SURVIVAL SKILLS IN ACADEMIC PUBLISHING:
How to Digest Reviewers' Comments

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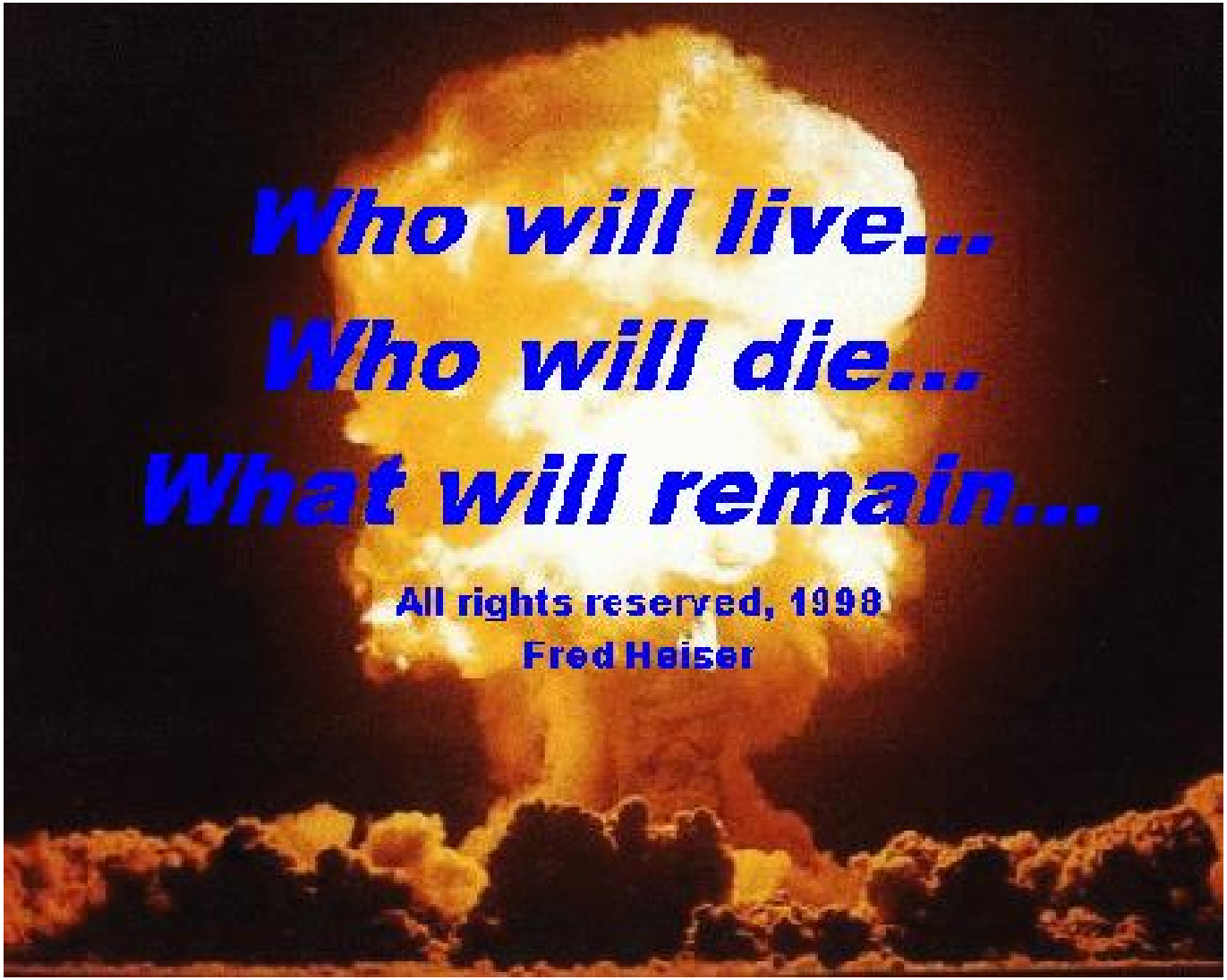
I. The basic skill: **Claim a result that the field is waiting for**

II. Psychological skills: **Coping with criticism, perseverance**

III. Editorial skills: **Structuring, detailing**

IV. Communication skills: **Metamorphosis, negotiation**

For Many People, Peer Review is Like a Clash of the Titans



The Basic Skill: Claim a Result That the Field is Waiting For

Is there a clear claim, relevant message, or reproducible result?
That is what the Editor wants to know.

