

# ***Ten Commandments for Publication of Scientific Research***

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# ***Disclaimers***

- **Many Facts, Many Opinions**
- **Based on Experience**
- **Author, Editor, Reviewer**
- **“Ten” Versus “The Ten”**
- **Intentionally Controversial**
- **No Literal Interpretation**
- **Exceptions**

# **Speaker's Primary Goal**

To provide "information" which improves probability of success in the world of scientific research publication.



# Speaker's Secondary Goals

To be a devil's advocate



and provoke thought on a spectrum of publication questions which often do not have clear answers.

# ***Perspective***

In this lecture, I adopt the point of view of someone new to the world of scientific publication. I generally take the point of view of the graduate student and sometimes take the point of view of a new faculty member.

# ***Outline***

- **You and Your Mentor**
- **You and Your Reader**
- **Ten Commandments**
- **Concluding Thoughts**

# ***Scenario***

You are about to write your first paper. You have little paper writing experience. You lack “perspective” on the field. Your mentor may be involved in the work. The mentor may be advocating writing the paper. In some cases, the mentor's advocacy is “strong.”

# Critical Question

How should I interpret my mentor's vociferous advocacy to write?

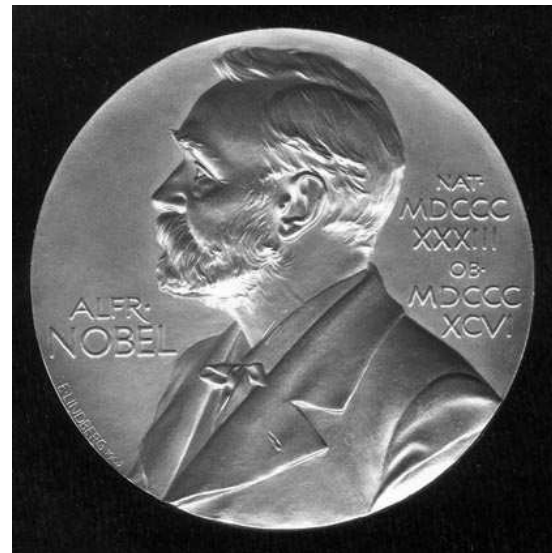




How should I interpret my mentor's advocacy to write?

# ***First Common Answer***

My mentor is a scholar and feels that we have something important to say.



How should I interpret my mentor's advocacy to write?

## ***Second Common Answer***

My mentor needs papers and feels that we have something important to say.



How should I interpret my mentor's advocacy to write?

## ***Third Common Answer***

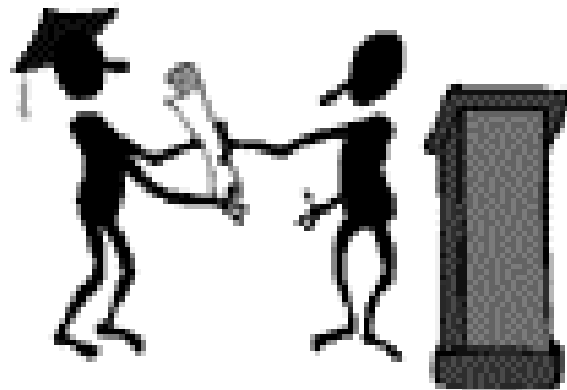
My mentor needs papers and may or may not know that we have nothing important to say.



How should I interpret my mentor's advocacy to write?

## ***Fourth Common Answer***

My mentor wants to help me gain experience, be "better" or credentialize myself.



How should I interpret my mentor's advocacy to write?

***Best Answer***

**A combination of the above.**

# ***Some Faculty Motives for Writing***

- **Scholarship**
- **Tenure, Promotion, Salary**
- **CV, Grants, Employment**
- **Helping Graduate Students, Colleagues**
- **A Combination of the Above**

# ***Speaker's Claim***

When you first start out, the biggest determinant of your "writing reputation" is your mentor's. Like it or not, your mentor's positives and negatives get "transferred" to you.

# ***Improving Your Odds***

- **Tenured Versus Non-Tenured**
- **Mentor's Reputation**
- **Warning: Blind Signoffs**
- **General or Foot Soldier?**
- **Working "With" Versus "For"**



# ***Outline***

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# ***Speaker's Maxims***

If you have nothing important to say and choose to say it, then say it well.

If you have something extremely important to say, it doesn't matter if you say it well or not.

