Publishing success in the 21st Century, or: "Confessions of a Journal Editor"

Alan Stevens

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Introduction and Summary

Strategy

The wrong strategy can

- delay publication of good work
- lead to being ‘scooped’
- prevent publication in a high-impact journal

Practical issues

Bad writing/presentation can delay publication

Good and bad submission techniques

Simple things can have significant effects

Pitfalls

know them, avoid them, deal with them

- How “the system” works (from the inside)
- Some top tips

Introduction – What counts as a scientific publication?

- Published, or just publicly available?
- Conference papers
  - Scientific papers
  - Technical papers
- Independently refereed?
- Journal papers

Why bother?

- Makes your work known to the wider scientific community
- Advancement can be attributed and referenced in future work
- Allows comment and feedback

- Informs internal and external judgement of quality of your science and that of your Organisation
- May contribute to research assessment exercise
- May be a requirement or expectation of your funding

- Provides publicity for you and your Institute
- Builds your reputation (and your CV!)

- Focuses the mind!

Scientific publication

- Publication of the results of research is an essential part of the scientific method
- Authors must supply enough details such that an independent researcher could:
  - Assess the design and methodology
  - Repeat the experiment to verify the results
  - Determine whether conclusions are justified
- Each journal article becomes part of the permanent scientific record

Scientific Integrity

- Fabrication--the actual making up of research data
- Falsification--manipulation of research data and processes or omitting critical data or results

- Plagiarism = taking credit for the work of another
  - "citation amnesia"
- Submit to one journal at a time – or be blacklisted!
  - Multiple publication of the same content with different titles and/or in different journals is unethical
  - scientific journals explicitly ask authors not to do this
- Don't over-refer to your own publications

- Scientific integrity is way beyond simple honesty

Journals (and the scientific community) get it wrong

- Millikan's oil drop experiment
  - Some controversy over selectivity in Millikan's results of his second experiment measuring the electron charge
  - Subsequent re-confirmation by others “asymptoted” to today’s value
- The Cyril Burt method
  - The great psychologist who allegedly faked his data in his ground-breaking publications on the nature/nurture debate
- Pons and Fleischmann
  - Announcement of cold fusion
  - Hundreds of positive replications published in mainstream peer-reviewed journals

OK, you want to do it …

Are you ready to write a paper?

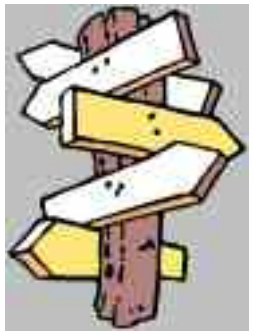
- Do you have something to say? What is the ORIGINAL scientific contribution?
- How is your work a SIGNIFICANT advance and different from what has preceded it?
- *Top Tip*: Good review papers are very welcome

- Are you free to publish?
- Do you need to protect any Intellectual property?

The Paper: Typical basic components

- Title
- Authors/Contacts/Corresponding author
- Abstract
- Key words
- Introduction/Literature review
- Theory
- Method/Experimental procedure/Data processing
- Results
- Discussion
- Conclusions, further work
- References
- Acknowledgements

The self explanatory title



- Identifies progress made
- Describes something new
- Involves issues/concepts not previously juxtaposed
- Refutes an old idea
- Demonstrates a new technique
- Answers a puzzling question
- Shows how to do something quicker, cheaper, more efficiently, etc.

Checks to make on your title

- Is it accurate?
- Is it concise?
- Is it clear and unambiguous?
- Does it contain all the important/essential words?
- Is it interesting?

If any answers are ‘no’, it needs more work!

The difference a title can make

- Investigation of the performance of an Extended Keystroke Level Model (KLM) as a surrogate metric for drivers' visual demand: Studies with in-vehicle information systems (IVIS) in simulated and semi-realistic driving environments to compare measured and predicted performance

- An Extended Keystroke Level Model for Predicting the Visual Demand of In-vehicle Information Systems

Authors

- Who made a creative contribution to the work?
  - Inspiration, ideas,
  - Design of details, practical work,
  - Data interpretation, implications etc
  - Non-creative contributions can be signalled in acknowledgements
- Gratuitious authors:
  - The “heavyweight” researcher?
- Who is writing the paper/corresponding author?
- Who provided the resources, facilities?
- Order in which authors are placed...
  - Assumption of priority?
  - Link to number of authors:
    - Crick and Watson (1953) v Crick et al (1953)

