Before returning to these conditions, a general survey of the research on evidence is in order.

### WHAT WE KNOW SO FAR ABOUT EVIDENCE

#### The General Persuasive Effects of Evidence

There are a few recent affirmations for the persuasive effects of evidence. McLaughlin, Cody, and French (1990) showed that challenges in traffic court rarely win without supporting evidence. Allen and Burrell (1992) supported the claim that people assent to persuasive messages based on the quality of the justification provided. Indeed, Reinard (1998) offered meta-analytic results indicating that up to 26% of the variance in persuas-

sion (which Reinard claimed is associated with up to 63% persuasive "success") could be attributed to the use of legitimate evidence quotations. Nevertheless, caution is in order given that between 20% and 30% of people appear to be willing to believe almost anything they are told. At least so claims the DiMassimo Brand Advertising research company (Rivenburg, 1999), which conducted a study in which it recruited 200 people to tell friends and neighbors relatively incredulous bits of information (e.g., Amazon.com is an Internet site for portly women, George W. Bush, Jr., is running for president as a Democrat, Kenneth Star is the president of Starbucks Coffee). The researchers found that 20% to 30% of the friends later indicated in a survey that they believed what they had been told.

Research that speaks of a clear effect for the use of data-like assertions and evidence can be seen in a number of studies. Hample (1978) pointed out that the conception of "no evidence" is faulty because arguments with no clear use of evidence will cause the receiver to inherently fill in the implied evidence. Nevertheless, studies that contain conditions with enthymematic arguments (i.e., with a premise implied or assumed) should offer comparisons to messages that clearly contain evidence. When Reinard (1988) chronicled the 18 major studies clearly supporting the effects of evidence, 15 had control groups with "no evidence (vague general statements)" (p. 11). Recall of the support for certain messages was found to combine with other communication or attitude variables to predict adoption of favorable attitudes toward the propositions (Burgoon, 1975). Hample (1977, 1978, 1979) tested models for the processing arguments and supportive data in messages and reported moderately high correlation coefficients (.50s to .60s) between predicted and obtained belief scores. In summary, the use of evidence produces more attitude change than the use of no evidence.

### Evidence Enhances Credibility

The use of evidence enhances the credibility of the advocate. O'Keefe (1998) performed a meta-analysis on the credibility effects of evidence and noted consistently "positive mean effects for . . . credibility outcomes" (p. 71). Warren (1969) demonstrated that citing credible sources of evidence enhanced the rating of the speaker as fair and justified. Arnold and McCroskey (1967) and Anderson (1970) showed that unbiased and reluctant testimony resulted in higher ratings of credibility over biased testimonies. Whitehead (1971) reported that for speeches on taxation of religious organizations and federal regulation of medicine, giving evidence citations resulted in higher ratings of "professionalism" for the speaker than when the speaker offered the same material without citations, but only for participants who scored low on critical thinking ability. The Whitehead study is sometimes cited as supporting a main effect for evidence citations on speaker trustworthiness and objectivity, but the significance test actually failed to meet traditional probability levels.

### CONDITIONS FOR THE EFFECTIVE USE OF EVIDENCE

There are some very obvious conditions underlying the effective use of evidence. First, there must be some awareness that "evidence" has indeed been presented. Second, the audience must be reasonably expected to process the message and the evidence. Finally, the audience must perceive the evidence to be legitimate.

#### Recipients Must Be Aware of the Evidence

*Is it evidence to the audience?* What do people regard as evidence? Typically, when we re-

fer to evidence, we mean data (facts or opinions) presented as proof for an assertion. We hear or see evidence on a regular basis. The poster for a new movie offers quotes of supposedly reputable reviewers assuring us that the movie is worthwhile. Our lover offers an exceptional gift or sacrifice as proof of love. The traffic police officer carefully documents the calibration of the speed radar equipment to be used each day because that question of calibration will be the first one asked by the judge as the traffic cases come up in court. There are many different types and forms of evidence (see Reinard, 1991; Rothstein, Raeder, & Crump, 1997). In the vast majority of the research studies on evidence (for detailed reviews of the early research, see Reinard, 1988; Reynolds & Burgoon, 1983), the researchers operationalized evidence as testimonial quotes attributed (or not attributed) to a particular source (usually a person qualified to make the observation being made).

