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REWARDS, NOT RIGHTS:  
THE UNIQUENESS AND CHALLENGES OF SCIENCE AUTHORSHIP

“Who are the Stewards of the Knowledge Ecosystem, and what is their Role?”

STM Spring Conference, Washington, April 30, 2014

# 1) A QUICK HISTORY: IT ALL STARTED IN THE 19<sup>th</sup> CENTURY

## a) FROM THE AUTHOR'S POINT OF VIEW

- Priority and authorial credit becomes tied to publishing in journals of scientific *academies* (not just any journal)
- No longer oral presentation plus archival printed publication
- Dissemination v. archiving
- Increasing concern with publication speed
- Radical changes in “peer review” (internal to external)

# 1) A QUICK HISTORY: IT ALL STARTED IN THE 19<sup>th</sup> CENTURY

## a) FROM THE AUTHOR'S POINT OF VIEW

- **Knowledge becomes “literature”**

- From the Book of Nature to the “magazine of nature” (Maxwell)

- The age of the curriculum vitae begins...

# 1) A QUICK HISTORY: IT ALL STARTED IN THE 19<sup>th</sup> CENTURY

## b) FROM THE PUBLISHERS & USERS POINT OF VIEW

- From state science to commercial publishers & scholarly societies
- From Academies to research universities (producers and users)
- New science journals between magazines and *Memoires*, but neither
- Industry not a significant player

(Alex Csiszar, “Broken Pieces of Fact,” PhD Dissertation, Harvard 2010)

## 2) MISMATCHES: AUTHORSHIP & THE LAW

“It was owing to the Modesty of *Sir Isaac Newton*, that he communicated some of his Discoveries to his Friends, before he published them. Unfortunately they came in the Hands of a Foreigner, who contested the Invention. In what Court of Justice could have *Sir Isaac* have instituted a Suit for a Reparation of this Injury? I will endure to affirm that he could have had no Redress in any Court either antient or modern...”

[anonymous, 1762]

Not unlike the mismatches between data and IP...

### 3) SCIENCE: A SUI GENERIS SYSTEM

PATENTS	COPYRIGHT	SCIENCE AUTHORSHIP
“Utility” (Artifact)	“Expression” (Artifact)	“Truth” (Nature)
Intangible + tangible	Intangible + tangible	Anything you can be recognized for by peers
Novelty+Nonobviousness (Inventive Step)	Originality (Personal Expression)	Priority (Discovery)
<b>PROPERTY</b> (Patent Infringement)	<b>PROPERTY</b> (Piracy)	<b>REWARDS</b> (Reputation) (Plagiarism of Ideas or Data)
Transferable	Transferable	Not Transferable (thus an economy of names, not property)
Temporal protection terms	Temporal protection terms	No terms (like in plagiarism)
Market	Market	Peer Review

## 4) PAST & FUTURE CHALLENGES FOR AUTHORSHIP

- We used to worry about credit and responsibility in multiauthorship
  - Identification of responsibility and quantification of credit
  - Contributorship and Guarantorship (Rennie)
- Copyright was not controversial then (focus on authorship)
  - Copyright crucial for publishers, but not for authors
- Open Access (especially Gold OA) is changing all of that
  - Scientific authors are becoming copyright holders as well
- Two kinds of authors folded into one

## 4) PAST & FUTURE CHALLENGES FOR AUTHORSHIP

- Data: Authorship, Data peer review
- New forms of publication misconduct
- New forms of “publication” around journals
  
- Also: rewarding the guardians: Reviewers as co-authors?