- There must be a ***story*** that is ***relevant*** for readers;
- Story must be in ***balance*** with the claim;
- Paper must show ***awareness of the literature***, especially in the Introduction and the Discussion sections.
- If you want to do a ***review***, wait until your Presidential Address (or do a meta analysis).

Many authors tell their story without giving much notice to the question: "Who wants to know?"

Anticipate what the field is waiting for - or convince them that they should have been waiting for it

Reasons for Rejection Without Review ("Sudden Death")

1) ***Form, obvious amateurism***
   a) Ignores instructions to authors
   b) Ignorant, parochial, no hypotheses, no conclusions
   c) Not conform journal standards of statistical analysis
2) ***Relevance***
   a) Outside scope of the journal
   b) Manuscript type unacceptable (e.g. review)
   c) Nothing new presented
3) ***Professional standards***
   a) Major methodological weakness (e.g. too few subjects)
   b) Clear ethical problems (waste of animals, no debriefing)

Psychological Skills

Primary Reaction to the Reviewers' Reports

1. Anything aside from straight reject is a positive outcome.
   - *Accept*: which almost nobody gets in the first round
   - *Accept with revision*: involves only minor changes
   - *Revise and resubmit*: we want it, but major changes required
   - *Reject with encouragement (or invitation) to revise and resubmit*: the paper has potential, but needs a lot of work
2. Look first for reactions on your claim:
   - Are they plausible?
   - Is there a difference between Referee and Editor?
3. Deconstruct each of the Reports for Author(s) and the Editor's letter into individual items that you can respond to.



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Coping With Criticism: Full Rejection

Remember that rejection is part of the game and has happened to famous writers, both in science and in fiction.

> *"The girl doesn't, it seems to me, have a special perception or feeling which would lift that book above the 'curiosity' level"*
>
> [from a referee report on **The Diary of Anne Frank**]

- Avoid self-criticism: it is not you, it is the paper!
- "Go to the Balcony" and evaluate the critic;
- Evaluate its usefulness to you;
- Send the paper to another journal unchanged,
  or improve it first,
  or make it part of another paper,
  or admit it was not such a good idea after all?

The Pursuit of Self-Esteem

Academic environment tends to favor development of high self-esteem and investment in self-worth. When regard from others is conditional upon performance or other extrinsic qualities, people are likely to be triggered into pursuing self-esteem goals (Rogers, 1959).

Self-esteem is generally considered the evaluative component of the self-concept, and is one of the most studied concepts in psychology.

As a trait, self-esteem does not drive behavior — it does not fluctuate.

As a state, self-esteem is a motivator: it produces pleasant feelings and enhanced initiative. Boosts to state self-esteem follow from success in domains in which self-worth is invested.

However, as argued by Crocker and Park (2004), objective benefits of high self-esteem are small and limited — it does not contribute to high academic achievement, good job performance or leadership, while its long-term costs are severe.

Costs of Seeking Self-Esteem

If a person fails in the goals in which self-worth is invested, it hurts terribly and may have severe emotional consequences. This is the first reason to downplay ego-boosting.

But one gets *intermittant reinforcement* whenever a success pops up. The second reason to downplay seeking self-esteem is that in the long run, the emotional benefits dissipate while the costs accumulate.

Costs are (Crocker and Park, 2004):

- It sacrifices autonomy (need related to persistance & effectiveness)
- Interference with learning (impedes improving from feedback)
- Impaired relationships (antagonisms, reassurance seeking, control)
- Self-regulation suffers (cool vs hot system, procrastination, …)
- Risk factor for health (attempts to escape the self — alcohol,…)

Instead of Cherishing Self-Esteem, Try to Develop Self-Efficacy

Self-efficacy (Bandura, 1994) is an impression that one is capable of performing in a certain manner for attaining certain goals. It is a belief that one has the capabilities to execute courses of action required to manage prospective situations.

People's beliefs about their efficacy can be developed by four main sources of influence:

1. One's own mastery experiences;
2. Through vicarious experiences provided by social models;
3. By social persuasion;
4. By reducing stress reactions and altering negative emotional tendencies and misreadings of affective arousal states.

Perseverance

"I do not think there is any other quality so essential to success of any kind as the quality of perseverance. It overcomes almost everything, even nature."

