

**Egyptian Diabetes Center - AuthorAID  
Cairo, 23-24 March 2009**

# **Medical writing**



**Karen Shashok, Granada, Spain**  
**AuthorAID in the Eastern Mediterranean**  
**kshashok@kshashok.com**

# Part 1

International scientific, technical and medical research publishing: current aspects and readers' needs



M. Xeridat, in Van Kolschooten F. Can you believe what you read? *Nature* 2002;416:360-363

## 1.1. EXERCISE

Please write down the two biggest problems you have had (or you think you will have) in trying to publish your research.

1. Science journals:  
service to the research community  
or  
profit-making product?

“NPG journals had the **highest rated impact factor** in every discipline in which we publish; the newly-launched Nature Reviews showed **impact factors 2-3 times higher** than their long-established **competitors** which have been published for over 15 years, and Nature Materials debuted with an **impact factor** of 10.8, **outstripping its main competitor**, Advanced Materials, by over 3 points to be not only the **highest ranked journal** in Materials Science but in all of physics.”

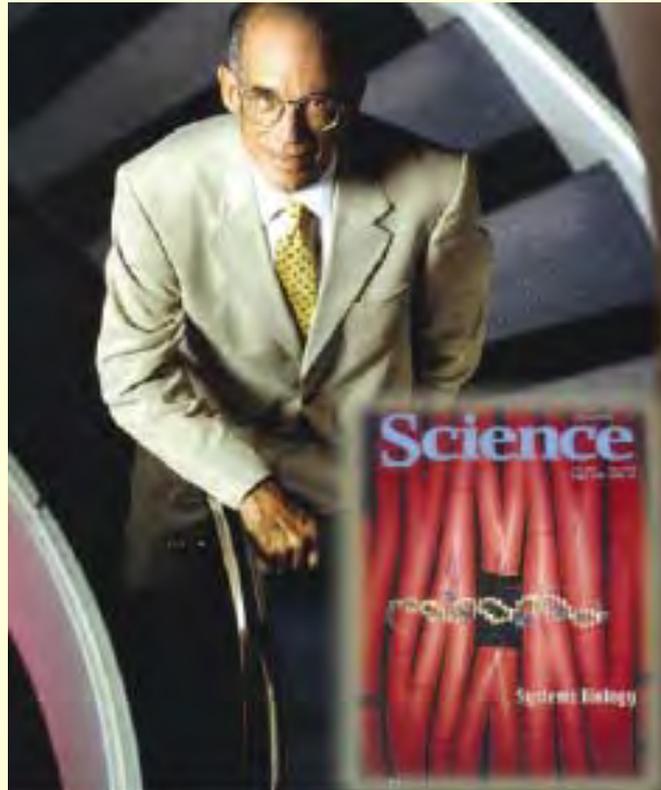
(Charkin 2004)

In July 2007 AAAS, publishers of *Science*, removed this journal from JSTOR.

*Science* said that “our strategic planning must reflect a **business environment** that is in a constant state of transition, one that has recently seen dramatic technological and **competitive changes.**”

Librarians said that the decision conflicted with the AAAS's mission "as a non-profit, membership-based organization, of advancing science and **serving society.**"

In January 2008 the AAAS quietly agreed to allow *Science* to be included in JSTOR again, but gave no information about the terms.



**M. Xeridat, in Van  
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Can you believe  
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Two main economic models:  
Commercial vs. society (not-for-profit) publisher.

Both produce good journals to attract good manuscripts.