Some more tips

- Use tables and charts effectively – illustrations need to look professional
- Provide lots of key words (so it is more likely to be found)
- Make any controversy overt

Drafting (some basics)

- Passive voice is/(used to be?) the norm in scientific publishing
- Use past tense for results; the abstract may be in present tense, also generalisations and recognised findings
- Aim for a scholarly yet inviting style
- Avoid slang/colloquial/over-exaggerated language
  - "Set-up", "huge", "massive" "disastrous"
- Write in full (avoid contractions)
  - "don't", "shouldn't"
- Use non-sexist language
- Be careful with jargon

- Put your draft aside for a few days and revisit it more objectively
- Get other opinions

Non-sexist language
(Dr Gary Burnett, Nottingham University)

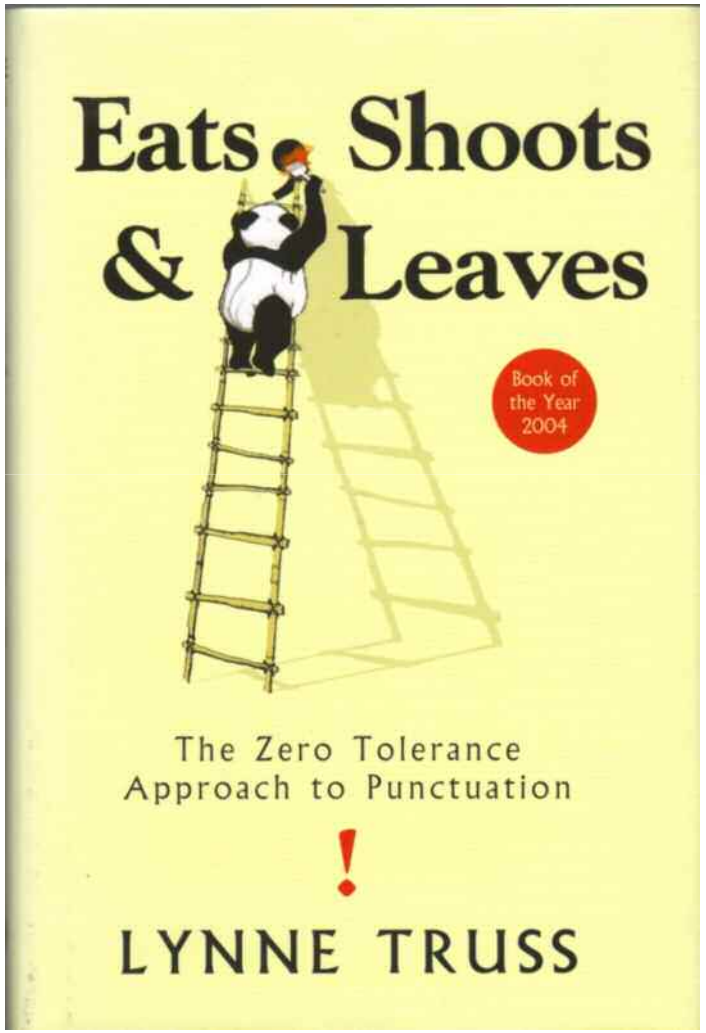
- "To boldly go where no man has gone before"

  - To boldly go where no man or woman has gone before?
  - To boldly go where no one has gone before?
  - To boldly go where no humanoid, android, robot, intelligent gaseous cloud being, non-corporeal energy entity, holographic projection, psychokinetic though-pattern reflection or anything else has gone before
  - To boldly go where we have never gone before...

Did they mean to say this?

"After standing in boiling water for an hour, examine the flask."

"With the aid of a thin platinum wire rabbit, pig and human cells were inoculated onto agar plates."



('How to Write & Publish a Scientific Paper', Robert A. Day. Oryx Press, 1998, 5th edition)

How readable is your paper?

