CSE Short Course on Publication Ethics
May 19, 2012

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and
Alan Price, Ph.D.
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“A Model for Editor and ORI Cooperation in Handling the Allegations, Investigation, and Resolution of a Difficult Case of Research Misconduct, against Professor James Abbs, Ph.D., Univ. of Wisconsin”
A Model for Editor and ORI Cooperation in a Difficult Case of Research Misconduct

Highlights of the Sub-Session

Presented by

Robert Daroff, M.D.,
then Editor in Chief of Neurology,
and Professor of Neurology at Case Western University
and

Alan Price, Ph.D.,
then OSI/ Office of Research Integrity (ORI) Scientist-Investigator

Actions as Editor of Neurology:
- handling allegations; referral to NIH and institutions; printing letters to the Editor regarding the allegations; dealing with ORI report and request for retraction; decision to retract; global views as Editor.

Actions as ORI Investigator:
- NIH history; initiation of ORI investigation; attempts to interview and get documents; dealing with court suit; analysis of data; ORI findings and administrative actions.
A Model for Editor and ORI Cooperation in a Difficult Case of Research Misconduct

History of the Abbs UWI Case

Dr. Daroff as Editor, and Dr. Price as ORI Investigator

- Handling of Allegations
- Handling of Letters to the Editor
- Process of Investigation
- Findings by ORI, to Editor
- Decision to retract paper

Feelings and Decisions during the case and on its followup

- Dr. Daroff as Editor
- and
- Dr. Price as Investigator

- Lessons Learned and Recommendations
I came to be involved as *Neurology* Editor-in-Chief in this University of Wisconsin misconduct case

January 1, 1987:
Became Editor of *Neurology*,
the Official Journal of the American Academy of Neurology,
the largest circulating Neurology journal in the world.

Published a paper by Abbs, Hartman, and Vishwanat:

- **Submitted:** August 1985
- **Accepted:** June 1986
- **Published:** March 1987

Robert Daroff, M.D.
March 1987 Publication in Neurology by Abbs, Hartman and Vishwanat

“Orofacial Motor Control Impairment in Parkinson’s Disease”

by

Dr. James H. Abbs, Neurology Department at University of Wisconsin, Madison (where the data were analyzed and the figures were prepared)

and

Dr. David Hartman and Balaji Vishwanat, Neurology Department at Gundersen Medical Foundation and Clinic (where the patients were subjected to the orofacial motor control measurements, recorded on chart-paper)
Allegation letter 1987 to *Neurology*, UWI & NIH by Dr. Abbs’ former graduate student

- April 1987 letter from Dr. Stephen Barlow, Director of Speech-Orofacial Physiology Lab, Boys Town Nat. Inst. (cc to UWI Dean, Director, and Chair; and the NIH / NINCDS Director)

- “... appear to be altered or falsified data in Abbs et al 1987 *Neurology* Figure 1 from NON-TREMOROUS Parkinson’s Disease (PD) Patient ... [they] strongly resemble hand-tracings of a nearly identical display of data from a TREMOROUS PD patient published by Barlow and Abbs (1983) *J. of Speech Hearing Res* 26:616 ... I feel this act of apparent misrepresentation and falsification of patient data is an insult to the medical and scientific community..., federal agencies that funded the study, and the public.”

- Barlow also questioned, if Figure 1 had been falsified (no such patient), were the related data in Figures 2 & 4 fabricated too?
Questioned Figure 1 in Abbs et al. 1987 Neurology paper

Tracings of motor control by a control subject vs. a non-tremorous Parkinson’s Disease patient (pressure on jaw, lip and tongue)
Questioned Figure 2 in Abbs et al. 1987 *Neurology* paper

Comparison of 6 Parkinson’s Disease patients’ to 6 normals’ facial motor control (pressure applied to jaw, lip, and tongue)
Questioned Figure 4 in Abbs et al. 1987 *Neurology* paper
Tracings of motor control by a control subject vs. a tremorous Parkinson’s Disease patient (pressure on lip, jaw, and tongue)
Overlay by Dr. Charles McCutchen of 1987 Abbs Fig. 1 vs. 1983 Barlow and Abbs Fig. 6.
What are the Editor’s Options?