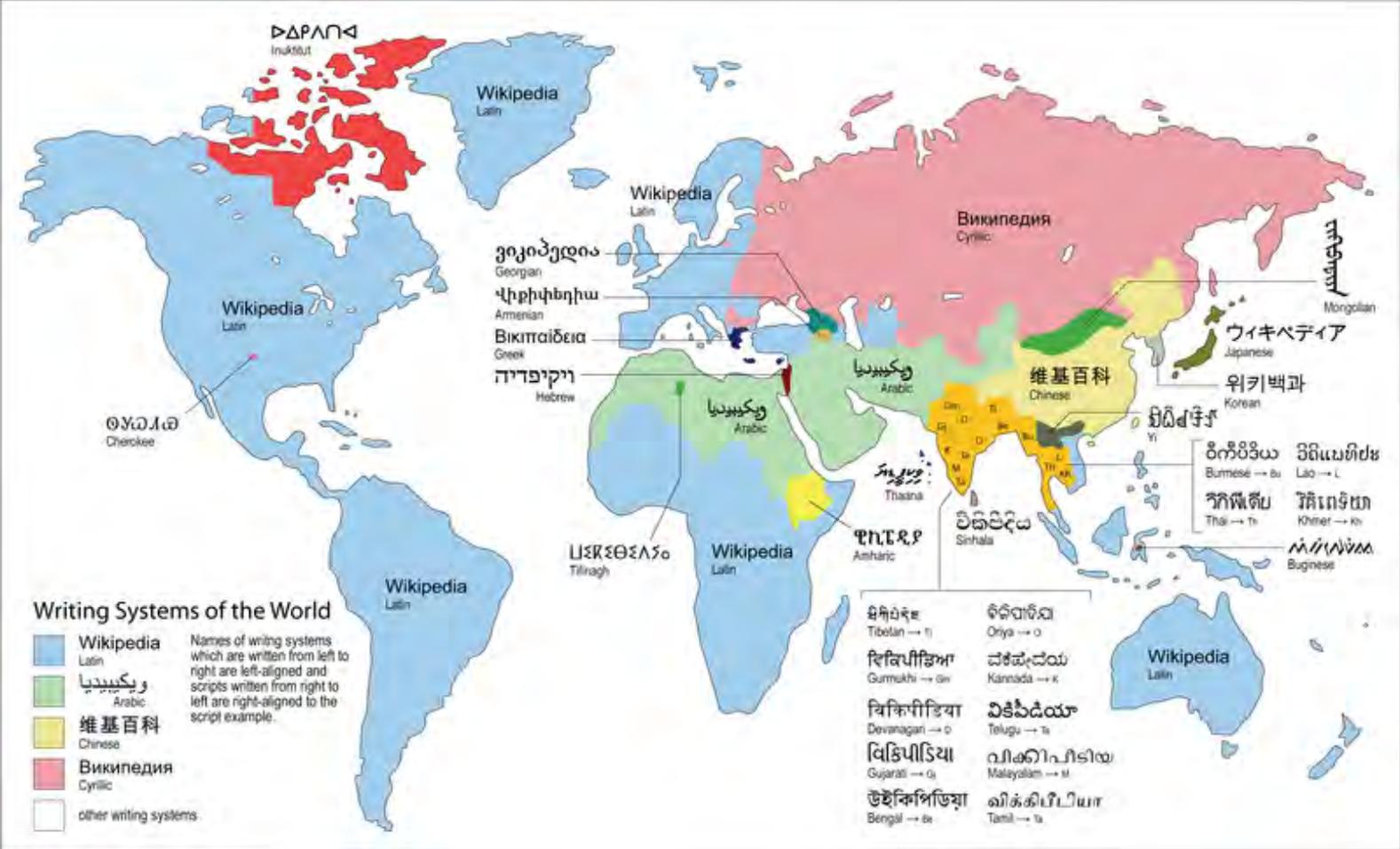
But the priorities and criteria for acceptance may not be the same.

Understanding the publisher's economic model and “philosophy” can provide insight into their editorial policies.

Insight into their policies can help authors select target journals with better chances of **success**:

- more favorable reception
- faster review and publication

# 2. Anglocentrism and globalization



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English linguistic imperialism:  
“the dominance asserted and  
maintained by the establishment  
and continuous reconstitution of  
structural and cultural inequalities  
between English and other  
languages”

**(Anonymous, Wikipedia, citing Robert Phillipson)**

“Some authors have voiced concerns about the dominance of the English language and US publications in the ISI database as possible sources of bias, but author biases may be more influential; like native English speakers, **authors in countries where English is not the first language prefer to publish in English** (possibly as such articles have a **higher impact** than those in their native tongue); they also **prefer to cite English-language articles, even in non-English language publications.**”

**(Chew, Villanueva, Van Der Weyden 2007)**

Current research publishing practices favor English.

This creates a conflict between practical values (professional researchers need to advance their careers) and cultural, historical and traditional values (language, writing, rhetorical strategies).

“It appears that Google [is] beginning to evolve into a one-stop place for research despite the severe limitations of Google’s search technology, especially for the academic community.”

(Esposito 2008)

More information (too much!),  
therefore less time to analyze  
information critically.