John D. Rockefeller

"Success is not final, failure is not fatal:
It is the courage to continue that counts"

Winston Churchill

"What counts is not necessarily the size of the dog in the fight
- it's the size of the fight in the dog"

General Dwight Eisenhower

"With time and patience, the mulberry leaf becomes satin"

Chinese Proverb

"Consider the postage stamp; its usefulness consists in the ability
to stick to one thing until it gets there"

Josh Billings

Psychology of Perseverance

Need for autonomy refers to the sense of being the causal origin of one's behavior (deCharms, 1968). Autonomy in goal pursuits is related to increased behavioral persistance, more effective performance, and better mental and physical health (Deci & Ryan, 2000).

To persist or withdraw depends on people's ***self-theories of ability*** and expectancies for future efforts.

A. **INCREMENTAL THEORY**: ability can be learned and improved

B. **ENTITY THEORY**: belief that ability is fixed and unchangeable

Entity theorists experience large drops in self-esteem upon failure, give up or search for ways to cover up for the self and continue, by self-handicapping or procrastinating (Rhodewalt & Sorow, 2003). Incremental theorists think that they can redress failure through subsequent efforts (Dweck, 2000); hence they tend to persist.

Perseverance in Sport Psychology

Ultimate quest for both sport scientists and coaches is to determine what physiological and psychological factors produce the winning formula or what factors form the profile of a successful athlete.

Results of Morgan *et al.* (1987) indicated that successful athletes score above the norm on the mood state

- ***Vigor***, and below the norm on the mood states
- ***Tension***, ***depression, anger, fatigue***, and ***confusion***

With this "Ice-berg profile" they were able to predict 10 out of 16 finalists for the U.S. heavyweight rowing team.

In psychological skills training (PST) programs, most frequently used techniques are: ***arousal regulation*** (progressive relaxation, meditation), ***cognitive restructuring*** (thought-stopping-centering), ***goal setting*** and ***imagery training***.

Perseverance in Writing

There appears to be no similar empirical research on perseverance in writing. But as argued by almost any book on writing, it helps to:

- Make a schedule and keep it;
- Set goals, make outlines;
- Set priorities;
- Separate production of sentences ("following the stream of consciousness") from criticism and modification (editing);
- Monitor progress, re-evaluate goals and priorities.

See Silvia (2007), *How to Write a Lot*, for more detailed advice and relevant references on writing and editing.

Editorial Skills

Revising the Manuscript

Denis de Sallo, the first editor of the first scientific journal, in the first issue of the *Journal des Scavans* in 1665, wrote:

> "We aim to report the ideas of others without guanteeing them"

➔Even though peer review is a screening process to filter out bad quality and possibly identify good quality, the author then was and still is solely responsible for truth of facts and correctness of reasoning in her or his own paper.

It needs to be a logical story in balance with the claims put forward, their generality, and plausibility.

The *reports for the Author(s)* are the author's best chance to improve the paper by doing most of what the referees ask for!

Introduction: Objectives & Approach (*from*: *Marketing Science*)

Here are some possible objectives & what you need to do in each case.

- Develop a normative theory (a ***standard of behavior***) or a model. Requires a high level of logic. Show why current standard fails.
- Develop new ***normative tools*** (psychotherapy, selection procedure). Compare to existing tools, why it outperforms them.
- Discover an ***empirical regularity***. Need to establish that the generalization holds across wide variety of situations.
- New ***method development***. Superior to current methods on some criteria or conditions.
- Propose new descriptive or ***positive theory***. Should have more explanatory power.
- Substantive ***empirical comparisons***. Be careful about data quality, rigor of analysis, and validation of results.
- ***Theory testing***. Develop competing implications, predict better.

Common Problems with Results Sections

(*from: Stolerman, Babor & West*)

- ☹ Results are mixed with descriptions of methods and conclusions, and are not linked to questions asked;
- ☹ Claims are made but data are not shown;
- ☹ Original data and data manipulations are not described, just the results of statistical analysis.

➔ Structuring of ***How*** and ***What*** you find.

- ☹ Important findings are left to the end or not emphasized enough (*cf*. newspaper order);
- ☹ Insufficient graphical presentation; figures should be understandable without reading the text.
- ☹ Excessive detail in Tables and Figures; do not duplicate.

➔ Structuring the exposition.