- Fog Index (Gunning FogTest) gives the number of years of education that a reader needs to understand what is written.
- Take a paragraph/section:
  - Count the number of words, W
  - Count the number of sentences, S
  - Count the number of hard words of three or more syllables, HW
  - Apply the formula: [W/S + (HW/W) x 100] x 0.4
- Examples:
  - TV guides, The Bible: 6
  - Popular novels: 8-10
  - Time, Newsweek: 10
  - Times, Guardian: 14
  - Academic papers: 15-20
  - Government documents >20
- Aim for 10-15

The end bits

- References:
  - Vancouver/Numeric [3]
  - Harvard/Scientific (Royale, 2007)
  - Format depends on conference/journal
  - Software can help e.g. EndNotes

- Acknowledgements:
  - People who helped but didn’t make a creative contribution
  - Sources of finance of each author
  - Other influential factors

Copyright issues

- In most cases, the author of an article is required to transfer the copyright to the journal publisher
- (Publishers claim this is necessary in order to protect author's rights, and to coordinate permissions for reprints or other use)
- Some governments and research institutes refuse but give the publisher an irrevocable license to publish, and retain the other rights themselves
- In any case, author usually has right to distribute a number of reprints/post-prints
- Open access movement

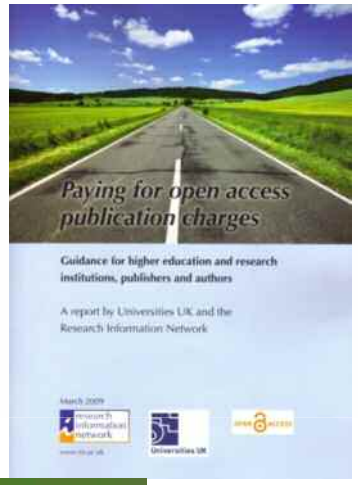
Digital first policy

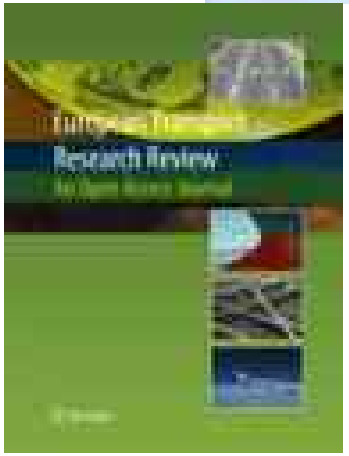
"The market is ... moving away from print-based offerings to rapidly disseminated and highly searchable web-based formats"

- What is the role of journals in the digital age?
  - Hardcopy 4 times/year
  - Papers available online immediately they are accepted (if you subscribe!)
- Future – everything on the web and "the journal" as a quality stamp?

Open Access Movement

- Publication has a cost
- Standard model: pay for journals
- Requirement to make research freely and rapidly available e.g. US National Institute for Health, Wellcome Trust
- Alternate models:
  - Pay to publish paper
  - Journal has independent financial support
- Some Variations:
  - Print and/or Web only subscriptions
  - Hybrid publications
  - Delayed publication
  - Referee 10 and publish 1 free?





Where to place your work

- Essential to identify the “right” journal

- Some journals/editors seem to work on a geographic basis
- Journals have different scientific impact
- Acceptance rate and time to publication can be very different
  - How many publications/year or “on acceptance”?
  - How many papers does the Editor have in hand?
  - Can priorities be assigned and using what criteria?
  - Special issue with a particular focus?

- Is the journal double blind refereed?
  - Relationships count

- Conference, magazine AND journal?
  - Possible if you are keen!

Journal Key Performance Indicators

- Table shows a selection journals indexed by Thomson under their "Transportation Science & Technology" category, and various KPIs (may be out of date)

Rank	Abbreviated Journal Title	Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life
2	IEEE T INTELL TRANSP	178	0.982	0.122	41	3.5
7	J ADV TRANSPORT	93	0.533	0.000	16	
13	TRANSPORT RES A-POL	619	0.646	0.083	48	8.6
14	TRANSPORT RES B-METH	1266	1.411	0.295	44	8.8
15	TRANSPORT RES C-EMER	305	0.651	0.000	16	6.2
20	TRANSPORTATION	382	1.190	0.143	28	6.5

Impact Factor

- Critical to a journal's success and still the most common benchmark of quality

- How it works:
  - Firstly, a journal must be accepted for indexing by Thomson ISI (Web of Science). This depends on citation rate and it takes new journals a while to get going
  - IF is obtained by dividing the number of articles published in a 2 year period, by the number of total citations the journal receives in the same period

Other things you should know!

