

THE HISTORY OF AFTE JOURNAL, THE PEER REVIEW PROCESS, AND DAUBERT ISSUES

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ABSTRACT

The Daubert Decision has changed the standards for admissibility of scientific evidence in court. Peer Review of a scientific procedure/technique is one of the factors on which the court may require evaluation. This article chronicles the evolution of the AFTE Journal. An overview of the mechanics of the editorial review and peer review process is presented from the first AFTE Newsletter through this current AFTE Journal. After reading this article, examiners will have a reference and be informed when responding to questions about the peer review process as it relates to the AFTE Journal.

DAUBERT

In 1993, the opinion resulting from the civil case Daubert v. Merrell Dow Pharmaceuticals, 113 S. Ct. 2786 (1993), changed the standards of admissibility of scientific evidence.¹ This opinion applies to Federal courts, as well as many state and local jurisdictions that have adopted it. The Supreme Court further clarified specific Daubert standards in Kumho Tire Company v. Patrick Carmichael, 119 S. Ct. 1167 (1999), where Daubert's general holding was extended to applied not only to testimony based on scientific knowledge but also to testimony based on technical and specialized knowledge.²

The Daubert Hearing requires the trial judge to be the "Gate Keeper" for the admissibility of scientific evidence to ensure that it is relevant and reliable, focusing on the principles and methodology, not on the conclusions they generate. The factors the court could consider include testing and validation, peer review, rate of error and general acceptance.

For the purposes of this article, the term "**PEER REVIEW**" relates to only one of many possible avenues of the peer review process of a technique or method. That being, the process of pre-publication evaluation of material submitted for publication to a scientific or technical journal and the post publication scrutiny of an article by readers of that journal. Other uses of peer review can be to evaluate presentations at scientific meeting and workshops, the distribution of protocols and/or testing of a technique/method. Further, it is not the more common reference to the process of the review of case notes or evidence reexamination such as the verification of microscopic comparison matches of fired bullets and/or cartridge cases, as may be done in actual case work.

FORENSIC FIREARM AND TOOLMARK IDENTIFICATION

The discipline of Forensic Firearm and Toolmark Identification has a documented history that extends back over 165 years.³ "On February 26th, 1969, a group of 35 police and civilian firearm and tool mark identification specialists in the branch of police science gathered in Chicago."⁴ The meeting established what is now the Association of Firearm and Tool Mark Examiners (AFTE). Mr Walter J. Howe was elected the first president and editor of the *AFTE Newsletter*.⁵

¹ "Daubert v. Merrell Dow Pharmaceuticals," 113 S.Ct. 2786, 125 L. Ed. 2d 469 (1993).

² "Kumho Tire Company, v. Patrick Carmichael," 119 S.Ct. 1167, (1999).

³ Hamby, James E. and Thorpe, James W., "The History of Firearm and Toolmark Identification", *AFTE Journal*, Volume 31, Number 3, Summer 1999:266-284.

⁴ Munhall, Burt, "Report on the Formation of the Association of Firearm and Tool Mark Examiners", *AFTE Journal*, Volume 31, Number 3, Summer 1999:219-220.

⁵ Howe, Walter J., *AFTE Newsletter*, Number 1, May 15, 1969:1

AFTE Newsletter EDITORS 1969 - June 1972

1969	Walter J. Howe
1970 - 1972	Steve Molnar, Jr.
1972	James E. Hamby (2 Newsletters)

AFTE Journal EDITORS August 1972 - Present

1972	James E. Hamby	(1 Journal)
1972	Patrick V. Garland	(2 Journals)
1973 - 1974	Otis L. Hensley	
1974 - 1978	George R. Wilson	
1978 - 1989	James E. Hamby	
1989 - 1992	M. James Kreiser	
1992 - 1993	Richard Van Roberts	(2 Journals)
1993 - 1995	Billy J. Hornsby	
1996 - 1999	Jerry Miller	
1999 - 2000	John M. Collins	
2000 - Present	Mickey L. French, Jr	

The first editor created and appropriately named the association publication the *AFTE Newsletter* because it was to be a communications vehicle to report on association business and stimulate the exchange of information among participants. Articles were generally case reports on unusual firearms, ammunition and toolmarks, as well as reference material, not scientific research papers.⁶

As the *AFTE Newsletter* went through its evolution, advancing in the complexity of material presented within the articles, Editor Hamby approached AFTE President Art Paholke about a name change for the publication. Editor Hamby believed the name should be changed to more accurately reflect the sophistication of material being submitted for publication at that time. President Paholke agreed, and the *AFTE Journal* was born in August, 1972.⁷