Common Problems with Discussions

(from: Stolerman, Babor & West)

- ☹ Opening paragraph is only a summary of results, does not offer important conclusions in relation to the data;
- ☹ Does not focus on aims as stated in Introduction;
- ☹ Does not place findings in context of previous knowledge, does not say what is new and what is confirmatory.

➔ Have to translate back to aims and claims.

- ☹ Addresses too many issues and is too long;
- ☹ Does not consider alternative interpretations or does not acknowledge major limitations of the work.
- ☹ Descends into politics, polemics and discussing 'trends'.

➔ Have to reserve speculation for separate occasion.

Detail of Exposition: Some Rules-of-Thumb

(from: Marketing Science)

Good ideas are often simple. The easier it is for reviewers and editors to read your paper, the more they are to recognize your contributions.

1. Tell the reader what will be learned from the manuscript
2. Avoid Ambiguous Terms
3. Avoid Buzzwords
4. Avoid Jargon
5. Avoid Stringing Nouns Together
6. Be Direct
7. Be Specific
8. Define All Terms
9. Do Not Digress
10. Do Not Make Exaggerated Claims
11. Do Not Skip Stops
12. Read Your Paper Out Loud
13. Simplify Whenever Possible
14. Use Active Voice
15. Use Standard English
16. Work On Readability
17. Write In An Interesting Manner
18. Tell the reader what was learned
19. Avoid Acronyms

Communication Skills

Cons & Pros of the Peer Review System

In an editorial of the journal "Personality and Individual Differences", Eysenck & Eysenck (1992) summarized arguments about the peer review system. Against refereeing they list:

1. Refereeing is ***unreliable*** — referees often don't agree
2. Refereeing is ***not valid*** — judgments relate poorly to citation rate
3. Refereeing is ***biased*** — coloured by prestige and contribution
4. Refereeing is ***inefficient*** — delays publication, time consuming
5. Refereeing can be ***personally damaging*** — especially for novice

On the positive side, many agree on three major advantages:

1. Refereeing ***weeds out poor quality*** articles (identifies excellence?)
2. Refereeing improves both ***content*** and ***presentation*** of remaining
3. Double-blind refereeing ***reduces bias***

Two Types of Reviewers: Gatekeeper and Mediator

Tesser and Martin (2006) describe two roles or mind-sets of reviewers:

Gatekeeper: primary goal is keeping bad research out of good journals. Focus is on finding weaknesses in the manuscript.



- **Confirmation bias**: people tend to find what they are looking for (Gilovich, 1993)
- **Perfectionism** and high-quality journal attributions

Mediator: have a generative mind-set. Focus is on positive contributions of the paper.

- Generates reasons for accepting the paper
- Generates suggestions how to revise to make these more obvious or accessible

Multidimensional Judgment Space

Eysenck & Eysenck (1992) listed problematic dimensions of judgment space, argueing that most of them induce a wrong attitude in reviewers and that there is not one dimension of good or bad.

1. New horizons vs. bandwagon themes
2. Novelty vs. ordinary science
3. Content breadth or narrowness
4. Theory-oriented vs. heuristic
5. Experimental or correlational
6. Rigour vs approximation
7. Replication vs. independence
8. Positive vs. negative results
9. Power of statistical tests
10. Short vs. long paper
11. Simple vs. elaborate statistics
12. Style of writing
13. Student samples vs. non-student
14. National vs. international authorship (ingroup/outgroup journal)

The Editor is Your Best Friend

In a study carried out by Opthof et al. (2002) and reported in Daniel (2005), on manuscripts submitted to the journal *Cardiovascular Research*, a statistical combination of the reviewers' and editors' ratings had the strongest correlation with future citation rate.

There are other studies (e.g., Lock, 1985; Daniel, 1993, 2004) showing that editorial decisions have relatively high predictive validity.

Therefore, it need not surprise us that journals tend to work with a ***clear division of labour***:

Referees screen and suggest,
the editor balances and formulates
actions and conditions

Metamorphosis

It helps if the author is able to transform himself into some of the other roles that are relevant for the situation.

Imagine you were a gatekeeper: summarize the weak points of your paper in order of importance. What could compensate for them?

Imagine you were a specialist reader or an honest and fair rival researcher: under what conditions would you accept the paper?

Identify with the mediator referee if there is one, or formulate his opinion and suggestions on the basis of the previous exercise.

