Publishing in Refereed, English-Language Journals

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Why a Workshop in Scientific Writing in English?

- English has become the international language for science and business
- Scientific meetings (including abstracts and proceedings) are usually conducted in English
- Many journals are now written in English. Some journals continue the practice of also including a summary in another language. E.g. Canadian journals published by the government must have a summary in French.
- Are there other language venues for publication? Yes! However, these outlets seldom have the **impact (factor)** of English-language journals.
- Most International positions demand English writing competence

(R.N.Trigiano)
In this workshop, we will go from...

- Getting ready to write
- Writing a scientific paper
- Submission process
Getting Ready to Write

1. Introduction to Workshop
2. Simple Writing Strategies
3. Research Proposal
4. Title Page
Writing a Scientific Paper

5. Writing Abstracts

6. Writing the Introduction

7. Writing Materials and Methods

8. Writing Results

9. Writing the Discussion
10. Submission to Acceptance
Useful Sources

➢ Wiley-Blackwell: How to Get Published in Peer-Reviewed English-language Journals

➢ http://authorservices.wiley.com/bauthor/
Publishing in the American Society for Horticultural Sciences


- **ASHS Style Manual**
- **ASHS Publications Style Manual - pdf** (61 pages)
- **HortTechnology Style Appendix - pdf**
- **Author Instructions - pdf** (7 pages)

### Subject Matter Emphasis of ASHS Publications

<table>
<thead>
<tr>
<th>Horticultural Crops and Their Products</th>
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<tr>
<td>Science ← → Science–Technology Interface ← → Technology ← → Technology Transfer</td>
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| Mission-oriented, fundamental research ← → Mission-oriented, applied research ← → Adaptive research ← → Teaching and Extension |

| Publication aimed mainly at communication with other researchers ← → Publication aimed at communication with researchers, teachers, extension workers, and industry professionals ← → Publication aimed at communication with extension workers, teachers, industry professionals, and practitioners |

- Journal of the American Society for Horticultural Science ← → HortScience ← → HortTechnology
What are Some of the Products of a University?

- Papers or Research Articles
- Patents
- Copyrights
- Intellectual Property (IP)

Some of materials on Plagiarism are adapted from a lecture by Fernandez and Bolorizadeh, UT (Sept. 2011)
Ways to Avoid Plagiarism

Quote -- word for word appearing exactly as in the reference. Must use quotation marks. “The physical structure was dilapidated.” Must include the citation or reference (source).

Paraphrasing – reducing the length of reference, including the ideas, but not using the exact wording. Does not use quotation marks, but you must cite the reference.

Both the Quote and Paraphrasing Are Not Used Very Often in Scientific Writing

Adapted from a lecture by Fernandez and Bolorizadeh, UT (Sept. 2011)
Ways to Avoid Plagiarism

**Summarize** – distills or reduces an entire paragraph or a paper to it’s most salient or main idea(s). Must include citation. For example, published SSRs for *Aspergillus flavus* were inadequate to define the population (Smith, 2010).

Another example, Jones (1922) found that compost-inhabiting fungi were highly cellulolytic.

**Summarization** is the Most Common Method of Reporting Prior Literature in Scientific Writing.

Adapted from a lecture by Fernandez and Bolorizadeh, UT (Sept. 2011)
Ways to Avoid Plagiarism

Cite

Cite

Cite

Cite

CITE
What is a Copyright?

- The right of exclusive ownership by the author or creator of a work (written or otherwise)

- Limited copies may be made for the purposes of criticism, comment, news, and teaching

- All work published after March 1, 1989, is copyrighted whether marked or not

- Copyright laws apply to cyberspace work as well as printed.

- *Always document the source of material!*

- Most journals demand that you transfer your copyright from you to the journal.
Scientific Writing

- Rare Talent or Learned Skill?
- Proficiency is **necessary** to:
  - Attain the degree that grants you entry to professional status
  - Communicate findings to your peers for publication and technical reports
  - Garner money to do research
  - Ensures “reproducibility”
“a naturalist’s life would be a happy one if he had only to observe and never to write”

Charles Darwin
What exactly is scientific writing?

- There are many vague conceptions about scientific writing based on scientific folklore, rules that scientists remember, and examples that scientists read.
- There are about 40,000 scientific journals in the world today that publish scientific writing.
Myth...