*Does the audience recognize the evidence?*

The clever advocate will recognize that evidence must be recognized and accepted by the audience as evidence. Indeed, Hample (1977, 1978, 1979, 1980, 1981, 1985) claimed that most intelligent message receivers plug in their own understanding of the implied evidence behind a claim. On the other hand, when message receivers expect to hear some sort of evidence and they do not hear it, they are likely to remember the omission and even demand that the speaker fill in the missing data (even if the message recipients knew the data all along). In a study with Dutch high school students, van Eemeren, de Glopper, Grootendorst, and Oostdam (1994) found that research participants identified unexpressed major premises and nonsyllogistic premises more correctly than they did unexpressed minor premises. This was when no disambiguating contextual information was present.

Morley (1987; see also Morley & Walker, 1987) demonstrated that audience members respond more favorably when the arguments and the supportive data are novel (i.e., new), plausible, and important to the overall conclusion. The political communication "adwatch" literature (see Cappella & Jamieson, 1994; Kaid, Tedesco, & McKinnon, 1996; McKinnon & Kaid, 1999; Pfau & Loudon, 1994) similarly indicates that without special visual and timing cues in the adwatch messages, audiences are likely to never notice that they are being given evidence critical of the claims being made in the original campaign ads. (Or, conversely, audiences such as juries may pay special attention to material they should ignore when their attention is drawn to it [Reinard & Reynolds, 1978]). Thus, to enhance persuasion, it is not merely enough to include evidence in a message; the audience must also perceive that evidence has indeed been deployed.

*Do citations of the sources of evidence help?*

If receivers are going to become aware of evidence in a message, it is most likely to occur because of explicit features in the message that highlight that evidence is being presented. The citation of the sources of evidence should clue listeners in that evidence is being presented. A number of studies have examined the use of explicit citations of evidence sources within persuasive messages. O'Keefe's (1998) meta-analysis "indicates a significant persuasive advantage for messages providing information-source citations" (p. 67).

McCroskey and his associates (Luchok & McCroskey, 1978; McCroskey, 1967, 1969, 1970) presented data that citations of sources can increase attitude change and credibility for a less credible advocate but that the citation of sources does not necessarily aid a credible advocate. The effect can be explained as resulting from the receiver's preparation for believing the highly credible source and not

needing additional justifications. Burgoon and Burgoon (1975) claimed, however, that "evidence seems to increase the persuasiveness of both high and low credible sources when a delayed measure of attitude change is obtained" (p. 153). O'Keefe (1998) questioned the existence of a credibility ceiling effect but admitted to lacking "sufficient quantitative information to permit useful meta-analytic treatment" (p. 70).

Luchok and McCroskey (1978) found that irrelevant evidence from an unqualified source will result in attitude change in the opposite direction from that advocated even when the speaker is highly credible. In addition, a moderate- to low-credible advocate is likely to get strong reverse attitude changes by citing an evidence source who is not qualified to comment on the topic. Indeed, a low- to moderate-credible advocate is most likely to obtain reverse attitude changes from an audience unless the advocate cites evidence from a qualified source. McCroskey (1970) also reported that in forums where alternative views are expressed, if a highly credible speaker does not include evidence citations following a speech with evidenced citations, the speaker tends to lose credibility. In summary, the use of irrelevant evidence from poorly qualified sources will produce counter to advocated attitude change regardless of the credibility of the advocate. The failure to use relevant evidence from qualified sources may produce counter to advocated attitude change for low- to moderately credible advocates. The failure to include evidence citations in a message following an evidenced message expressing opposing views will result in lowered credibility ratings for an advocate.

Some of the best and most specific data on the importance of evidence citations was provided by Bostrom and Tucker (1969) and by Fleshler, Ilardo, and Demoretcky (1974). Bostrom and Tucker (1969) found that speak-

ers who relied on simple assertions without clear supporting evidence were less persuasive than those who gave evidence to back the assertions, cited the sources of the evidence, and gave the qualifications of the sources. Similarly, Fleshler et al. (1974) found that when speakers employ specific documentation of evidence, the speakers got increased credibility ratings.

The direct effects of developed or underdeveloped arguments and evidence in a message obviously may vary with the particular receivers. Eagly and Warren (1976), for example, demonstrated that higher intelligence led to more critical assessments of messages that contained only "a short introduction stating the recommendation . . . and a short conclusion repeating the recommendation" around five paragraphs of material "irrelevant to the recommendation" (p. 230). The less intelligent, by contrast, offered only moderate assent to the recommendation even when the introduction and conclusion bounded five paragraphs of persuasive reasoning and evidence. Interestingly, the "arguments included" (p. 234) versions had only vague references to the source of the evidence. The lack of specific evidence citations may partially explain why Eagly and Warren's persuasive messages achieved only moderate levels of persuasion (e.g., an average of 2.95 on a scale of 1 to 7 with a high of 3.64).