Imagine you were the editor: given the action letter, determine a bottom line for acceptance.

Responding to Referee Reports: Be Explicit and Detailed

Construct a detailed reply to referees. Reply with numbered sections corresponding to referee points. It could look like this:

Table 5.1 Example of the use of a table to respond to reviewers' comments.

No.	Comment	Location	Amendment
1	The long section on avoidance of food allergens is not useful. The paragraphs should be deleted ...	Page 3	This section has been shortened but not removed because one of the studies forms the basis of our hypothesis that diet modification may be important in reducing the incidence of asthma.
2	There should be discussion of the safety and possible side effects of Acaril	Page 5	A comment about the safety of Acaril has been added. Side effects of the active ingredient benzyl benzoate have only been reported when this compound has been applied directly to the skin or used to treat clothing at higher concentrations (10%). The concentration used in this study is 0·03% and is unlikely to cause these effects.
3	If sampling was by residential area, then there is a potential statistical issue to do with cluster designs	Page 6	We apologise for unintentionally being misleading. This study was not a cluster design and we have altered our wording accordingly. Children were selected who lived within a specified distance from the hospital. This has been made clear.
4	The method for calculating measurement error does not correspond to the coefficient of repeatability described by Bland and Altman in 1996	Page 7	We have calculated measurement error according to the method of Chinn (1991) and included the limits of agreement as described by Bland and Altman (1996).

(Continued)

Responding to Referee Reports: Do's and Don't's

- Make revisions to deal with most criticisms; then explain why you have not dealt with the rest.
- Be prepared to make some minor changes that may not really be necessary, to appease a gatekeeper.
- If there are important or major changes recommended that you are absolutely sure are wrong, then present a polite, argued rebuttal.
- Answer questions raised by referees in the ms., not in cover letter.
- Keep your reply as short as possible; spend a significant amount of time optimizing your reply to referees and editor.
- Maximize and stress agreements, acknowledge their contribution.
- Minimize disagreements (but not to the point of dishonesty).
- Be careful when you feel referee is biased, or has different views.

Conclusions

1. Coping with criticism requires self-confidence and perseverance.
   Self-confidence = Self-esteem + Self-efficacy.
   For scholarly work, second factor should dominate over the first.

2. Professional publishing behavior also needs self-regulation, respect for conventions, editorial awareness and care about detail.

3. Peer reviewing is not a Win-Lose clash of the titans, but a ***Win-Win negotiation process***, because editors want to publish results.

   Before Negotiation: prepare, plan, determine bargaining chips.