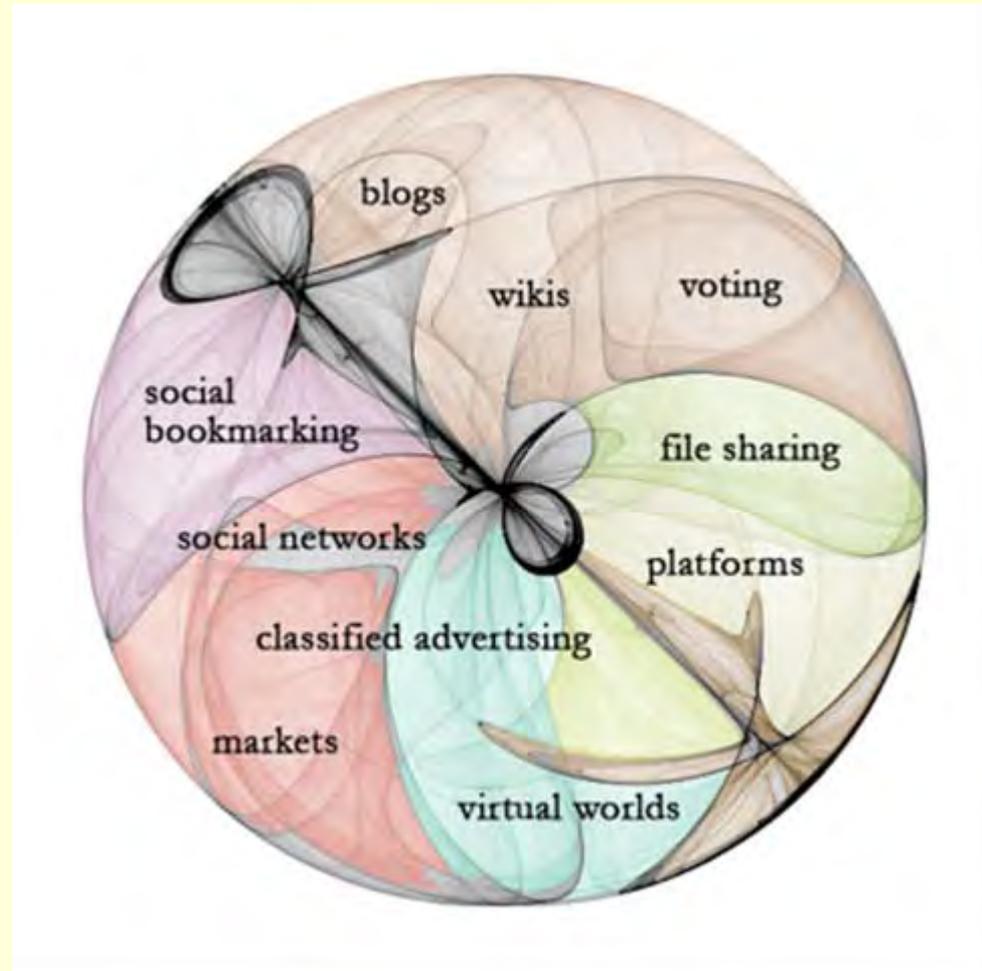
Increasing dependence on  
information technology.

Literature review strategies  
narrower and less complete than in  
the pre-Internet era.

# Consequences for literature searches:

Older studies (pre-Internet publishing technology), studies not available online (access policies), and studies not in English tend to be overlooked.

# Future knowledge-seeking and reading strategies



**Hannay T.**  
**The web**  
**opportunity.**  
**2007**

Therefore:

To reach the right **readers**,  
researchers need to have a  
publication strategy in addition to  
good research and good writing  
skills.