Not my problem. The previous editor had accepted the paper.

Send letter to Abbs for rebuttal.

Convene Editorial Board Committee to adjudicate.

QUOTE: “We are the JCI, not the FBI”

Stephen P. Lock, Ed

R.D.
What I did as the Editor of *Neurology* in response to the allegations

Wrote to Dr. Barlow, the complainant

Sent Dr. Barlow’s letter to University of Wisconsin authorities (the Dean and Department Chairs), the President of Gunderson Medical Foundation, and the NINDS Director.

Sent the letter to the 3 authors (since they couldn’t alter the data)

Received a denial letter from Dr. Abbs.

Robert Daroff, Editor
How I came to be involved in this case at the NIH Office of Scientific Integrity

My transition from University of Michigan to the Federal Government in 1987:

- The National Institute of Health (NIH)
  - In the U.S. Public Health Service (PHS)
  - In the Federal Department of Health and Human Services (HHS)
- including Office of Scientific Integrity (OSI) at NIH in 1989

How I felt about the Abbs’ case and my role

Alan Price, Ph.D.
Inquiries into Dr. Barlow’s allegations at the Univ. Wisconsin and Gunderson Med. Fdn.

- Letter from UWI Medical School Dean June 1987, to Dr. Abbs, with cc’s: Editor Daroff; Dr. Barlow; UWI Director and Chairs; NINDS Director; and NIH Deputy Director:
  
  “… the report of an ad hoc committee appointed by Neurology Chair [with 3 of 4 faculty from Dr. Abbs’ own department] to consider [individually, holding no meetings, and using only Abbs’ rebuttal] charges against you [Dr. Abbs]. . . [their] recommendation is that Barlow’s accusations against Drs. Abbs, Hartman, and Vishwanat are unsubstantiated… I have concluded that there is no basis for the accusations and no need for further action. I have informed the Acting Chancellor… He agrees with that conclusion.”

- Concurrence in August 1987 with UWI committee’s conclusion by a Gunderson Medical Foundation inquiry committee.

- Letter from UWI Neurology Chair Sept. 1987 to Dr. Barlow: “The committee found your undocumented suspicions spurious and totally without merit… We believe very strongly that you have an ethical responsibility to apologize in writing to Dr. Abbs… and the Dept.”
How did I react as Editor to the “exoneration” letters from the University of Wisconsin and the Gunderson Medical Foundation?

OKAY WITH ME, SINCE I DIDN’T REVIEW THE ORGINAL DATA, AND I HAD NO REASON TO QUESTION THEIR DECISIONS

R.D.
Follow-up letters by others to *Neurology*

- March 1989, Letter to Editor by Dr. Charles McCutchen of NIH Intramural Research, with two side-by-side and overlaid figures “so readers can judge for themselves.”

- Rebuttal letter from Dr. Abbs

- January 1990, Letter to Editor by Dr. Gary Weismer of U-WI (who had been one of Dr. Abbs’ collaborators), criticizing Dr. Abbs’ response.

- Dr. Abbs’ rebuttal letter.

- All were published in *Neurology*
Thank you letter to *Neurology* Editor from Dr. Charles McCutchen

- **01-27-1997**

I thank you for publishing the exchange. After so many important people have behaved so timidly, it was wonderful to see someone with the power to do something who dared to do it. Maybe I have read too much Nevil Shute and Dashiell Hammett, but I think courage is good stuff, and I am proud to be your fellow scientist.

Sincerely yours,

Charles McCutchen

C. W. McCutchen
NIH Followup on Criticism by other Scientists of inquiry reports and Abbs’ responses

- Letter June 1988 to Editor Daroff from NIH Deputy Director, noting NIH/NINDS review ongoing; not certain the matter could be resolved. Senior NIH officials Sept. 1988 asked Dr. Abbs for information on his records. He provided some in Dec. 1988.

