# THE CONSEQUENCES OF QUANTIFICATION

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Several of the authors in the previous edition of this yearbook wrote of the distinctions between NDT and CEDA, one of which they identified as the use of evidence. Differences include not only the amount of evidence appropriate in a debate but also the kind of evidence. As Zeuschner mentions elsewhere in this edition, the standard NDT burden of providing quantification is often foreign to the CEDA debater.

It sounds heretical to propose that numbers (be they of dead bodies or other commodities) may not belong in a debate. Those who have heard my students debate might also label it hypocritical. Therefore, I won't make such a claim, but I do think we should be aware of the distorting effect that quantification may have on a debate.

The concerns expressed here have also been the focus of controversy in the legal community. An influential article by Harvard law professor Lawrence Tribe, "Trial by Mathematics: Precision and Ritual in the Legal Process" made a strong case for limiting the use of numerical data in the fact-finding process. Much of the following analysis borrows from Tribe.[1]

Quantification can undermine the debate decision-making process in two ways. It may lead to (1) improper weight or focus accorded particular issues and (2) difficulties in processing information.

Reliance on numerical proof causes an excessive emphasis to be given certain questions in a value debate. While relatively little has been written about debating topics of value, that literature is, nevertheless, consistent about the role of standards of judgment, or criteria. Glen Mills explained:

> In a proposition of value the appropriate analytical questions ask what criteria or standards apply, and whether the matter in question meets these criteria.[2]

The latter question is one that may be quantifiable, for as Taylor argues, "...it is an empirical question whether a given object fulfills or fails to fulfill a given standard."[3] The former question, where to set the standard, is not one subject to numerical justification. Stevenson contends that while "demonstrative or empirical methods" are useful for securing agreement in belief, ethical agreement or standard-setting requires much more.[4]

Several CEDA topics illustrate this problem. While affirmatives and negatives were both able to cite statistics on the impact of illegal aliens on the domestic economy, figures alone did not dictate whether the economic considerations were more or less valuable than another issue, the consequences of immigration on America's national security. On the current topic, though affirmatives can quantify the crime or rearrest rates for those released on bail, they are far less facile at resolving whether that crime is a more serious injustice than

keeping an increased number of the accused behind bars. The ability to quantify Mill's second question shifts the debate in that direction and away from standard setting.

Tribe noted that this same distorting effect of quantification occurs during the trial process. He contends that "soft" issues will be ignored in favor of more easily quantifiable ones.[5] Brilmayer and Kornhauser raise the same concern:

> We believe...that legal thought should not be diverted to the wrong questions merely because they are more susceptible to quantitative analysis than are the right questions.[6]

Milanich offers as examples the legal issues of intent and volition, factors she notes are difficult to quantify.[7] Whether in a debate or in a courtroom, reliance on numerical proof leads to issue distortion.

A second difficulty generated by the use of quantified evidence applies to the judge. Though we may fancy ourselves as trained social scientists, it is likely that we misuse statistical evidence in our decision-making.

Tversky and Kahneman have identified a number of judgmental biases that lead to "severe and systematic errors."[8] Included in their list are insensitivity to prior probability outcomes, insensitivity to sample size, misconceptions of chance and misconceptions of regression.

As judges, we are mistaken if we assume immunity. A large body of evidence demonstrates that even those with extensive training in statistical research are subject to the distortion of these biases. Saks and Kidd summarize the findings which identified quantitative processing problems for stock experts, engineers, psychologists, statistically sophisticated researchers, and business decision-makers.[9]

These problems cited with the use of quantitative evidence are not arguing for the elimination of quantification from CEDA. The use of numerical support is entirely appropriate for resolving whether the topic's subject meets the established criteria. Rather, this effort is aimed at identifying the complications that accompany the use of quantification. Once debaters understand the effects of statistical evidence, they should be better prepared to control the detrimental consequences.

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[1]Lawrence Tribe, "Trial by Mathematics: Precision and Ritual in the Legal Process," Harvard Law Review, 84 (1971), 1329.

[2]Glen E. Mills, Reason in Controversy (Boston: Allyn & Bacon, 1964).

[3]Paul Taylor, Normative Discourse (Englewood Cliffs: Prentice-Hall, 1961), p. 253.

[4]Charles L. Stevenson, Ethics and Language (New Haven: Yale U. Press, 1944), p. 31.

[5]Tribe, p. 1335.

[6]Lea Brilmayer & Lewis Kornhauser, Univ. of Chicago Law Review, 46 (1978), 132-3.

[7]Patricia G. Milanich, "Decision Theory and Standards of Proof," Law and Human Behavior, 5 (1981), 94.

[8]Amos Tversky & Daniel Kahneman, "Judgment Under Uncertainty: Heuristics and Biases," Science, 85 (1974), 1124-1131.

[9]Michael Saks & Robert Kidd, "Human Information Processing and Adjudication: Trial by Heuristics," Law and Society, 15 (1981), 123-160.

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defenses down. After I've got them softened up, then I can give them a moral."

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[1]Jonathan Aitken and Michael Beloff, A Short Walk on the Campus, Ahteneum, New York, 1966, pp. 16-17 and 19.

[2]Douglas Ehninger, Bruce E. Gronbeck, and Alan H. Monroe, Principles of Speech Communication (8th Ed.), Scott, Forsman and Company, Glenview, Illinois, 1980, p. 217.

[3]Eugene E. White, Practical Public Speaking (4th Ed.), Macmillan Publishing, 1982, p. 202.

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[14]Schattschneider, p. 12.

[15]Crain Dudczak, "Direct Refutation of Propositions of Policy: A Viable Alternative," Journal of the American Forensic Association XVII (Spring, 1980), 232.