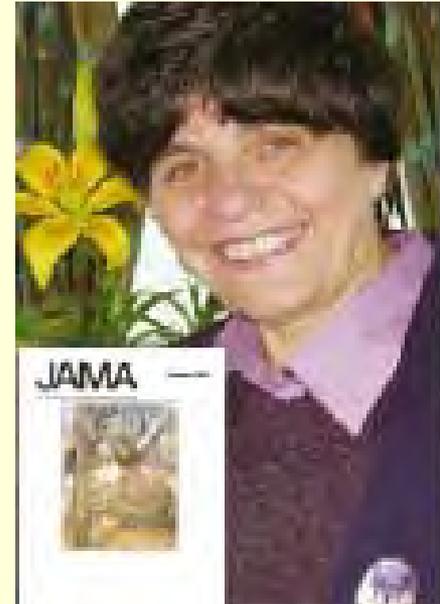
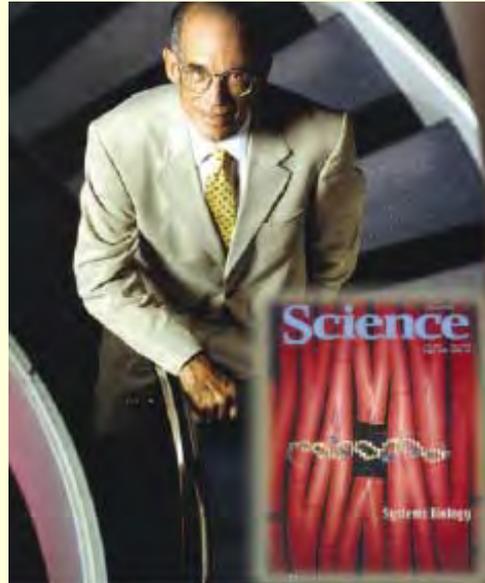
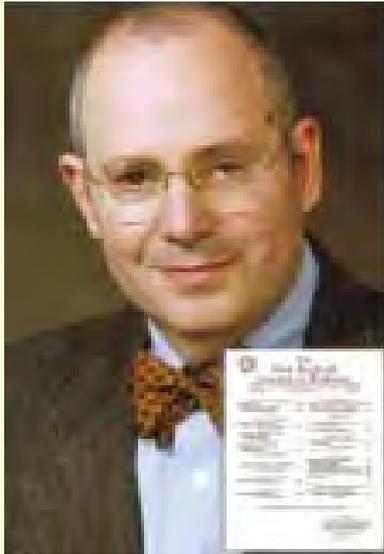
## 1.2. EXERCISE

Please write down what you think the **editor**, **reviewers** and **readers** consider the most important characteristic of a good research article.

### 1.3. EXERCISE

Please write down what you think are **editors' three most important criteria** for accepting a manuscript.

# 3. What do editors want?



**M. Xeridat, in Van Kolschooten F. Can you believe what you read? Nature 2002;416:360-363**

**The Guardian**



At ***BMJ***:

- sound science and statistics
- new information
- papers that will be read and cited
- papers that are well written

(Langdon-Neuner 2008)

## At *Diabetologia*:

- tell a story
- message communicated in 2-3 sentences
- new, interesting
- basic information for a sensible and intelligent reader unfamiliar with the subject area

(Gale 2008)

## Articles likely to:

- have a high impact
- receive media coverage  
(controversial, current topics)
- have high citation potential
- increase the impact factor

(Chew, Villanueva and Van Der Weyden 2007)

What should **authors** want?

An optimal match between your work and the journal's mission

(Guyatt and Haynes, 2006)

How can the article be exposed to the greatest number of most interested **readers**?

**Chose the most appropriate journal.**

Write specifically for that target audience.

Write specifically for the type of article (original research, short communication, case report, letter, review, meta-analysis, editorial, etc.)

## **End of Part 1**

International scientific, technical  
and medical research publishing:  
current aspects and readers' needs

**Questions? Reactions?**

## Part 2

Writing to make your results easy to understand



1. A **title** that reflects the contents

What subjects? What population?

What conditions? Where?

What setting (local, national, regional, international)?

Experimental or observational (noninterventive)?

When?

# 1. Title

Emphasis on the hypothesis, the method, or the results?

Should the title state the conclusion?

Consult examples in your **target journal**.

2. An **Abstract** that reflects the contents.

Re-revise the abstract after the main manuscript is completely finished.

## **2. Abstract**

No discrepancies in the information in the abstract, main text, and tables or figures for:

**terminology, sample size, population size, numerical data.**

3. An **Introduction** that attracts attention and identifies the **target population** of readers

- Interesting first sentence
- Identify the problem or gap in knowledge.
- Explain why it is a problem.
- State your proposed solution.
- Say how you tested your solution.

### 3. Introduction

Should the Introduction end with a summary of the conclusions?

Often, in social science and humanities journals.

Usually not, in science, technical or medical journals.

Check your **target journal**.

## 4. **Methods** that don't keep secrets.

No secret ingredients or secret techniques please!



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## 4. Methods

Supplementary information?

Internet publishing means unlimited space *but* readers don't have unlimited time to search and read everything.

**5. Results** that focus on the question asked in the Introduction.

**Figures and tables** that focus on the question asked, and the data that help readers answer it for themselves without reading the Discussion.

**5. Results** that focus on the question asked in the Introduction.

If you present data clearly, the readers will be able to foresee your conclusions, and your article will be more convincing.