# ***Example***

## **A Ten Minute Cure for the Common Cold**

by

**John Doe**

**Department of Medicine**

**University of Wishful Thinking**

**Wishful, CA 94520**

**[jdoe@med.wish.edu](mailto:jdoe@med.wish.edu)**

**Abstract: A new chemical has been found which is great. Following ingestion, the common cold is cured within ten minutes. It really works. This is not one of these dumb symptom maskers such as zinc. I think this new drug should be named Johnium – because I am so terrific. I tried the drug on 100 patients with common colds. It worked every time. There were no side effects. I am a great researcher. You're not worthy.**

# ***Your Readership***

● **Readers  $T \geq 10$**

● **Touchers  $1 < T < 10$**

● **Equation**

**Readers  $\subseteq$  Touchers**

● **Two Gedanken Experiments**

# ***Gedanken Experiment 1***

Your paper appears today in a premier journal. Imagine a group of 1000 active researchers in your field. Now imagine the passage of six months.

*The Basic Questions:* How many out of the 1000 researchers have touched your paper? Read your paper?

# ***Gedanken Experiment 2***

Consider Engineering faculty. On a weekly basis, we consider the following the mean number of papers:

Touched per week?



Read per week?



# ***Refinement of Theory***

Thus far, our theory includes the notion of “Readers and “Touchers.” We now expand our framework to include the notion of *Talker*. A Talker has neither read your paper nor touched it. Since every Reader and Toucher is a Talker, we arrive at the basic equation

**Readers  $\subseteq$  Touchers  $\subseteq$  Talkers**

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# ***Ten Commandments***



# ***Speaker's Pre-Commandment***

**Write for the Touchers.**

Rationale: The readers will remain readers. The Touchers will be enthusiastic --- some will be converted to Readers. The Touchers will be Noisy Talkers rather than Quiet Talkers. The number of Talkers will be increased by the noise of Touchers.

# **Ten Commandments**

*Thou shalt separate talking from writing.*

*Thou shalt do first things first.*

*Thou shalt treat thy reader as an idiot.*

*Thou shalt position thyself.*

*Thou shalt not hedge thy bets.*

*Thou shalt not over-promise.*

*Thou shalt separate claims from justification.*

*Thou shalt not shoot ducks with cannons.*

*Thou shalt spare thy reader from Tylenol.*

*Thou shalt love the harwkeye as thyself.*

# ***Commandment One***

*Thou shalt separate talking from writing.*

- **Talking With Your Collaborator**
- **The Golf Clubhouse Effect**
- **The Apres-Ski Effect**



# ***Commandment Two***

*Thou shalt do first things first.*

- **Title as a Newspaper Headline**
- **National Enquirer or NY Times**
- **Articulation of the Vision**
- **The Boy Who Cried Wolf**
- **The Abstract**
- **The Introduction**
- **Revision Philosophy**
- **No Blanks; Fake Section Numbers**

# **Commandment Three**

*Thou shalt treat thy reader as an idiot.*



## **Commandment Three (Continued)**

*Thou shalt treat thy reader as an idiot .*

**An excessively complicated exposition turns your potential Readers into Touchers, potential Touchers into Talkers and potential Talkers into silent ones.**

# ***Commandment Three (Continued)***

*Thou shalt treat thy reader as an idiot.*

- **Experts Get Snowed in Their Areas**
- **The Undergrad Text Secret**
- **Simplicity Versus Complexity**
- **The Big Dilemma**



# **Commandment Three (Continued)**

*Thou shalt treat thy reader as an idiot.*

## **REVIEW #1**

The results in this paper are trivial. The proof of the main Theorem amounts to an easy Homework problem in a graduate course. I recommend rejection of the paper.

## **REVIEW #2**

The exposition in this paper is truly brilliant. The author is to be congratulated for taking a technically deep contribution and simplifying it to its essence. This paper deserves publication.