#### The Evidence Must Be Cognitively Processed

There should be some reason to presume that the audience will be systematically (or elaboratively) processing the arguments in the message. While controversies about forms of processing may rage (see Allen & Reynolds, 1993; Eagly & Chaiken, 1993; Stiff, 1986), there is little disagreement among attitude

change and persuasion scholars that the manner and extent of message processing matters (see Aune & Reynolds, 1994; Petty & Cacioppo, 1984). One of the more obvious instances when an audience might be assumed to engage in systematic message processing is when opposing advocates present competing evidence to the audience (Luchok & McCroskey, 1978; McCroskey, 1970).

Most of the studies on the persuasive effects of evidence take place within a one-to-many deliberative oratory scenario (see Miller & Burgoon, 1978) where the recipients are presumed to be engaged in policy or legal decision making. The vast majority of the participants in the studies have been college educated with, supposedly, some sensitivity to being diligent message processors. Nevertheless, it is unfortunate that we can only assume in most of these studies that the message recipients were engaged in message elaboration (see Reynolds, 1997).

Blasting the recipients with quotes of ungrounded statistics appears to be a sure way to distract them from systematically processing the evidence and the message (Harte, 1971; Kline, 1969; Nisbett, Borgida, Crandall, & Reed, 1976). Similarly, spinning a long but interesting yarn or offering a quick quip or an analogy may be so distracting or entertaining that at least some audience members may turn away (Whaley, 1997) or just be confused enough to become vulnerable to nearly any persuasive suggestion (Kassim, Reddy, & Tulloch, 1990). As an alternative to telling a long story, asking members of an audience, particularly females, to imagine their own versions of relevant scenarios can provoke particularly strong responses (Berger, 1998).

*Statistical Versus Narrative Evidence.* There is some inconsistency on the effects of statistical versus narrative (story) evidence. Some studies indicate that a meaningful story in support of an argument appears to be as persua-

sive as meaningful statistics for a moderately involved audience (Baesler, 1997; Baesler & Burgoon, 1994; Kazoleas, 1993). Other data seem to indicate that statistical data are more likely to result in persuasion than are pithy tales (Allen & Preiss, 1997), and the verdict is still out on how specific such quantification needs to be (O'Keefe, 1998). Furthermore, the effects of statistics versus "anecdotes" seem to vary with the initial position of the message recipients (Slater & Rouner, 1996) such that fellow supporters of the advocate prefer statistical evidence, while audience members who are opponents of the advocated position find anecdotal stories to be more persuasive. Kopfman, Smith, Ah Yun, and Hodges (1998) found "a main effect for evidence type such that statistical evidence messages produced greater results in terms of all the cognitive reactions, while narratives produced greater results for all of the affective reactions" (p. 279).

On balance, statistical evidence would seem to be the more persuasive form of evidence when compared to narrative evidence, but such effects will depend on the type and amount of cognitive processing of the evidence. Certainly, the initial attitudes of the audience members and the desired effects being sought are key to understanding the cognitive processing of different types of evidence. For now, the best conclusion may be that the effective advocate is best advised to use both statistical and narrative evidence (Allen et al., 2000).

Message strategies and tactics need to also be weighed within the broader context of the message reception environment. While specific message content is central to message processing (see Austin & Dong, 1994), the characteristics of the receivers are also key. In particular, Berger (1998) pointed out that "all messages are comprehended within the context of extant declarative and procedural knowledge" (p. 102).

*Prior Knowledge and Evidence Processing.* Prior knowledge of the topic may affect the potential processing of evidence. McCroskey (1969) found that only the participants without prior knowledge of the topic changed their attitudes when given evidence-laden messages. By contrast, a survey of the research on prior (working) knowledge and attitude change (Wood, Rhodes, & Biek, 1995) revealed that prior knowledge can facilitate or inhibit processing new information depending on the motivations or dispositions to process the information and the complexity of the material. Further advances in research on the effects of evidence will need to incorporate the theory and research on working knowledge and attitude change.

Harte (1976) investigated the effects of prior attitude, credibility of source (high or low), and evidence (maximum use or minimum use). Measurements were taken immediately after the experiment and again 3 weeks later. Findings showed that no attitude change took place in the immediate situation but that significant attitude change occurred in the maximal evidence/extreme attitude conditions after 3 weeks. There was no effect for credibility across the time periods. There was no significant attitude change for the neutral attitude condition.