6. A **Discussion** that explains what your findings mean.

Answer the **question** you asked in the **Introduction**.

6. A **Discussion** that is critical of your own study.

- Identify the limitations.
- Explain how far the conclusions can be generalized.
- Suggest new studies that could help answer questions that require more data.

6. Should the **Discussion** begin with a summary of the results?

Usually not, but check your **target journal**.

## 2.1. EXERCISE

Please write down your three most important criteria to decide **which journal** to send your manuscript to.

# Choosing the **right journal**

Ask yourself:

Who needs to know this information to become a better clinician or scientist?

What journals do these people **read**?

Aim for an optimal match between  
your work and the journal's mission  
(Guyatt and Haynes, 2006)

How can the article be exposed to  
the greatest number of most  
interested **readers**?

Who needs to know what you found to improve clinical practice or make progress with research?

Study your target journal and edit your manuscript by adding, deleting or modifying things.

Satisfy your **readers' expectations.**

## 2.2. EXERCISE

Please write a title for the abstracts.

What specialty do you think the articles are from?

What specialists need to read this article to improve their research or clinical care?

## 2.2. EXERCISE

1. Interaction between p53 codon 72 polymorphism and melanocortin 1 receptor variants on suntan response and cutaneous melanoma risk

*British Journal of **Dermatology***

2. Germline and somatic c-met mutations in multifocal/bilateral and sporadic papillary renal carcinomas of selected patients

*International Journal of **Oncology***

3. Mechanism of hypotensive transients associated with abrupt bradycardias in conscious rabbits

*Canadian Journal of **Cardiology***

## **End of Part 2**

Writing to make your results easy  
to understand

# Part 3

## Good scientific English style



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**Who** can help you improve your writing?

Native speakers of English?

Specialized translator or author's editor?

Scientific peers and subject experts?

*1. Language and usage:*

Grammar and syntax

Specialized terminology and usage

*2. Content and writing:*

Organization and logical flow

Rhetoric and persuasiveness

*Grammar, syntax:*

Well-educated native speaker,  
preferably with specialized  
knowledge

*Terminology, usage:*

Subject expert or specialized  
translator or editor

*Organization, logical flow:*

Reviewer or well-educated native speaker, translator/editor

*Rhetoric, persuasiveness:*

Reviewer or experienced translator or editor, preferably with specialized knowledge

## **Local peers and advisors**

Experts in the scientific content

## **Author's editors**

Experts in written communication

When? Before manuscript submittal

## **Author's editors**

- help authors to produce writing that will effectively communicate their message to the target audience
- help ensure that the text is read with respect for and attention to the content

If you are able to identify the types of problems in the writing, you will be able to identify the best person to help you.

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### 3.1. EXERCISE

Please analyze your manuscript or the sample manuscript to see if it satisfies the goals for clear writing.

Please identify different types of writing problems: use of language (grammar, syntax, terminology, usage) or organization and logic (flow, persuasiveness).

### 3.1. EXERCISE (cont.)

Do you think the readers of the article will be confident in the study and convinced about the findings?

Please note places where the manuscript 1) inspires confidence or 2) may lead the reader to have doubts.

