MOSIG brown bag lunch session #1

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September 25, 2012

Outline

Topic

Ethics in Publishing: Intro

Plagiarism

Rigor – The essence of scientific work

Editors requirements

Yesterday, I have submitted an article to ACM TOMACS. I had to testify my paper to:

- be the **authors' own original** work, which has **not** been **previously published elsewhere**
- not be submitted to more than one journal for consideration (ensuring it is not under **redundant simultaneous** peer review), and
- properly **credit** the meaningful **contributions of co-authors** and **co-researchers**,
- be appropriately **placed in the context of prior** and **existing research**,
- reflect the authors' own research and analysis and do so in a **truthful** and **complete** manner.

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Some editors and conferences do not bother with such considerations...

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Plagiarism

Rigor – The essence of scientific work

Is this really plagiarism ?

The new means of communications have broken down the barriers between people and knowledge.

We can access a quasi unlimited amount of information. An utter most important skill is the ability to **filter** and **aggregate** information.

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- I've read wikipedia and the description of ... is so good that there is no way I can write anything better.
  Why not use it ? After all, wikipedia is public domain...
- I've read an internal report of a PhD student of the team and his introduction is just what I need.
- The figure of this other report is just great so I've used it.
- Deadlines came around more quickly than expected, I had to produce something

People often use terms like "*copying*" and "*borrowing*", which disguises the seriousness of the offense.

What is plagiarism?

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According to the Merriam-Webster Online Dictionary, to "plagiarize" means:

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- to use (another's production) without crediting the source
- to commit literary theft
- to present as new and original an idea or product derived from an existing source.

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In other words, plagiarism is an act of **fraud**. It involves both **stealing** someone else's work and **lying** about it afterward.

But can words and ideas really be stolen?

According to many governmental laws, the answer is yes. All of the following are considered plagiarism:

- turning in someone else's work as your own
- copying words or ideas from someone else without giving credit
- failing to put a quotation in quotation marks
- giving incorrect information about the source of a quotation
- changing words but copying the sentence structure of a source without giving credit
- copying so many words or ideas from a source that it makes up the majority of your work, whether you give credit or not

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The fraud is generally more about **lying** about the content of your work than about **dispossessing** someone from something.

How to avoid plagiarism?

Most cases of plagiarism can be avoided, however, by **citing sources**.

Simply **acknowledging** that certain material has been borrowed, and providing your audience with the information necessary to find that source, is usually enough to prevent plagiarism.

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That is why I need to confess now that most of previous slides are plain copies from http://www.plagiarism.org/, just like the next slides. :)

Citations

A "citation" is the way you tell your readers that certain material in your work came from another source.
It also gives your readers the information necessary to find that source again, including:

- information about the author
- the title of the work
- the name and location of the company that published your copy of the source
- the date your copy was published
- the page numbers of the material you are borrowing

Why should I cite sources?

Giving credit to the original author by citing sources is the only way to use other people's work without plagiarizing. But there are a number of other reasons to cite sources:

- citations are extremely helpful to anyone who wants to find out more about your ideas and where they came from.
- not all sources are good or right – your own ideas may often be more accurate or interesting than those of your sources. Proper citation will keep you from taking the rap for someone else's bad ideas.
- citing sources shows the amount of research you've done.
- citing sources **strengthens your work** by lending outside **support** to your ideas.

Doesn't citing sources make my work seem less original?

Not at all. On the contrary, citing sources actually helps your reader **distinguish** your ideas from those of your sources. This will actually **emphasize the originality of your own work**.

But do not cite too much things. Only cite the work you have actually read!

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Rigor – The essence of scientific work

What is rigor ?

The content of the next slides is stolen from Prof. Jorge E. Allende, Electronic Journal of Biotechnology ISSN: 0717-3458, 2004 by Universidad Católica de Valparaíso, Chile

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  - search for all possible explanations of what we observe,
  - it is accepting a result that demonstrates the fallacy of our most precious hypothesis.

A famous biochemist, Dr. Efraim Racker, once said "*there's nothing sadder that an ugly fact destroying a beautiful idea*". Rigor demands us to accept the destruction of that beautiful idea by facts.

Rigor in communication

In science, communication is essential since it is the interface between the research authors and the rest of the world.

Before they are communicated, the results of the investigation are nonexistent, there is no contribution to human culture, the answers to our questions that rose from our experiments are only **anecdotic**.

This communication has to be rigorous in order to comply with the main purpose of publications: to present our results to the **critical analysis** of our scientific peers, allowing our experiences be **checked** and **expanded** by other researchers working on similar projects.

Rigor in questioning

Being rigorous in the formulation of a scientific research project implies many aspects.
A key component is **choosing questions and hypothesis** that can be answered experimentally in the time and with the means proposed in the project.

Many people answer a lot of different questions with a single experiment. Doing so, they generally do not answer any question.

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The whole experimental design should pursue the ideal of a straight answer: a **clear** and **sound** answer that says **yes** or **no** to our question.

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- It is always good and rigorous to use **alternative** methods to have **independent verifications** and **eliminate artefacts** that can result from the use of one method or technique.

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- Before, you should provide ways to **others** to try to **reproduce** your work.
- Before, you should make sure that **you** can **reproduce** your work.

Rigor in bibliography

We already mentioned the importance of a good bibliography to avoid plagiarism.

Another main aspect is the rigor in the bibliographic analysis of existing knowledge, **mentioning the reports that favor** our hypothesis **as well as those not supporting** our ideas...

Rigor in reviewing and peer evaluation

Another aspect that requires great honesty and thoroughness is precisely the evaluation of research projects and works presented by our peers.

We are judges deciding on the financing of projects from which the careers of academics and students depend and that may generate important advances to knowledge.

Considering yourself as a reviewer will help you improving the presentation of your work.

Too much rigor is pointless

We must be conscious that even rigor in science can be exaggerated and lead to paralyzing extremes.

- *"The best is the enemy of the good"* (Voltaire). Your work cannot be perfect, be you have to be **aware of** its **weaknesses** and **be honnest** about it.
- You will have to **suspend your disbelief** when reviewing the work of others and should always try to welcome their work with a **positive eye**.

Being rigorous does not mean being a bastard reviewer. Be positive and constructive!

> *Reject: Figure 3 is unclear.*
>
> *– Bastard Reviewer From Hell*