The studies on prior knowledge and evidence so far suggest that evidence has an effect only on those who have some previous attitudes on (and presumably knowledge of) the persuasive topic. Furthermore, it appears that people with extreme attitudes naturally take longer to change their beliefs and attitudes after receiving persuasive messages than do people with initially moderate attitudes.

*Information Processing Predispositions.* Beyond simple prior knowledge, there are a host of recipients' factors that may influence the receipt of evidence data in messages. Berger

(1998), for example, found that processing of quantitative data across adjacent messages may well vary with the personal involvement or stress levels of the recipients. Specifically, Berger found that men were better able to debias messages with prior information than were women, probably because men were less threatened by the subsequent information.

Both the content and the recipients have an impact on whether and how evidence is cognitively processed. Many questions remain to be explored about how much and which types of cognition are essential for evidence to aid persuasion.

#### The Evidence Must Be Judged as Legitimate

The sociocultural history of Western civilization has led us to learn the practice of expecting advocates to present arguments and evidence that can withstand counterargumentation (Kline & Oseroff-Varnell, 1993). On the other hand, the development of standards of evidence in legal and policy-making bodies can be traced to the suspicion that jurors and voters might not catch tainted testimony or data when left unchecked. There are, of course, lists of rules and "codes" for acceptable evidence that argumentation and law students learn to apply. But surprisingly little research has been done on what factors actually influence audiences to view evidence as legitimate.

*Evaluation of Evidence and Arguments Mediating the Effects of Evidence.* The study by Reynolds (1986/1987) supports a path structure where evidence evaluation leads to message evaluation, which leads to post-message belief in the message proposition. This same evidence evaluation to message evaluation to post-message belief path structure can be par-

tially extrapolated from the data presented by Allen and Burrell (1992) and is also evident in the data presented by Slater and Rouner (1997). Similarly, Wood et al. (1995) claimed that "evaluation [of message content] mediates the link between knowledge and attitude change" (p. 301). In short, there is nearly perfect support in the literature and in the Reynolds (1986/1987) data for a casual path from evidence evaluation to message evaluation to post-message belief.

The implication for the mediating effects of evidence and message evaluation on persuasion is intensely important. Studies that look for direct effects of evidence manipulations on persuasion are probably missing two important steps in the chain of effects: (a) the perception that the evidence is high quality and (b) the overall evaluation of the quality of the message. Failing to incorporate the linkages among evidence evaluation, message evaluation, and persuasive effects will likely result in erroneous and misleading findings. There are a number of insights in the literature on the factors that influence assessments of evidence.

*Finding Bias in the Evidence.* One frame for evaluating whether evidence is legitimate is the potential bias in the evidence. Arnold and McCroskey (1967) demonstrated that reluctant testimony (i.e., statements at odds with the evidence source's own bias) is more persuasive than biased testimony and that audiences prefer speakers who present unbiased testimony. Similarly, Buckless and Peace (1993) showed that jurors respect external (and presumably objective) governmental standards to internal professional standards (i.e., industry standards) when making judgments about professional competence. Schul and Mayo (1999) demonstrated that once a source is seen as invalid on one bit of information, that source remains tainted even on valid bits of in-

formation. Schul and Mayo provided data showing that advocates should probably use multiple pieces of evidence from multiple sources.

In an interesting twist on how people think about evidence, Kline (1971a) investigated the way people categorized evidence. Kline's data showed that some participants sorted evidence along a content relevance dimension, while others created categories based more on the credibility of the sources of the evidence. Kline also had the participants select evidence for a persuasive message. Attitude pretests did not predict evidence selections, but after reading the evidence on the topic, the participants developed more positive attitudes toward the topic. Kline's follow-up study (1971b) showed that documented evidence (i.e., providing a source citation) was selected more often by high-dogmatic than by low-dogmatic individuals. Kline also showed that, in general, participants selected more undocumented than documented evidence. Bradac, Sandell, and Wenner (1979) followed up on Kline's (1971a) findings. Two Q-sort analysis studies revealed that the selections of evidence form two categories: those categorization schemes showing a preference for unknown but competent sources and those showing a preference for known and trusted sources.

Harte (1971) looked at respondents' ability to identify evidence and weaknesses in evidence. The results were primarily that evidence inconsistent with the arguments was more difficult to detect than either evidence from suspect sources or evidence that was irrelevant. O'Keefe (1998) noted that such comparisons of the linkages between evidence and argumentative strength, especially with comparisons to "shoddy arguments with information of dubious relevance or provenance" (p. 68), are seriously lacking in the research literature on evidence.