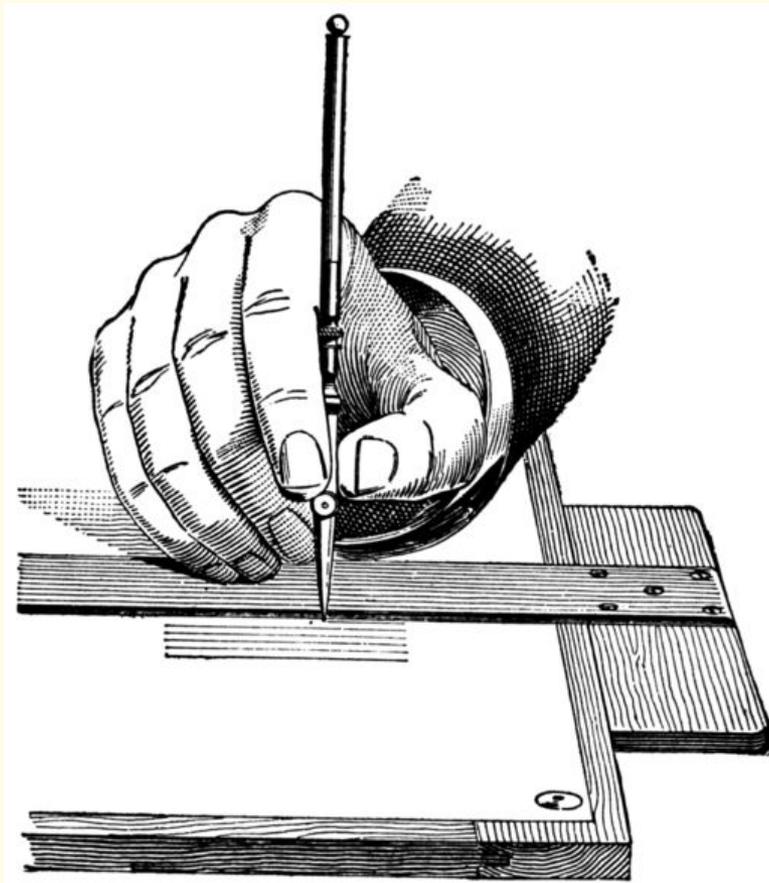
## **End of Part 3**

Good scientific English style

Who can help you improve your writing?

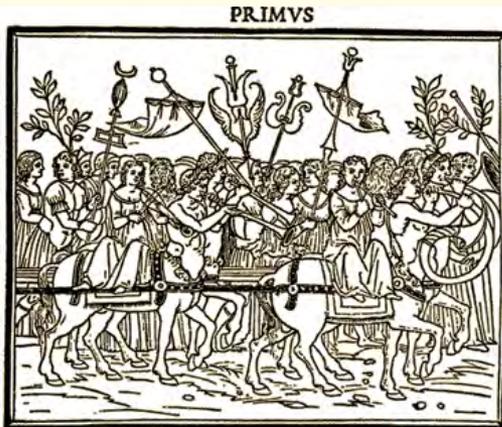
## Part 4

Good scientific English style  
Some practical examples



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# Goal: a text that is clear and accurate, not a work of art

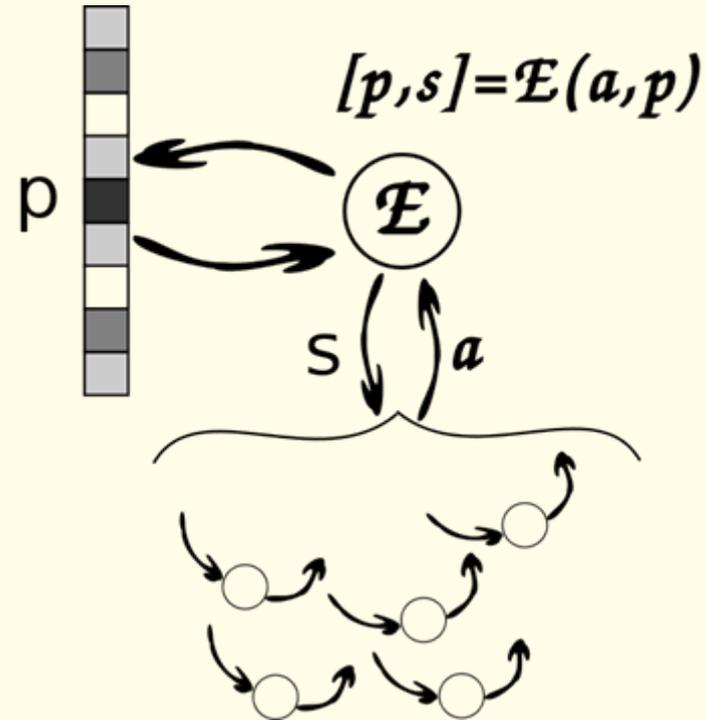


EL SEQVENTE triúpho nó meno miraueglíoso d'l primo. Impo che gli hauea le q̄tro uolubile rote tutte, & gli radii, & il meditullo defu sco achate, di cãdide uẽule uagamẽte uaricato. Ne tale certãnte gestoe re Pyrro cù le noue Muse & Apolline i medio pulsãte dalla natura ip̄sso.

Laxide & la forma del dicto q̄le el primo, ma le tabelle eraõ di cyaneo Saphyro orientale, atomato de scintille d'oro, alla magica gratissimo, & longo acceptissimo a cupidine nella sinistra mano.

Nella tabella dextra mirai exscalpto una insigne Matrõa che dui oui hauea parturito, in uno cubile regio colloca ta, di uno mirabile pallacio, Cum obstetrices tu pefacte, & multe altre matrone & astante Nymphe Degli quali uscua de uno una flammula, & delal tro ouo due spectatissi me stelle.