- Solicitation by the NIH Acting Director of opinions from 5 outside independent experts, Spring 1989 (all agreed there was less than 1 chance in $10^4$ to $10^{12}$ Abbs’ Fig 1 arose differently than by tracing).

- Referral of the allegations and 5 experts’ opinions to the new NIH Office of Scientific Integrity (OSI), Summer 1989.

- Appointment by OSI of 4 new outside experts in neuro-sensing and neurophysiology, Parkinson’s Disease neurology, orofacial biomechanics control, and statistics.

- Attempt to interview Dr. Abbs in Wisconsin, as he agreed, May 1990 (with lawyer, he declined on that day to answer questions.)
Filing of suit in Federal Court by Dr. Abbs and Univ. Wisconsin against HHS / OSI

- Dr. Abbs’ claimed July 1990 OSI was violating Constitutional due process rights and OSI failed to follow Fed. Administrative Procedures Act requirements; sought a preliminary injunction.

- UWI officials also refused to provide Abbs’ records in July 1990 while the University was a party-plaintiff in the suit.

- The Federal Judge declined to impose a temporary injunction; so UWI officials provide some information in October 1990.

- Initial Federal Judge’s decision in Wisconsin in December 1990 in favor of Dr. Abbs’ claim that OSI needed to follow the AP-Act.

- HHS publication of OSI’s operating procedures in 1991 *Federal Register* (no other investigative agency had ever done this).

- HHS counsels appealed that court ruling in 1991, with a final decision by the Federal Appeals Court in May 1992 -- vacating the original Judge’s decision (nothing had happened yet to Dr. Abbs).
Investigation of Dr. Abbs’ research in the HHS Office of Research Integrity (ORI)

- OSI and OSIR merge to form ORI at HHS level in 1992, and ORI reinitiated investigation of Dr. Abbs’ research, with Forensic Image Analysis by Dr. John Krueger and Digit Analysis by Dr. Jim Mosimann.

- Request by UWI to conduct any investigation; ORI declined, given the lack of UWI objectivity, thoroughness and competence in 1987 inquiry.

- Request from ORI to Dr. Abbs for more information, June 1992.
- Dr. Abbs provided more details to ORI in Sept. and Nov. 1992.
- Interviews by ORI of other witnesses suggested by Dr. Abbs, Nov 1992

- Attempt again by ORI with 4 outside experts to interview Dr. Abbs, per his request in December 1992; UWI declined for him in March 1993.

- Draft ORI investigation report in 1995, sent to Dr. Abbs for comments.

- Response, after settlement in April 1996, by Dr. Abbs to ORI report.

- ORI internal rebuttal in May 1996 to Dr. Abbs’ responses to ORI report.
  A.P.
• ORI found the framing and overlap of tracings for Abbs’ Fig 1 and Barlow’s Fig 6 make highly probable the former was traced from latter.

• ORI found Abbs’ claim of chart-paper recording periods impossible, based on the numbering of the fan-fold paper (less than half used).

• ORI found Abbs’ claim of doing hand-analysis of the chart-records to be implausible (would have taken over 100 hours, as he described it).

• ORI found Abbs’ claim, that PD Subject #1 for Figure 1 was a man, was contradicted an early paper draft, identifying Subject #1 as a woman.

• ORI found Abbs’ claim, to have used 6 control subjects matched by age and sex to the PD patients, not to be supported by the records.

• ORI found Abbs’ response letters to McCutchen and Weismer sent to *Neurology* Editor contained numerous misrepresentation of the facts.
ORI Forensic Digit Analysis

- ORI analyzed Dr. Abbs’ hand-written data tables (he used for Figure 2) to examine possible fabrication, as reflected by a lack of uniform distribution of the error digits (the final or rightmost two digits), that offer no information on the magnitude of the number, with probability of a difference from uniform defined by a Chi-square goodness of fit.