*Handling of Anomalous Data.* An interesting turn in the question of judgments of evidence is the handling of anomalous data (i.e., inconsistent with other known data and accepted theory). Chinn and Brewer (1993) contended that people can have one of seven responses to anomalous data: ignore it, reject it, exclude it, hold it in abeyance (waiting for further data), reinterpret it, make a minor repair to existing beliefs (i.e., assimilate the data in a way that makes it nonanomalous), or accept it. The research they reviewed that is relevant to the processing of anomalous data (which is primarily on science education) is potentially instructive for further research on the uses and effects of evidence in persuasion.

There is little direct data on what message recipients do when they hear an advocate present evidence that the recipients perceive to be anomalous with prior data. The resistance to persuasion literature (e.g., Burgoon, Cohen, Miller, & Montgomery, 1978; Pfau, 1992; Pfau, Van Bockern, & Kang, 1992; Zuwerink & Devine, 1996) could be applied if evidence and prior knowledge were to take a stronger position in that theory and research. The early resistance research (e.g., McGuire, 1961) in which the topics were truisms seemed to indicate a strong tendency to just accept anomalous data. Wood et al. (1995) noted that "knowledgeable subjects resist all but the most cogently argued persuasive appeals" (p. 302), but they also noted that "knowledge contributes to the biasing, defensive effects associated with strong attitudes when the attitude issue generates intense affects" (p. 304). Therefore, the application of the resistance to persuasion literature to the study of evidence as anomalous data may be worthwhile, but such attempts will encounter serious theoretic and operational difficulties.

*Too Much Evidence to Be Legitimate?* One consequence of employing evidence in a per-

suasive message may be only that the speaker is held in higher credibility than would otherwise be the case. Obviously, if a speaker already is seen as highly credible, then the inclusion of evidence can have only diminishing returns, if any, for enhancing the speaker's credibility or persuasiveness—assuming, that is, that the speaker's claims are unchallenged by the audience members or by an opposing advocate (McCroskey, 1970).

Lavasseur and Dean (1996) presented data that, on first glance, suggest that a speaker can use too much evidence and thus appear bookish or nerdy. But the speakers in their data were U.S. presidential candidates engaged in debates. These speakers probably had comparably less credibility to gain than to lose. Such speakers are also expected to have a facile command of the issues and data without having to belabor them. Thus, concern about too much evidence may need to be reserved for more unique circumstances. Students and practitioners should probably not start to worry about having too much evidence (or to use this "nerd effect" as an excuse for failing to provide evidence). The more everyday sort of speaker may want to include the best evidence possible because, even if a speaker does not have an obvious immediate opponent, most sophisticated audiences are quite capable of generating counterarguments against the claims of even the most highly regarded advocate.

#### WHAT WE NEED TO KNOW: FUTURE DIRECTIONS

There are a number of fruitful directions for future research on the use of evidence in persuasive discourse. The following ideas are grouped roughly in terms of how foundational they seem to be. Thus, the first suggestions would seem to be important first steps



before researchers move on to the subsequent suggestions.

### Evidence Belongs Within the Context of Presumption

Basic argumentation students learn that the presentation of evidence is inextricably linked to presumption (Whately, 1991) and the related concept of the burden of proof. In the courts of the United States, for example, there is a legal presumption that a defendant is innocent until the prosecutors have met the burden of proof by presenting a compelling case and, furthermore, that the compelling case has withstood the evidence, refutations, and arguments by the defense. Theoretically, in any context of discourse where evidence is presented, the presumption and the burden of proof underlying the event govern the strength and even the type of evidence that is to be presented.

There are a number of common presumptions in persuasive events. The presumption of innocence is based on the idea that the *status quo* will continue until there is just cause to make a change. With some groups and situations, however, the presumption is that change is actually preferred over maintaining the status quo, and greater evidence (the burden of proof) is required of the advocate who seeks to resist change. In policy disputes, some special interest groups (e.g., environmentalists, pro-choice or pro-life activists, victimized minorities) so narrowly define the issues that the range of relevant arguments and evidence is seriously constrained. Furthermore, some bureaucrats tend to be interested only in arguments and evidence that protect them and their institutions. There are many other presumptions advocates must adjust to in order to be persuasive.

Perhaps one of the reasons for some of the inconsistencies and confusions in the evidence research is the lack of effort at conceptualizing about the context of presumption in which the evidence manipulations are cast. For example, an audience of parents being told that they should support the legalization of drugs is more likely to rest on ethical absolutes about prohibitions than is an audience of drug rehabilitation counselors. Some basic exploratory work is needed on identifying the major presumptions advocates face and how those presumptions influence the selection and effects of evidence.