\* \*  
\*



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# How do I start writing?

- Use whatever strategy works for you.
- Be prepared to think hard about who your **readers** will be and what they need to know.
- Be prepared to make many changes.

# **Writing strategies**

-Make notes or draft parts of the text any time you have an idea.

-Make an outline.

-Make a list of references that should be cited.

-Write the easy parts first and the hard parts last.

Make English your ally for clear communication, not your opponent.

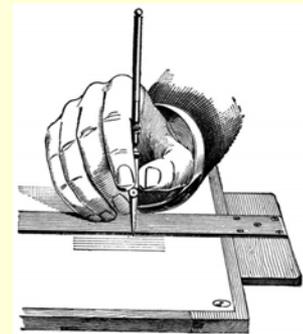
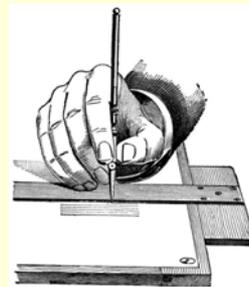
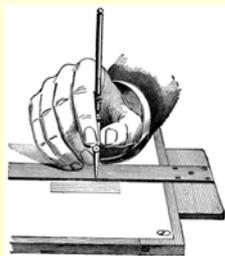
The reader needs to be convinced that your findings are **logical, valid, and supported by solid evidence**, not impressed by your writing style.



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1. A simple and boring text is better than a complex, “interesting” text that is hard to understand.

2. Revise, correct and rewrite patiently.  
It is normal for a good article to be rewritten many times before it is clear enough for **readers** to understand easily.

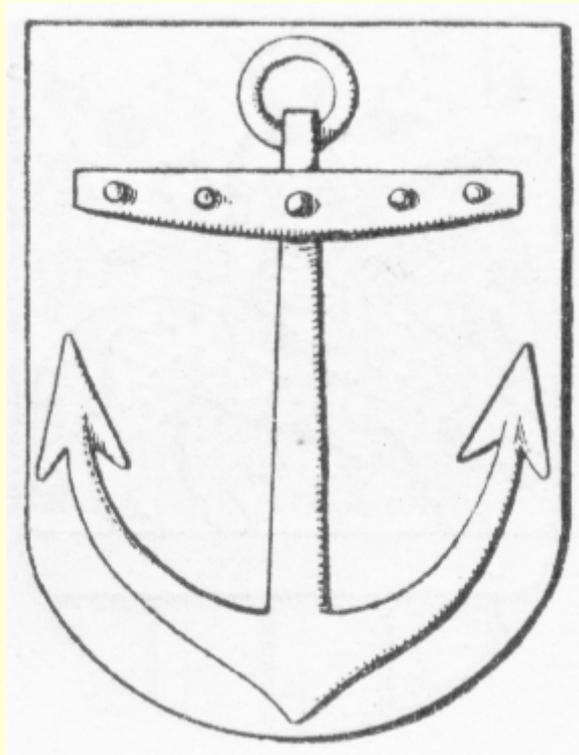


3. Ask a specific question. Provide a specific answer.

Your statement of purpose (at the end of the Introduction) is the anchor for the whole article.

3. Refer to your statement of purpose often while writing and revising, to stay focussed on the aim of the study and the new, original, key results.

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4. What are your results and what do they mean for other researchers?

Eliminate discussion and references that are not related to the research question posed in the Introduction.

5. Relate the conclusions explicitly to the aim of the study.



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6. Don't copy and paste from other articles. The English may not be very good.

Many articles in an unreadable writing style are published even in top journals.

would tell us that writing well can boost the authors' chances of getting published. Even so, attention to language among scientists is still scant, which would account for the number of unreadable articles published even in top-tier journals. In a Letter published in the *British Medical Journal*<sup>6</sup>, the author reports that "over the past 20 years..." many articles have shown "that medical information (such as journal articles, informed consent forms) is written in an 'unreadable' writing style." Among the authors of such texts are NES researchers, as even those writing in their mother tongue can be poor writers. However, improving writing skills in the native

**Vasconcelos SMR. Writing up research in English: Choice or necessity? Rev Col Bras Cir 2007; 34:1-2**

Tell a simple story to explain and convince, not to deceive or oversell.

The human element is okay.

A narrative sequence that mentions surprises, insights or even errors helps to keep the **readers** interested in the conclusions.