• *Scientific writing is a mystical science.*

Scientific writing is not a science, it is a *craft or a skill that is developed through practice.*
Myth...

• *Scientific writing is not really that important*

If someone does Nobel quality research but never publishes it, what value does it have...

- 10 years later?
- after she/he dies?
Considering its value then, why do graduate students spend four years learning to do research, but only 3 months (if they are lucky) to learn how to publish it?
Myths...Scientists can't write; if they could, they wouldn't be scientists!

- Misconception that if you are good at analytical skills you are not good at verbal skills. Not true!

- The skills that make a good scientist (logical organization, imagination, hard work) do not automatically preclude good scientific writing.

- It is a **perspiration** skill not an **inspiration** skill!
Myth…Scientific writing is easy for scientists

- Scientific writing is not necessarily easy. Who promised it was?
  Everyone can acquire the skills to do it.

- Quote by Red Smith, sportswriter:
  "Writing is easy. You just stare at the typewriter until drops of blood appear on your forehead!"
GOOD ADVICE!

➢ Think a volume,
➢ write a page,
➢ and for every page of thine,
➢ publish but a single line

Le Bolde
Economy of Words

- Ernest Hemingway
- Short sentences, concise, trained as a print journalist (not a blogger!!)

- His distinctive writing style, characterized by economy and understatement, influenced 20th-century fiction.
What is a scientific paper?

It is a **first disclosure** that...

- Assesses observations
- Provides enough information to be able to repeat experiments from the information in it
- Provides a system of peer exposure and review to evaluate intellectual processes and outputs of scientists
Four attributes of a good scientific paper

- NEW
- IMPORTANT
- TRUE
- COMPREHENSIBLE
The End of the Introduction

Why English for scientific writing?

Plagiarism and ways to avoid it!

What is scientific writing?

What makes a good writer?
Here's a Deal **for Undergraduate Students in Horticulture**  The American Society for Horticultural Science (ASHS), the premier worldwide organization for those interested in the science, art, and practice of horticulture, invites all undergraduate students enrolled in horticulture classes to membership in ASHS - absolutely free for the entire time you are an undergraduate horticulture student.

**ASHS Newsletter**
Dedicated to advancing horticultural research, education, and application

http://www.ashs.org/studentmembers/challenge.lasso
Types of Scientific Papers

- Scientific Papers
  - Methods papers
  - Results papers
- Review papers
- Short communications or notes
- Meeting proceedings
- Abstracts and expanded abstracts
What are the Parts of a Scientific Paper?

Title
Author information
Key words
Abstract
Introduction
Materials and Methods
Results and Discussion
Conclusion or Summary
Literature Cited
Tables
Figures
IMRaD Format Answers Questions

- What problem was studied? (Introduction)
- How was the problem studied? (Materials and Methods)
- What were the findings? (Results)
- What do these findings mean? (Discussion)
What kind of writer will you be?

BASICALLY, THERE ARE FOUR TYPES OF WRITERS

1. TRIGGER HAPPY TYPE
   
   Data hot off the press-> rush into publication

2. NEVER FINISHED TYPE

   Always one more experiment to do

3. PROCRASTINATOR

   Will start next week, or next semester, or next summer, or next year....

4. THE GOOD WRITER

   Submits to one journal at a time
   Keeps length and therefore cost down
   Plans paper as carefully as the research
   Paper is a self-contained unit and is homogeneous
   **If rejected,tries, tries again!!!**
Why is technological competency important?

- Word processors
  - Grammar checkers (not infallible)
  - Spelling checkers (also not infallible)
- Graphing programs
- Spreadsheets and databases
- Statistical analysis
- Project management software
- Presentation software
- Electronic literature searches
- Internet searching and resources
- Email communications

Electronic submission of manuscripts, editing, and e-journal publications are now common; in fact, most journals will not accept hard copy documents!
Do You Trust Your Spell Checker?

“statistically”

“The amount of plant material resulting from the three treatments was not sadistically different.”

“humidity”

“Cotton responds to both soil moisture and relative humility.”
“acceptable”
“I hope you will find this manuscript acceptable.”

“bear”

“Please bare with me!”
Spell- Checked
To rite with care is quite a feet
Of witch won should be proud,
And wee mussed dew the best wee can,
Sew flaws are knot aloud.
Anonymous

Corrected Text
To write with care is quite a feat
Of which one should be proud,
And we must do the best we can,
So flaws are not allowed.
Malapropisms and homophones are words that sound similar to the one intended, but are ludicrously wrong in context.
Examples

➢ "Don't" is a contraption (contraction).