### The Need to Measure the Perception of Evidence Quality

If the linkage among evidence evaluation, message evaluation, and persuasion is fundamental to the study of evidence and persuasion, then further work will be needed on the measurement of evaluations of evidence. An important aspect of this issue is that it is not merely enough to manipulate evidence (although further refinements are also needed there). Evidence, like credibility, rests in the perceptions of the message recipients.

A few studies have offered measures of argument and evidence evaluation. Allen and Burrell (1992) presented a four-item measure of argument quality and believability that included one item on the overall evidence in a message. Morley and Walker (1987) had participants rate the information in mock court testimony as to its importance (*very important* to *very unimportant*), novelty (*clearly did* to *clearly did not provide new information*), and plausibility (*very likely* to *very unlikely*). Wood, Kallgren, and Preisler (1985) used a thought-listing protocol and counted the number of thoughts critical of the message arguments. Reynolds (1986/1987) developed

a measure of evidence evaluation with Likert-type scales. The stimulus statements were derived from discussions of the traditional tests of evidence employed in argumentation and debate (see McCroskey & Wheeless, 1976; Miller, 1966; Reinard, 1991). The strongest items in the scale are presented here:

*The evidence presented in the message:*

- was sufficient to prove the points being supported.
- was irrelevant to the conclusions drawn in the message.
- was not clear and understandable.
- contained clear and understandable statistical information.
- taken as a whole, supported the point being made.
- came from experts on the topic.

Any effort at refining the measurement of evidence evaluation will need to start with untangling a number of interrelated concepts, manipulations, and measures. O'Keefe (1998), for example, pointed out that evidence researchers have not "sought to articulate palpably unsatisfactory support" (p. 69). When measures or manipulation checks are used, they often combine assessments of evidence with other characteristics or arguments or message construction. The "manipulation of a suite of message features does not necessarily enhance effect sizes" (p. 70) and certainly complicates untangling the separate effects. Correspondingly, Allen and Reynolds (1993) pointed out that the entire concept of "argument strength" from the Elaboration Likelihood Model literature continues to appear to be confounded (at least across research programs) with general affect, argument relevance, argument absurdity, and message/argument development (listings vs. coherent texts). One

obvious area where this conceptual measurement work can begin is with integrating theoretically and operationally Morley's (1987; Morley & Walker, 1987) concepts of important, novel, and plausible information.

### Lingering Questions About Evidence in Public Advocacy

Even within the public communication context, there is a great deal of research yet to do on evidence and persuasion. There may be 60-plus years of research on the effects of evidence (see Reinard, 1988), but the significant advances have been sporadic at best. We need answers on the quantitative specificity of evidence. There need to be more concentrated and direct studies of the credibility ceiling and effect claimed in earlier studies. The study of types of evidence needs to be expanded. And researchers need to further examine how the effects of evidence vary with different modes of cognitive processing.

*Quantitative Specificity.* O'Keefe (1998) noted that there are only four studies on the effects of quantitative specificity of evidence. Beyond modal terms such as *many* and *frequently* versus specific probabilities, advocates are also constantly confronted with balancing between detailed accounts of exacting scientific experiments and trying to ground the data in the experiences of the audience. Researchers may also want to consider whether the citation of studies with longitudinal data is more persuasive than the citation of similar findings from studies with controlled one-shot experiments. By extension, most of the research cited in public speech textbooks on the effects of visual displays of supporting materials rarely refers to studies employing a public advocacy context.

*Credibility Ceiling Effects?* While the vast majority of the published research articles supporting the effects of evidence (see, in particular, Reinard, 1988) generally conclude that there is a credibility ceiling effect beyond which evidence does not enhance persuasion, O'Keefe (1998) claimed that the actual research data paints less than clear support for the credibility ceiling. Unfortunately, most of the complicating data are so underreported that comparisons across studies are not justifiable. The picture is further complicated by vast inconsistencies across the studies in the manipulation and measurement of the initial credibility of the advocate. It is also not new to note that it is difficult to actually construct a low-credibility source induction, particularly when the audience is composed of American college students from the last half of the 20th century. Even the claim of long-term effects for evidence after the memory of advocate credibility fades is sparsely supported by a few studies. A stronger and systematic set of studies on the interplay of credibility and evidence use is needed.