How does your research story end?

## 4.1. EXERCISE

Article to review on 4 quality criteria:

- use of English
- technical/copy editing
- writing
- scientific thinking

## **End of Part 4**

Good scientific English style

Some practical examples

## Part 5

Peer review, feedback, and manuscript revision:

Accept good advice but resist bad advice.

# **Competencies:**

Scientific expertise or  
language/writing expertise?

Are reviewers always right about  
the English, the language and the  
writing?

“Far from this being an occasional occurrence, it seems that the excuse of poor English is used as a way of rejecting manuscripts, a handy tool to have in these days of heavy submission loads and the need to ‘cull’ manuscripts before peer review.”

(Cooter 2008)

Good language professionals are more sensitive to and tolerant of alternative uses of English than journal gatekeepers are.

Language professionals usually know more about good English than the reviewers and editors.

Gatekeepers are usually happy to learn.

But gatekeepers may assume omniscience and overestimate their expertise.

(Shashok 2008)

“If I believe a referee is mistaken in his/her concern, and I know a way to defuse that mistaken concern without telling the referee that he/she is mistaken, then I will use that way because the probability of surviving the review process decreases when referee concerns are challenged rather than accepted.”

**(Wright and Armstrong 2008, quoting an anonymous researcher)**

“Researchers overwhelmingly (90%) said the main area of effectiveness of peer review was in improving the quality of the published paper, and a similar percentage said it had improved their own last published paper, including identifying scientific errors and missed and inaccurate references.”

**(Ware 2008)**

“Our experience is that substantial improvements on the basis of reviewers’ comments are unusual, but do happen on occasion.”

**(Guyatt and Haynes 2006)**

If the gatekeepers responsible for editorial quality control are not trained in quality control skills, we cannot assume they are all skillful editors or reviewers, even though they are very skillful researchers and subject experts.

# Journal peer reviewers

“Through the Anglo-American hegemony, UK- and US-based referees’ comments often not only force a non-native English-speaking author to rewrite his/her paper, but also increase the ‘creative destruction’ of a paper.”

Aalbers MB. Creative destruction through the Anglo-American hegemony: a non-Anglo-American view on publications, referees, and language. *Area* 2004; 36: 319-322

For most researchers, and therefore most reviewers, English is not their first language.

**Even manuscripts written by native speakers of English are frequently criticized for poor English.**

It has frequently been said that despite the fact of having English as their first language, authors who fulfil this criterion may nonetheless receive frequent negative feedback due to the unfeasibility of discerning the meaning in their written communications.

## 5.1. EXERCISE

Please write down the types of feedback from reviewers and editors that you find most useful.

## 5.2. EXERCISE

What should you do if you disagree with a reviewer's criticism or request for modification in the manuscript? Why?

## 5.3. EXERCISE

Please read the examples of reviewers' reports on a manuscript.

Which comments are about the language or writing, and which are about the content?

# Conclusions



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Every journal is different, every editor is different, but good writing is the same: **clear, rigorous and convincing.**

Impartial Judgment by the “Gatekeepers” of Science: Fallibility and Accountability in the Peer Review Process

## Methods

### Participants and procedures

To measure mortality we did a national cross-sectional cohort study of deaths from January, 2002, through July, 2006. Household information was gathered about deaths that occurred between January of March 18, 2003, in all households compared with deaths that occurred through to the date of 12000 was calculated to doubling of an estimated pr

AT<sup>1\*</sup>, JOSEPH S. GONNELLA<sup>1</sup> and H<sup>2</sup>

## RESULTS

### Methodological and Statistical Content Study

Less than half of the 166 journals provided information on statistical methods (Table 1). Eighty-seven percent (13/15) of general journals and 36% (54/151) of specialty journals made reference to ICMJE uniform requirements.<sup>11</sup> Fifty-three percent

## **Clear:**

The **reader** doesn't need to read the same sentence or paragraph more than once, and can navigate all parts of the article easily.

## **Rigorous:**

- The results (including tables and figures) follow from the methods.
- The discussion follows from the introduction.
- Limitations and possible additional studies are noted.

## **Convincing:**

- Focus on answering the question asked in the introduction.
- Don't overstate or exaggerate your conclusions.
- Search for and correct technical errors.

# Convincing:

Be confident in the interest and usefulness of **your** findings.



**Thank-you very much for your participation.**

**AuthorAID in the Eastern Mediterranean**