# ***Commandment Three (Continued)***

*Thou shalt treat thy reader as an idiot.*

- **Possible Solution**
- **Drawing in Your Reader**
- **Gobbledy Gook at the End**

# **Commandment Four**

*Thou shalt position thyself.*



# ***Commandment Four (Continued)***

*Thou shalt position thyself.*

- **What's New in This Paper?**
- **Conference Papers as Insurance**
- **Flags in the Ground**

# ***Commandment Four (Continued)***

*Thou shalt position thyself.*

**Citation of References: The first thing many reviewers do is go to the end of the paper to see if they are cited.**

# ***Commandment Four (Continued)***

*Thou shalt position thyself.*

## **The Citation Style**

**Style 1: According to Mitchell (1997), the important results of Brown (1994), Brown (1993a) and Brown (1993b) are readily revised to account for the correction in Mitchell (1992).**

**Style 2: According to [1], the important results of [2] - [4] are readily revised to account for the correction in [5].**

# **Commandment Four (Continued)**

*Thou shalt position thyself.*

## ● **Formulation/Reformulation/Triviality**

REVIEW #1: I believe this paper is rather trivial. The manipulations are straightforward and I see no contribution worthy of publication.

Review # 2: The major contribution of this paper is the clever problem reformulation. By creating some new definitions and asking the question in a way which is slightly different from previous authors, the authors have reduced an open problem to one which is easily solved.

## ● **Blame Reviewer 1 For Shallowness?**

# ***Commandment Five***

*Thou shalt not hedge thy bets.*

**“This paper describes a new technique for measurement of the viscosity of fluidium. Using this measured parameter, we develop a new simulation technique for the flow model. Our new simulation method is described in detail. It involves a new algorithm which we developed in order to exploit the sparsity of the matrices entering the model.”**

**● Where is the Author’s Money?**



# ***Commandment Six***

*Thou Shalt not over-promise.*

***Introduction:*** The main result in this paper is a new formula for the ionization coefficient in heterogeneous media.

***Section 6:*** Consider heterogeneous medium with flow compressibility factor  $0.3 < f < .33$ . Then the ionization coefficient is given by ...

# ***Commandment Six (Continued)***

*Thou shalt not over-promise.*

- **Setups for Disappointment**
- **Issue of Parsing Words**

***Introduction:*** The main result in this paper is a new formula for the ionization coefficient in heterogeneous media with restricted ranges on the compressibility factor.

# ***Commandment Seven***

*Thou shalt separate claims from justification.*

**“The notation to be used in this paper is listed below:**

**The following preliminaries are presented before the main result.”**

# **Commandment Seven (Continued)**

*Thou shalt separate claims from justification.*

- **The Five Minute Reading**
- **Notation**
- **User Versus Prover**
- **The Trust-Your-Math Criterion**

# ***Commandment Eight***

*Thou shalt not shoot ducks with cannons.*



# **Commandment Eight (Continued)**

*Thou shalt not shoot ducks with cannons.*

Reviewer 1: This paper should be rejected. The authors have taken a simple problem and complicated the hell out of its solution with elaborate analytics and complicated experimental technique to validate their formulae. Why haven't the authors considered the simple commonsense method which begins with Boltzmann's equation

Reviewer 2: This paper is a major breakthrough. The problem being considered is known to be intractable by using Boltzmann's equation or other simple methods. The new equations and associated experiments, although complicated, are motivated by the failure of conventional techniques. The results are important and provide motivation for future research aimed at their simplification.

# ***Commandment Nine***

*Thou shalt spare thy reader from Tylenol.*

- **Equation Numbers**
- **Font Size**
- **Spacing**
- **Annoyance Integral**

$$\text{Headache}(t) = \int_0^t \text{Annoyance}(\tau) d\tau$$

# ***Commandment Ten***

*Thou shalt love the hawk-eye as thyself.*

In this paper, the Bailey-Lichtmann affect is analyzed for pi-mesons. This phenomenon originates with Baily's seminal work and Lichtman's subsequent refinements. Our new equations are relevant in the following sense: They predict the existence of Pi-mesons with an extra electron charge component  $q = .342$  coulombs which are unexplained by lab experiments.

B. C. Bailey and George Lichtmann, "A New *Pi*-Meson effect in semi-conductors," Journ. Adv. Physics, vol. 26, no. 2, pp. 436-39, 1997.



# **Commandment Ten**

*Thou shalt love the hawkeye as thyself.*

## ● **Leaps of Faith**

### **Speaker's Question**

**If you cannot trust the author on the small stuff, will you trust the author on the big stuff?**

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# ***Concluding Thoughts***

- **Just a Sampling of Issues**
- **Wildcard Reviewers**
- **Rubens Versus Van Gogh**
- **Coauthors: “I” “We” “(S)he”**
- **Some Opinions**
- **Devil’s Advocacy**
- **Random Aspects**
- **Improving Your Odds**