*The Further Study of Types of Evidence.* The comparisons of statistical versus narrative forms of evidence notwithstanding, a weakness in the evidence research to date stems from the lack of satisfactory classification of types of evidence (Hample et al., 2000; Laverseur & Dean, 1996). There are many different schemes for the classification of evidence (Reinard, 1991, p. 133). Some classifications focus on content (e.g., reports, exhibits, statistics, opinions, hearsay), some classifications address the connectedness of the datum to the claim being advanced (e.g., direct vs. circumstantial, factual vs. "desirable"), and still other classifications seem guided by the relationship of the evidence source, audience, or speaker to the evidence (e.g., common knowledge, unbiased or expert

testimony, impromptu or reluctant testimony, artistic proofs or verbal evidence, personal anecdotes, negative evidence or failing to present evidence). Beyond the quantitative or storytelling research, what research there is on the effects of different types of evidence tends to merely suggest that evidence relevant to the arguments seems to be the most persuasive. (Reinard, 1991, p. 113, reviewed this research, most of which is in unpublished theses and dissertations.) Argumentation and persuasion scholars would be well-served by extended efforts at conceptualizing and testing different classifications of evidence types.

*Multiple or Alternative Modes of Processing.* Kopfman et al. (1998) presented direct evidence that different types of evidence influence different modes of processing and speculated about the joint effects of both types of evidence in the same message. Allen et al. (2000) demonstrated the superiority of multiple types of evidence in a single message. Similarly, O'Keefe (1998) noted that the research to date has not sufficiently allowed for the joint assessment of both heuristic and systematic modes of processing (Chaiken, 1987). Tangentially related is the call by Allen and Preiss (1997) to look at the effects of cultural variability on the impact of evidence because of "different expectations for forms of proof" (p. 129). For example, the higher avoidance of uncertainty and risks in some cultures would lead to the expectation of higher thresholds for evidentiary proof before assent is granted. Uncertainty avoidance would probably also lead to greater denial of the opportunity to persuade in the first place. Similar to Berger's (1998) suggestion that victimization led to unjustified acceptance of bad news about social problems, powerlessness or power distance could also have an impact on what evidence an audience is willing to process or is capable of processing.

### Evidence in Interpersonal Communication

There is a great deal of research yet to be done on the use of evidence in interpersonal communication. O'Keefe (1977) distinguished between argument<sub>1</sub> (reasoning) and argument<sub>2</sub> (making an argument particularly in the interpersonal setting). Jackson and Jacobs (1981) have also argued that standards of argument between people tend to be set by the practices of the disputants (particularly dyads) over repeated episodes. Brockriede (1972) led us to the idea that "argument is for lovers" (meaning that only people who care for one another can manage to engage about differing views without falling into a mere quarrel). Several others have investigated argument from an interpersonal communication perspective (e.g., Alberts, 1989; Benoit & Benoit, 1990; Hample et al., 1999; Johnson & Roloff, 1998). Consistent with Miller and Burgoon's (1978) call to look more closely at the one-to-one or one-to-few contexts, explorations of argument and evidence in the interpersonal context are likely to reveal unique insights about evidence that the more traditional forensic and deliberative settings have not afforded us. When do we use evidence in interpersonal encounters? What evidence do we use? What are the effects of evidence in the interpersonal arena?

*Presumption in Interpersonal Relationships.* What presumptions influence how interpersonal dyads apportion responsibilities for the obligation of presenting evidence in the interpersonal setting is rarely, if ever, discussed in the interpersonal communication literature. If a neighbor, for example, suspects that the child of a close friend has lied to the friend, will the neighbor go to this friend and present evidence of the child's dissembling? Or is the neighbor more likely to ask probing questions that might draw out the friend into seeking

evidence of veracity from the child? In either case, what would count as prima facie (sufficient) evidence worthy of demanding a defense by the suspect child? Certainly, the court of family relations does not even approximate the presumptions or burdens that a formal legal body might have. Do people simply give presumption to relational partners on the basis of intimacy (Johnson & Roloff, 1998) until confronted with relational problems (Sprecher, 1986)? Or are better relationships characterized by loving arguments in which respectful partners are careful to present full reasoning and evidence (Benoit & Benoit, 1990) with a commitment to resolvability of conflicts (Johnson & Roloff, 1998) even if the arguments are performed in a way that is unique to the couple (van Eemeren & Grootendorst, 1991)?

Sproule (1976) pointed out that argumentative presumption can also be seen as showing deference to an opponent. Deference in argument and the acceptance of evidence is not yet a regular topic for research. A number of factors that could influence the showing of deference (granting presumption) to an adversary: the mood of either advocate, the credibility of the adversary, the topic under dispute, and the preference for a collective over an individual judgment.