- The ORI analysis showed a high probability of NON-uniform error digit distribution in Abbs’ data (too few 9s, 0s, & 7s; too many 1s, 2s, & 3s).

Standard Deviations in handwritten data used for Figure 2 by Dr. Abbs:

<table>
<thead>
<tr>
<th>End Digit Places</th>
<th>Chi square</th>
<th>Degrees of freedom</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>300 in next to last</td>
<td>50.46667</td>
<td>9</td>
<td>&lt;0.00001</td>
</tr>
<tr>
<td>300 in last digit</td>
<td>55.20000</td>
<td>9</td>
<td>&lt;0.00001</td>
</tr>
</tbody>
</table>

- Versus Standard Deviations in “control” data obtained from Dr. Barlow:

<table>
<thead>
<tr>
<th>End Digit Places</th>
<th>Chi square</th>
<th>Degrees of freedom</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>85 in next to last</td>
<td>10.17647</td>
<td>9</td>
<td>0.33639</td>
</tr>
<tr>
<td>85 in last digit</td>
<td>12.05882</td>
<td>9</td>
<td>0.21001</td>
</tr>
</tbody>
</table>
PHS Counsels settlement with Abbs’ attorney

- Dr. Abbs’ agreement to settle the case, April 1996.

- Publication in the Federal Register of ORI’s findings:

  “ORI found that Dr. Abbs falsified Figure 1 in the Neurology paper, which displays orofacial motor control instability in a Parkinson’s disease patient reported as non-tremorous, by (1) tracing the waveforms from those of a tremorous patient that had previously been published as Figure 6 in the Journal of Speech and Hearing Research (26:616-621, 1983); (2) eliminating the apparent tremors from the waveforms depicted in Figure 6; (3) falsifying the standard force levels and structures from those of Figure 6; and (4) misrepresenting the identity of the actual subject reported in Figure 1.

  “ORI also found that Dr. Abbs falsified and fabricated the data for Figures 2 and 4 in the Neurology paper by (1) falsifying the number of trials run on each subject; (2) misrepresenting the number of measurements made on each of the waveforms; and (3) fabricating the numbers used to calculate the force instability results presented for Figure 2. Dr. Abbs used the same fabricated numbers in Figure 4.”
ORI administrative actions required in settlement agreement with Dr. Abbs

• ORI found falsification and fabrication of research for figures created and published in *Neurology* by Dr. Abbs; he neither confirmed nor denied this in the settlement agreement.

• ORI administrative actions required institutional supervision and certification of any of Dr. Abbs’ future NIH-supported research, and prohibition of him from any NIH advisory service, for a period of 3 years [no debarment from federal funding; however, his NIH grants had ended years earlier].

• ORI sent a letter in May 1996 to Editor Daroff suggesting the retraction of the Abbs *et al.* 1987 *Neurology* paper.

• ORI also provided to Editor Daroff the ORI investigation report and ORI’s rebuttal of Abbs’ April 1996 response to it [none made by him before setting the case], for Dr. Daroff’s use as Editor in deciding on a retraction in *Neurology*. 
Follow-up as Editor of *Neurology*

- I notified Dr. Abbs of ORI’s retraction statement, May 1996
- Dr. Abbs requested he be allowed an alternative to retraction.
- I sent Dr. Abbs our standard retraction wording.
- Dr. Abbs’ sent me alternative wording suggestions, June 1996.
- I wrote to ORI about Dr. Abbs’ alternative wording.
- ORI Director recommended rejecting Dr. Abbs’ alternative.
- I published the retraction of the 1987 paper, August 1996.
- R.D.
Retraction of:
Orofacial motor control impairment in Parkinson’s disease

James H. Abbs, PhD,
David E. Hartman, PhD, and
Balaji Vishwanat, MD

From the Department of Neurology and Neurophysiology (Dr. Abbs), Clinical Science Center, University of Wisconsin-Madison, Madison, WI; the Speech Motor Control Laboratories (Dr. Abbs), Waisman Center, University of Wisconsin-Madison; and the Department of Neurology-Neurosurgery (Drs. Abbs, Hartman, and Vishwanat), Gunderson Medical Foundation, La Crosse, WI.