- Journals want to be known for quality (Tier 1 Journal)
- Journal seeks a good number of submissions
- Short time to first decision (also important to Authors!)
- Immediate rejection rate:
  - tends to increase as journal becomes known (and gets more choosy)
- Acceptance rate:
  - tends to reduce – 25% is typical

ITS	J	F	M	A	M	J	J	A	S	O	N	D	
Submissions	0	0	17	9	2	2	5	2	4	7	30	8	**86**
% decisions within 4 months			100	100	100	100	90.5	91.2	86	86.8	84	83.3	
Papers over 4 months			0	0	0	0	3	3	0	0	0	0	
% acceptance rate			72.2	65.5	55	58.8	61.8	60	60	58.5	57	49	
% immediate rejects			27.8	34.5	38.7	38.2	35.7	38	36	41.5	37.5	43.6	

How to identify the right journal

- What's important to you?
  - Journal reputation / Journal impact
  - Circulation, visibility
  - Acceptance/rejection rates
  - Speed of handling
  - Speed of publication
  - Quality of printing - graphics
  - Publication costs: author pays, page charges, colour work charges
  - Publication benefits: preprints, issue of journal, ...
  - Subscription or Open Access

- Talk to colleagues, seek advice
  - For choosing journal and writing paper

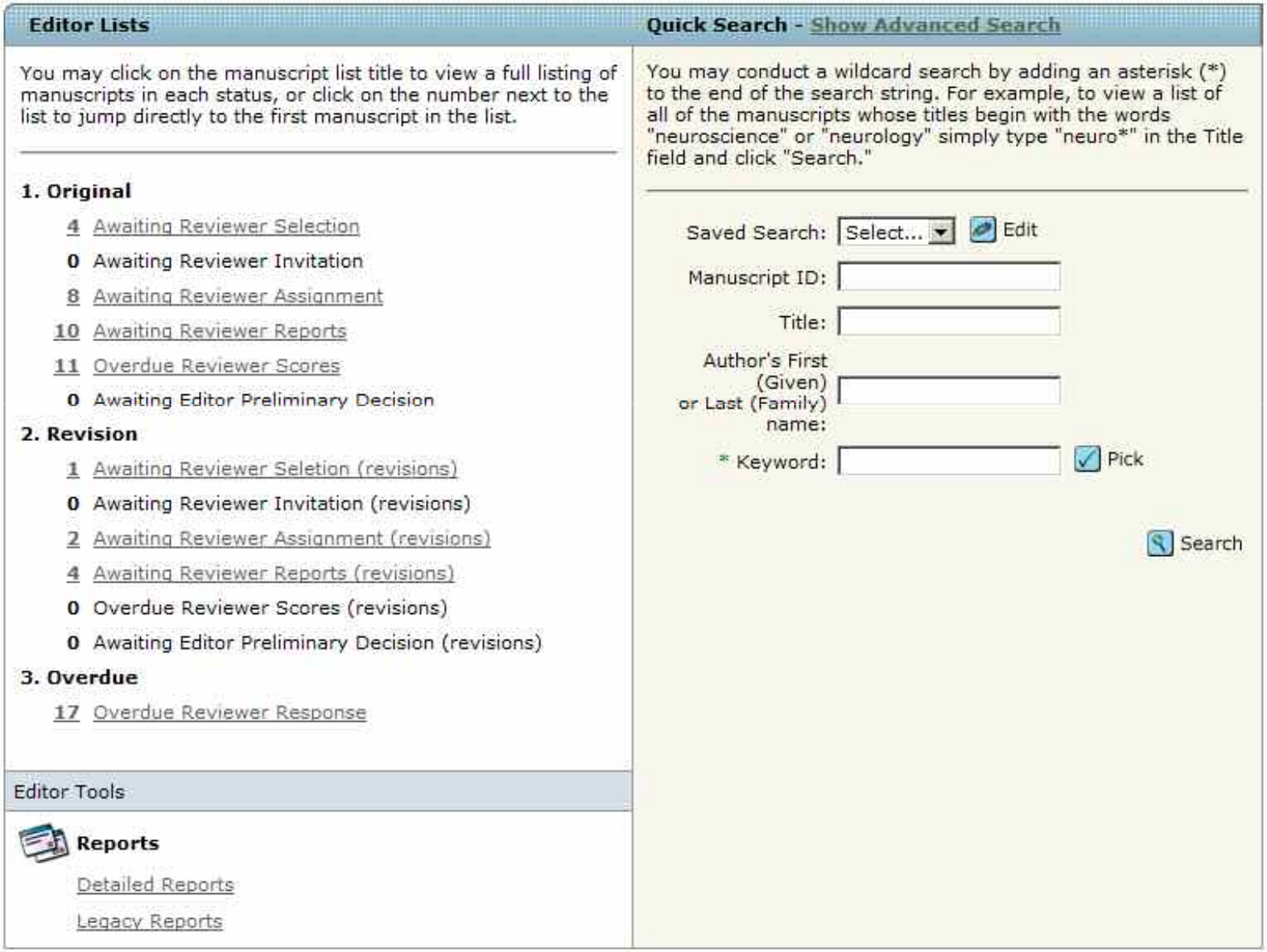
Cover letters should

- Be addressed to the right journal and the right person
- Be professional and courteous
- Be concise but informative
- Briefly describe the work and its suitability for the journal
- Indicate significance and novelty of the work
- Not contain exaggerated claims
- Include all statements and information required by the journal
- Mention any exceptions to journal requirements
- Mention any relevant previous communications with the editor or editorial office
- Give any dates of absence and alternative contact details or name and details of person to contact during that time
- Top tip: suggest some possible referees

You're ready to submit

- Your manuscript is complete, well written, well presented, organised according to the journal's requirements
- All enclosures and permissions are to hand
- You've prepared a good cover letter
- Make sure the document is "stable" (e.g. use RTF)
- Perhaps you can suggest some referees?
- You've got a copy of everything
- You know how and where to submit
- If submitting online, remember to press the 'Submit' button
- Make sure you get an acknowledgement/ref number

Working the System



Initial Checks

- The editorial office/Editor will immediately reject some papers:
  - Scope – any papers OBVIOUSLY not within the scope of the journal
  - Length – any papers not conforming to the length policy requirements
  - English – any papers that are deemed to be of VERY poor quality
  - References – any papers with either very few, or only very old references
- The Editorial Office assumes that if a paper passes initial quality checks, it is suitable for sending to reviewers
- Editor has small window of opportunity to decline a paper

Reviewing

- "The System" has a database of reviewers
  - areas of expertise, how many papers reviewed recently, turnaround times, scores given etc.
- If possible, Editorial office will choose reviewers