*Evidence Across Stages of Relationships.* Interpersonal researchers could also take a longitudinal and evolutionary view of the process of argument and evidence use in relationships. In the course of a relationship, the substance of the arguments evolves, the couple's arguing style (particularly the use of evidence) evolves, and the amount of deference that occurs between the two evolves. Certainly, the status of the individuals within their shared and separate networks could strongly influence when and how demands for "proof" could be made.

Avtgis, West, and Anderson (1998) explored the cognitive, affective, and behavioral

dimensions of Knapp's (1978) Relational Stages Model. Naturally, talking about everyday matters, "old news," and general information exchanges are scattered throughout the different stages. But during the "intensifying" stage, participants are more likely to probe for moral values and use moral principles in arguments than they would be during the initiating or experimenting stage.

During the initiating and experimenting stages, couples are probably more likely to play the game of argument more for testing and teasing than for serious conflict management. The inability to produce an efficient coherent argument may have devastating effects on the budding relationship.

During the differentiating stage of relational decay, the elaboration of premises probably often gets reduced to personal attacks. These arguments may be more likely to consist of hearsay and personal opinions and might not allow for much formally defined evidence. Newell and Stutman (1988) explored relationships and framed this type of argument as social confrontation.

Sillars (1998) discussed how "certain devious misunderstandings" may appear in particular arguments. In discussing the goals of argument in interpersonal relationships, Sillars stated that "evidence, in the form of past relationship events, might be selectively remembered, based on how the examples serve persuasive goals" (p. 88). In addition, Sillars mentioned "[how] 'metaperception' about the partner's opinions and intentions might be represented in simplified or distorted terms (as in the 'straw man' fallacy of argument), thereby, making it easier to refute or dismiss criticism" (p. 88).

According to Cupach and Metts (1986), conflicts during the terminating stage tend to look at the other partner's faults and the fact that issues have become unmanageable. Of the possible acts that might be expected in interpersonal conflict, statements of fact and

attack-defend sequences would clearly be ones where we could expect the presentation of evidence (for a review of related research, see Messman & Canary, 1998).

It may well be that because satisfied couples use fewer negative statements and less negative reciprocation (Carrer & Gottman, 1999; Gottman, 1979; Gottman & Levenson, 1999), they may also see less need for the use of evidence in their deliberations. Conversely, it may just be that it is because they stay focused on the evidence that long-term satisfied couples are less likely to blow up and short-circuit their problem-solving efforts.

There certainly are sufficient entries into the interpersonal arena for argumentation and evidence scholars to pursue. When do lovers, friends, and family members grant or deny presumption? Are certain family members or friendship types best for presenting particular arguments and evidence? What are the burdens and standards we place on each other for presenting evidence? Are better relationships characterized by calm reasoning where there is an active refusal to leave the evidence as taken for granted?

### The Study of Evidence Use and Effects Across Forums

Of all the studies by communication and persuasion scholars on the effects of evidence and arguments, only a few (most notably Luchok & McCroskey, 1978) are actually set up within the context of a forum of competing advocates. Perhaps it is the case that debate-like settings (even the artifice of political debates) foster greater uses of evidence. Could it be that the introduction of evidence actually seems odd and out of place in a rubber chicken circuit speech (especially to anyone outside of the speech, communication, and persuasion academic communities)? We also might undertake serious consideration of the

influence that computer-mediated communication forums have on the use and effectiveness of evidence.

In most of the research on evidence, the message recipients are reading the message and only occasionally sitting alone in a booth listening to an audio recording. Could observable audience responses (Axsom, Yates, & Chaiken, 1987; Hocking, Margreiter, & Hylton, 1977) influence the reception of and yielding to evidentiary material? Certainly, it would be difficult to ignore evidence when others in the audience are giving nods of assent, defiant glares, or even occasional shouts of "Amen!" or "No way!" from the back of the room.

### SUMMARY

Considering what we know about evidence, the conditions for the effective use of evidence, and what we need to know, there is a strong future for researchers interested in the study of evidence. The quality and quantity of research relevant to the study of the use and effects of evidence have advanced far beyond the early stages of doubt about the worthiness of the enterprise. Now there is an evolving research literature base on which evidence researchers can draw. There might not be a flood of studies over the next few decades, but there should be a continuing steady stream of theses, dissertations, and research articles. Perhaps some entire academic departments may wish to make evidence research a focal point in their collective efforts at development and advancement.

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