Published in Neurology 1987:37:394–398

Supported by NIH Grants NS-13274 and HD-03352
and the Gunderson Medical Foundation.

Note from the Editor-in-Chief

The retraction of this paper is based upon the Department of Health & Human Services’ Office of Research Integrity (ORI) Investigation Report finding that James H. Abbs, PhD, engaged in scientific misconduct by deliberately falsifying and fabricating certain figures and research results that were published in the above paper. The ORI believes it is necessary to retract the paper to correct the scientific literature.

The form of this retraction complies with the recommendations of the International Committee of Medical Journal Editors (Annals of Internal Medicine 1988;108:304).
Wording of the Retraction of Abbs’ paper

Note from the Editor-in-Chief August 1996

• “The retraction of this paper is based on the HHS’ Office of Research Integrity (ORI) investigation report finding that James H. Abbs engaged in scientific misconduct by deliberately falsifying and fabricating certain figures and research results that were published in the above paper. The ORI believes it is necessary to retract the paper to correct the scientific literature.

• The form of this retraction complies with the recommendations of the Internal Committee of Medical Journal Editors.”

R.D.
Retraction was a “no-brainer” to me, but not to all editors.

IN ANOTHER CASE:

JUNE 1989:
PHS NOTIFICATION THAT A 1983 ABSTRACT IN NEUROLOGY AND MULTIPLE ARTICLES IN ANOTHER JOURNAL BY SAME AUTHOR WERE FRAUDULANT

I RETRACTED THE ABSTRACT.

OTHER EDITOR REFUSED TO RETRACT.

R.D.
ORI Followup on Abbs case

• Notification of the University of Wisconsin and the Gundersen Medical Foundation of ORI’s findings and administrative actions

• [Science “News and Comments” by freelancer – not citing facts]

• Praise for Neurology Editor Robert Daroff by ORI: as a “poster child” or “dean” for responsible editors.

• What happened to the principal players?

• What other editors can learn from such a case, about working closely with the Office of Research Integrity (ORI)

A.P.
My statement on becoming the Scientific Integrity Advisor for Neurology (2004)


“BUT, IN DOING SO, I BECAME A ‘POSTER EDITOR’ FOR THE NIH AND OTHER PUBLIC HEALTH SERVICE ENTITIES. MY POPULARITY RELATED TO OTHER EDITORS BEING RELUCTANT TO RETRACT ARTICLES. INDEED, I ATTENDED A 1990 ORI MEETING WHERE THE EDITOR OF A MAJOR JOURNAL ESPoused THE POSITION THAT ONLY THE AUTHOR, NOT THE EDITOR, CAN RETRACT A PAPER, DESPITE DOCUMENTED EVIDENCE OF FALSIFICATION OR FABRICATION.”

R.D.
“Jerks” or “Crooks”

Erratum
or
Voluntary Retraction

Retraction
Are retractions increasing? Decreasing? Why?

See: http://retractionwatch.wordpress.com/

Analysis by Dr. John Krueger/ORI, for SOncyc March 2012

Retraction/Citation (%) vs. Fiscal Year, 1996-2011
What can we do to ELIMINATE Scientific Fraud?

First, Let’s Start with WAR

1. Plato: “Only the dead have seen the end of WAR.”

2. Freud to Einstein (1932)
   Why WAR?

3. Einstein: “Easier to denature plutonium then to denature the evil spirit of man.”

4. HUMAN NATURE

R.D.
We cannot eliminate Scientific Fraud but, on our watch, IT WILL NOT GO UNPUNISHED.

R.D.
THE END