➢ The vendor is the soul (sole) source for that software.
Recipe for Success

• Attend All Workshop Sessions
• Complete All Homework Assignments
• Participate in All Class Discussions
• Ask Questions – There Are NO stupid Questions
• Write Each and Every Day
Expectations/Outcomes from the Workshop??

• Properly Organize/Format a Manuscript for Publication

• Adapt Your Manuscript to a Number of Different Journal Styles

• Construct Tables/Figures That Are Appropriate for Publication
Plagiarism Defined

Plagiarism, as defined in the 1995 *Random House Compact Unabridged Dictionary*, is the "use or close imitation of the Language and thoughts of another author and the representation of them as one's own original work."[1] Within *academia*, plagiarism by students, professors, or researchers is considered *academic dishonesty* or academic fraud and offenders are subject to academic censure, up to and including *expulsion*.
Plagiarism Detection Software

Some Older Programs

• Turnitin
• iThenticate
• EVE2
• Plagiarism Finder

Some Newer Programs

helpychalk.blogspot.com

scanmyessay.com
Cultural Differences

In many parts of the world, people believe that once something is published, it belongs to everyone and may be freely used. Many cultures do not recognize individual contributions, but instead feel that the society is more important. These cultures may or may not recognize individual forms of ownership such as patents, copyrights and trademarks.

Other cultures are more or less opposite and hold the accomplishments of the individual more highly. These accomplishments belong to the individual and not the community. Patents, copyrights and trademarks are important.
Plagiarism = Theft of Scientific Ideas

(In some cultures: it is considered flattery)

For plagiarism to exist, the offending author must do both of the following:

1. Use the ideas/writing/etc. of another person

   AND

2. Claim the work as their own (does not cite the originator)!
Self – Plagiarism – Is it possible?

Case Study – CRC Review Article

Case Study – Tree Gene and Genomics

Case Study – ASHS Journal
CRITICAL REVIEWS IN PLANT SCIENCES

Very long review was written and accepted in 2009. There were four authors of which the “senior” and corresponding authors was last.

Two years latter, the authors of one of the papers that was cited contacted the Editors-in-Chief of CRPS and stated that a paragraph in the review was directly copied from his paper published in 2007.

Editors contacted the corresponding author of the 2009 review and queried about the origin of this paragraph.

The corresponding author stated (with great embarrassment) that his post-doc had written this section, he had not seen and difficulty, and that he would take full responsibility for the problem.

The Editors put the corresponding author in touch with the author of the 2007 paper and they worked-out the problem.
Loss of flowering dogwoods from eastern forests has reduced the rate of soil and forest floor calcium mineralization, which may have negative effects on many associated flora and fauna (Holzmueller, 2006).
Manuscript submitted by authors in the People’s Republic of China.

During the review process, the review team discovered that the authors of the paper had “borrowed” PCR data and a blot figure from another paper without citation. In fact it was presented as their own work. None of the authors of the present paper were authors on the plagiarized paper.

This rises to the level of plagiarism as we defined previously. First, they presented materials as their own, and second, they did not cite the other paper as the source. (Typically, figures can never be used in a third party, refereed journal articles, even with permission because it is understood that all work in the submitted article is original.)

The corresponding author stated that his student was at fault and that he had disciplined them.

The Editorial found that all authors were equally responsible and “banned” all authors from publication in ASHS venues for two years.

Was this a cultural problem?
THANK YOU

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- Lecture materials taken from Dr. Trigiano’s short course for Scientific Writing (2012).
- Materials where provided from Dr. Trigiano’s graduate level course for Scientific Writing.
However Many Scientists Have Trouble Explaining Their Work

Albert Einstein's wife, Elsa--a stranger to science--once implored her husband to explain his research to her: "Couldn't you tell me a little about your work? People talk a lot about it, and I appear so stupid when I say I know nothing."
Einstein’s Response

Einstein struggled briefly to simplify his ideas but then got flippant. Inform them that "you know all about it but can't tell them, as it is a great secret!" he advised his wife.
A Helpful Textbook

Who is your role model?

- Just as people copy other people, scientists copy other scientists.
- Many published papers are weak, poorly structured, the language is imprecise and unclear and the illustrations do not mesh with the words