- Editor may choose or may need to select additional reviewers
- A good source is authors of references quoted
- Options: Blind refereeing, who knows who...
- Comments to Author
- Comments to Editor

What the referees are asked

- General:
  - Is the subject matter suitable for publication in this journal? (If NO, suggest other journals)
  - Does the paper describe original work? (If No, give references to previous)
  - Are the references adequate? (If No, provide suggestions)
  - Should the paper be shorter? (If Yes, make suggestions)
- Evaluation of technical content:
  - Theory
  - Engineering application
- Presentation:
  - Has the author demonstrated the value of the work?
  - Is the manuscript organised to show clearly what has been done?
  - Is the use of English clear and unambiguous?

Options given to Referee

- ☑Accept
- ☑Accept subject to minor revisions
- ☑Accept subject to major revisions
- ☑Decline with encouragement to submit a substantially revised paper
- ☑Decline

When Referees comments are returned

- Usually need 3 referee returns – sometimes up to 5
- Editorial Office monitors
- Editor is emailed when decision can be taken
- 9/10 times it's pretty straightforward
- 1/10 are more interesting!
- Occasionally need a further referee

Feedback Examples (all real!)

- "This is outstanding work that should definitely be presented"

- " Please accept ... this critique as a love of the paper, and a desire to see it improved so that it is equally loved and embraced by the entire community"

- " The paper is poorly written. This cannot be overstated. It has four high-level problems. First, it is poorly organized. Entire sections, as well as paragraphs within sections, are presented out of order. Second, sections and paragraphs do not discuss what they are purported to set out to discuss. Third, ... Fourth, ... Please rewrite the paper."

Revising paper

- If you can make changes – move fast
- Paper is often re-reviewed by original referees and this can be quite quick
- Don't get defensive
  - Referees like to look useful
  - They may be right!
  - Remember it's the paper they are criticising, not you
- You will need to revise the paper AND reply to each point describing what you have done in response
- Always be courteous and professional …

"… We are indebted to the referees for their many helpful comments to improve our paper" … (!!!**?!!)

A successful outcome!

“Thank you for submitting your work to this journal. We are pleased to accept your paper and look forward to publishing it”

Handling rejection

- Read the comments carefully
- Don’t respond in the heat of the moment
- Don’t insult the Editor or reviewers or call their abilities into question
- Don’t make threats or issue ultimatums
- Don’t try to argue it back (unless you feel really aggrieved and sure of your ground!)
- Can something be salvaged?
- Consider an alternative journal
- Keep it – it might come in handy later
- Keep writing – start again

Good Luck!

Alan Stevens

Editor in Chief

IET Intelligent Transport Systems

Do You
Have Any
Questions?