PEER REVIEW

⁶ Howe, Walter J., Telephone Conversation with first editor, *AFTE Newsletter*, January 14, 2002

⁷ Hamby, James E., Telephone Conversation with third editor, *AFTE Newsletter* and first editor of the *AFTE Journal*, January 15, 2002

Early peer review of the *AFTE Journal* was informal, meaning there was no step-by-step written procedure. The editors and other examiners within the editor's laboratory firearm and toolmark unit edited and reviewed articles for accuracy of the content, grammar, spelling and sentence structure. Prior to publication, editors would contact industry and discipline representatives, who were subject matter experts, when necessary for research on material presented within submitted articles. This is the process carried out for most peer reviewed journals. The editors had the responsibility for what was published and the final decision authority on validity and appropriateness of articles for publication.^{8, 9, 10, 11, 12, 13, 14}

In 1989, AFTE established the Editorial Committee naming M. James Kreiser as Editor and Committee Chairman. This ushered in a formal systematic review process. Editor Kreiser appointed three assistant editors and twelve additional committee members. The majority of the editing and peer review was done by the editor and his assistant editors. The committee members were periodically given editorial and peer review assignments in areas within the discipline for which they were considered subject matter experts.

Authors were contacted via telephone or in writing by the peer reviewer about issues or questions. The editor was told about the issue(s) and results of the contact with the author prior to publication.¹²

"Instructions to Authors," were first published by Editor Kreiser, setting out standards for the submission of articles to the *AFTE Journal* with specific criteria for the manuscripts, photographs and charts.¹³ To place things in proper historical context, Editor Kreiser brought the *AFTE Journal* submission process into the cyber age with "Instructions to Authors" in April, 1990. He set the first standards for submitting articles utilizing computer disks.¹⁴ Additionally, the first written guidelines for listing references appears in the October, 1990 issue of the *AFTE Journal*.¹⁵

A uniform format for articles was established in April, 1994 when Editor Hornsby designated the standards for margins, font style and size.¹⁶

⁸ Howe, Walter J., Telephone Conversation with first editor, *AFTE Newsletter*, January 14, 2002

⁹ Hamby, James E., Telephone Conversation with third editor, *AFTE Newsletter* and first editor of the *AFTE Journal*, January 15, 2002

¹⁰ Wilson, George R., Telephone Conversation with fourth editor, *AFTE Journal*, January 14, 2002

¹¹ Garland, Patrick V., Telephone Conversation with second editor, *AFTE Journal*, January 15, 2002

¹² Kreiser, M. James, Telephone Conversation with the fifth editor, *AFTE Journal*, January 15, 2002

¹³ Hornsby, Billy J., Telephone Conversation with the seventh editor, *AFTE Journal*, January 15, 2002

¹⁴ Roberts, Richard Van, Telephone Conversation with the sixth editor

¹² Kreiser, M. James, Telephone Conversation with the fifth editor, *AFTE Journal*, January 15, 2002

¹³ Kreiser, M. James, "Instructions to Authors," *AFTE Journal*, Volume 21, Number 4, October 1989:Inside Back Cover

¹⁴ Kreiser, M. James, "Instructions to Authors," *AFTE Journal*, Volume 22, Number 2, April 1990:Inside Back Cover

¹⁵ Kreiser, M. James, "Instructions to Authors," *AFTE Journal*, Volume 22, Number 4, October 1990:488

¹⁶ Hornsby, Billy J., "Instructions to Authors," *AFTE Journal*, Volume 26, Number 2, April 1994:iv

A vehicle for "post-publication peer review", first appeared in early 1997 within the Winter issue of the *AFTE Journal*.¹⁷ This peer review section of the *AFTE Journal* allows readers a forum to comment on the information and opinions expressed in the articles previously published in the *AFTE Journal*. Authors are contacted by the editor prior to publication for their comments/rebuttal.

Pre-publication peer review forms were adopted by Editor Miller with the introduction of the AFTE Manuscript Referee Review Process. In August, 1997, Editor Miller sent the written procedures and forms to all AFTE Editorial Committee members.¹⁸ Copies of the Manuscript Referee Review Process were published in the Fall 1997 *AFTE Journal*.¹⁹

This process is broken into two separate but equally important categories: (1) the pre-publication process; and (2) the post-publication process, previously described. The pre-publication peer review process directly involves the editorial committee. The peer reviewer is now referred to as Referee. The committee's responsibility is to ensure that the submitted manuscript meets the following criteria:

1. Is the work significant and new? Are the experimental design and methodology satisfactory?
2. Have the right methods been used in conducting experiments? Have the right arguments been used in discussing the results?
3. Is the arrangement of the paper logical and economical? Can the text, tables and figures be condensed, or do parts have to be expanded?
4. Is the manuscript written clearly?
5. Are pertinent references cited?