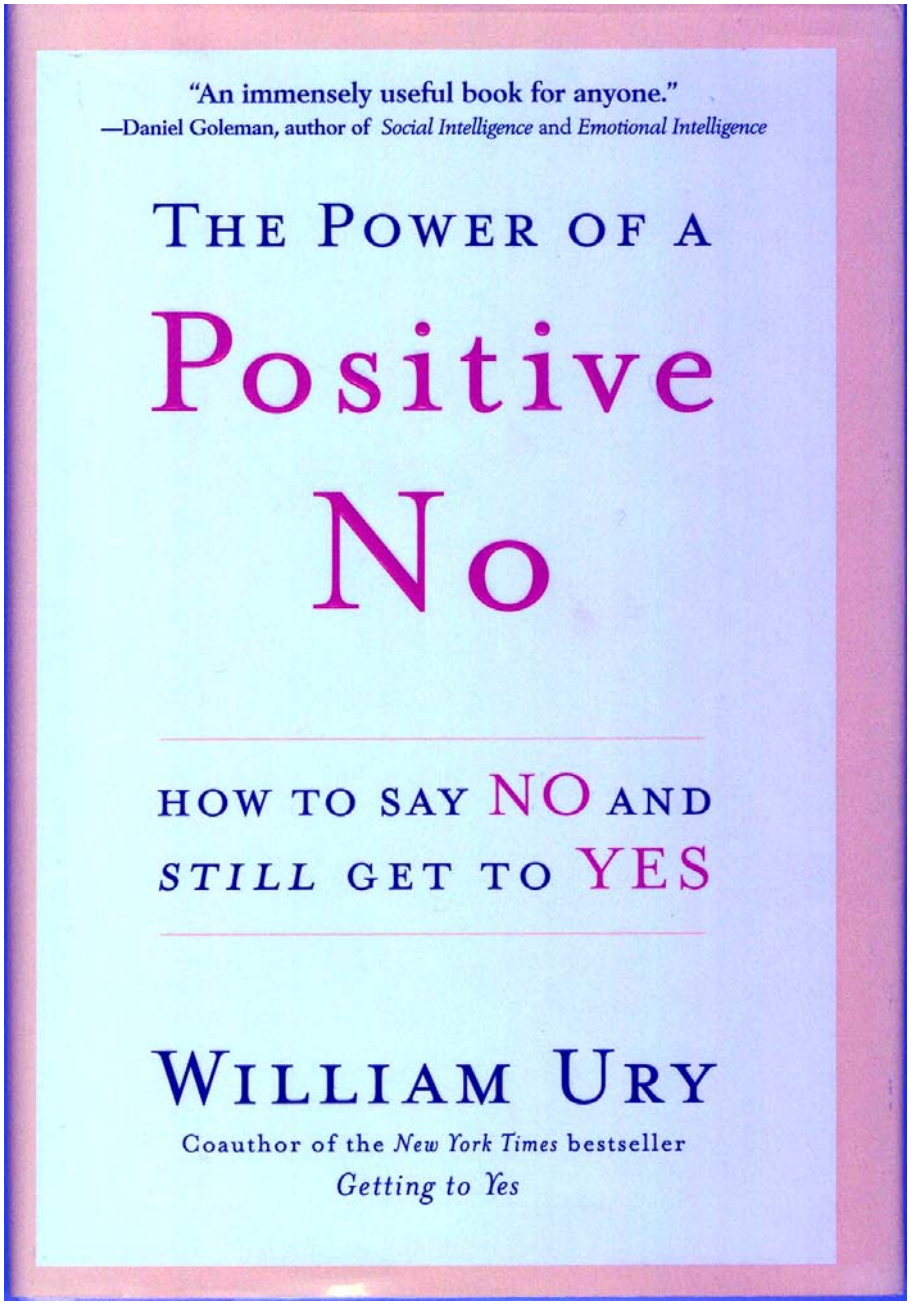
   During Negotiation: show respect, explore underlying needs of self and other, select and refine an Agreement, review and recap the Agreement.

   After Negotiation: review Negotiation and capture what you learned from it and from interaction with editor & referees.

NEGOTIATION

Win  Win

SKILLS


"An immensely useful book for anyone."
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THE POWER OF A
Positive
No
HOW TO SAY NO AND
STILL GET TO YES
WILLIAM URY
Coauthor of the New York Times bestseller
Getting to Yes

Notes and References

(added April 6-9, 2007, after oral presentation on March 30, 2007)

Notes

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2. The picture on page 2 was retrieved on February 23, 2007 from web site http://thingsfallapart.us/.

3. Classification listed here was composed from items in the tutorial by Stolerman, Babor and West (2004).
4. The vignette on page 7 was retrieved on March 5, 2007 from web site http://www.cl.utoledo.edu/canaday/artsandcrafts/demise.html.
5. For the quote about the rejection of Anne Frank on page 8, and several other striking samples from "letters that publishers wish they'd never sent", see the web site: http://www.writersservices.com/mag/m_rejection.htm, which refers to a book by Andre Bernard (retrieved February 23, 2007).
6. The quotes about perseverance on page 12 were selected from the web site http://www.ordinarypeoplecanwin.com/quotesperseverence.htm (retrieved February 23, 2007).
7. On page 15, I stated that there appears to be no similar empirical research on perseverance in writing. It turns out this statement is not quite true: there is interesting psychological work on the motivational and habit-formation side (Boice, 1982, 1983, 1989), with useful advice based on best practices using contingency management or operant conditioning (Boice, 1990, 1994). There is also cognitive psychological work studying processes of formulating and expressing thoughts in written text (Kellogg, 1994).
8. See Rennie (2003) for the quote of Denis de Sallo on page 17.

9. Material on pages 18, 21 was retrieved on September 15, 2006 from web site http://bear.cba.ufl.edu/centers/mks/author_information/howto.asp.
10. The table illustrating a detailed reply to referees on page 28 was reproduced from chapter 5 in Peat, Elliott, Baur, and Keena (2002).
11. The vignette on page 31 was retrieved on February 23, 2007 from web site http://uwadmnweb.uwyo.edu/HRTraining/courses/ns.asp.

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