The manuscript peer review process of the editorial committee is as follows:

1. Once the manuscript is received, two copies are made.
2. Two members, chosen from the referee list, are mailed a copy with a referee form with the manuscript.
3. The manuscript is reviewed, and a referee form completed. Both are returned to the editor and assistant editors for their review.
4. The manuscript can then be accepted for publication, or returned to the author with comments or suggestions.

The referees have an opportunity to make the following recommendations:

- | | |
|---|------------------------------------|
| <input type="checkbox"/> Acceptable for publication | If Acceptable, Manuscript will be: |
| <input type="checkbox"/> Acceptable with revision, it does not require further review. | <input type="checkbox"/> Excellent |
| | <input type="checkbox"/> Good |
| <input type="checkbox"/> Acceptable only if adequately revised and re-circulated for additional review. | <input type="checkbox"/> Passable |
| | <input type="checkbox"/> Doubtful |

In cases where there is disagreement among referees, the manuscript will be sent to a third referee for review, and the author will be contacted to discuss the relevant issues. The editor has the final decision-making authority on publication of the manuscript.

¹⁷ Miller, Jerry, "AFTE Peer Review," *AFTE Journal*, Volume 29, Number 1, Winter 1997:160

¹⁸ Miller, Jerry, "AFTE Manuscript Referee Review Forms," Correspondence, August 11, 1997:1-3

¹⁹ Miller, Jerry, "AFTE Manuscript Referee Review Process," *AFTE Journal*, Volume 29, Number 4, Fall 1997:518-520

In the summer of 1998, Editor Miller reorganized the *AFTE Journal* by defining three manuscript categories. "An article" is defined as an in-depth discussion of a specific topic. "A case report" is defined as a presentation of details of an unusual case or a case that warrants discussion in the *AFTE Journal*. And finally, "a technical paper" is defined as a brief presentation of a particular product or technique.²⁰

In the Fall of 1999, Editor Collins refined the pre-publication review process with the creation of an "Author's Publication Checklist," "Manuscript Review Form" and instructions on "How to Write and Submit an AFTE Manuscript."²¹ In the Spring of 2000, the Author's Publication Checklist was modified to require only two Pre-submission Quality Reviews.²²

The Author's Publication Checklist provided a guide to be utilized in documenting completion of the pre-publication tasks. For the first time authors could solicit pre-publication reviews from persons who were required to complete a Manuscript Review Form and sign the Author's Publication Checklist. These completed forms and manuscript were then sent to the Editorial Committee. Editor Collins compiled instructions on "How to Write and Submit an AFTE Manuscript" to assist and encourage authors.

In January 2001, Editor French revised the format of the "AFTE Manuscript Review Form." This revision was implemented to require the reviewer to better document actions taken during the article review process.²³

SUMMARY

The *AFTE Journal* is a scientific journal published quarterly which has a formal pre-publication evaluation process, a editorial committee with subject matter experts who function as referees and a post-publication peer review process designed to ensure relevant and reliable information to the criminal justice community and members of the discipline of Forensic Firearm and Toolmark Identification. The *AFTE Journal* is but one of many media that provide the foundation for the discipline of Forensic Firearm and Toolmark Identification.

It is important for every forensic scientist to be aware of issues that they may be asked to respond to while on the stand providing testimony. This article and "Scientific Reliability - Publication, Peer Review, and the AFTE Journal"²⁴ by Editor Collins should assist examiners about this one portion of peer review as it relates to the *AFTE Journal*.

While the purpose of Daubert Hearing is to ensure that the scientific technique/method is relevant, reliable and has been subjected to peer review, this article is intended to aid the examiner with questions about the peer review process as it relates to the AFTE Journal. Included is a table of contents for a 36 page appendix listing the changes as the process has evolved and been redefined. Being familiar with and compiling these documents should provide a comprehensive reference.

APPENDIX

²⁰ Miller, Jerry, "Instructions to Authors," *AFTE Journal*, Volume 30, Number 3, Summer 1998:549-551

²¹ Collins, John M., "From the Editor," *AFTE Journal*, Volume 31, Number 4, Fall 1999:438-442

²² Collins, John M., "From the Editor," *AFTE Journal*, Volume 32, Number 1, Winter 2000:6-9

²³ French, Mickey L., "AFTE Manuscript Review Form," Correspondence, January 16, 2001:1

²⁴ Collins, John M., "Scientific Reliability - Publication, Peer Review, and the AFTE Journal," *AFTE Journal*, Volume 32, Number 2, Spring 2000:132-135

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