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How to publish your research in *Technological Forecasting & Social Change*

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ABSTRACT

A slide presentation of this material has been well received in several countries. Presenting it here in paragraph form should be helpful to additional authors. The editorial explains the current flow path for incoming submissions to *Technological Forecasting & Social Change*. It details five areas authors should attend to, in order that their manuscripts should pass the Editor-in-Chief's and Associate Editors' preliminary approval, and be sent to external peer review. It concludes with a list of twenty common mistakes that would prevent a paper from going to peer-review.

1. Technological Forecasting & Social Change

Widely considered one of the top three technology management journals, TF&SC has an impact factor of about 3.1, making it an attractive target for authors. Indeed about two thousand manuscripts are submitted each year. 1.2 million TF&SC articles are downloaded every year, meaning that our articles are read, and have a good chance of being cited.

We publish approximately 225 articles per year, implying an acceptance rate of about 12%. Many of the points made below are consequences of this low acceptance rate.

1.1. TF&SC's theme and scope

The journal is concerned with the interaction of technological change with social/organizational change; problems of forecasting, adoption, diffusion, and implementation of new technologies; and new and improved methodologies for studying those problems. Within those frames, we feature strong ongoing streams in environmental sustainability, system theory, and innovation. Many arriving papers fall outside this scope, and I return them to authors with this notice:

Technological Forecasting & Social Change is not a general innovation journal, strategy journal, entrepreneurship journal, or R&D journal. TF&SC papers may “cross” one or more of these areas. TF&SC papers must have an explicit technological focus and some measure of future-orientation. They must relate technological innovation(s) to social impacts, or extend the methodologies for doing so. Papers focusing on the profitability of individual companies are not of interest to *Technological Forecasting & Social Change*, although “social change” can sometimes be interpreted as organizational change. *Technological Forecasting & Social Change* seeks substantial and important (i.e., not incremental) research results.

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I admit this is not an unambiguous guide to what fits TF&SC and what doesn't. There will not be such a guide, as we are an interdisciplinary journal and we must be open to important new ideas. Further, though I communicate periodically with our Associate Editors about the journal's theme, the AEs are senior researchers whose opinions I respect. They may not have identical ideas about whether a particular paper falls within TF&SC's scope.

1.2. Workflow

All incoming manuscripts come to my attention. I return (“desk-reject”) a great many of them, for reasons detailed below. I assign the remainder to one of the Associate Editors for further consideration. The Associate Editors may, and are encouraged to, exercise the desk-reject option when appropriate. The AEs invite peer reviewers, either members of TF&SC's Advisory Board or other experts, to examine the remaining papers. The AEs use the reviewers' comments and their own judgment to issue the reject/accept/revise decisions. (Another editorial decision for a submitted research article might be, “Resubmit as a different article type.” The other types are Research Note, and From My Perspective.)

Finding reviewers who are qualified, willing, and available has always been difficult, and recently has become more so for a number of reasons, some having to do with lower university budgets and higher professor workloads. This means, first, that reviewers, not authors, are our scarce resource. Though it pains the AEs and me to say such a harsh thing, we must desk-reject papers that are likely to bother reviewers unnecessarily.

Second, it means review cycles are getting longer, as reviewers decline or do not respond to invitations, and new reviewers must be invited. Polite reminder letters from authors to editors are always

welcome when delays occur, but I do hope the authors who write these letters are willing reviewers when they are asked (by any journal) to referee the papers of others.

2. How to get your paper noticed and into the review process

Though the title above is “How to Publish...,” an author’s main hurdle (aside from scientific rigor and ethics!) is reaching the peer-review stage, i.e., not getting desk-rejected. To this end, authors must attend to five main considerations: Topic, Title, Abstract, Methodology, and Prose. The remainder of this essay addresses these.

2.1. Topic

The paper’s topic must fall within TF&SC’s theme and scope. This is laid out in the paragraphs above, and on the journal’s web site, where you may also find “Author Guidelines.” Read the Author Guidelines! Read published TF&SC papers. These sources will help you understand the style, length, and topic coverage of TF&SC papers.

Please don’t email the editors to ask whether an idea for a paper fits the journal. With two thousand incoming manuscripts each year, we cannot take the time (and risk of error) to judge your intended paper on the basis of your brief description. Write the paper and upload it to <https://www.evise.com/profile/#/TFS/login>. If it is not a fit, you will hear from us quickly.

Avoid trendy topics. If the mainstream media have covered a technological trend, you can be confident other researchers are thinking along lines similar to yours. None of them will be taking exactly your approach to the problem, but there are only so many papers we can publish on a single topic. For example, we are already receiving too many papers on adoption of mobile payment systems, and on Industry 4.0’s impact on employment. If you feel strongly that you have something important to say about a trending topic, check the list of special issue projects at the TF&SC web site; one of them might be soliciting papers on the topic.

We do prefer papers treating topics of broad importance. (That said, no sentence in your paper should say the article presents a “major” or “important” advance. Whether your paper is important is for the reviewers to decide.) We have little page space for papers showing how adding a moderating variable to an established model yields an additional half percentage point of statistical power. However, rigorous research showing such incremental results may be published occasionally. Replication studies can be welcomed also.

2.2. Title

Your paper’s title should indicate as precisely as possible what your paper is about. It should be eye-catching, without going too far in the direction of Hollywood glitz. It should be short. A good recent example is “Private highly automated vehicles: Factors affecting consumers’ intention to adopt.” This title could be even shorter, but it tells the reader exactly what the paper is about.

A less auspicious recent title was “Human-Like and System-Like Trust in the Sharing Economy: The Role of Context and Humanness.” This author may have written a good paper, but if I were to look only at this title, I would have no idea what the paper is about. Puzzled journal readers would hesitate to click through to read the paper.

The title must be grammatical. Grammar mistakes in the title strongly suggest there will be many more in the body text.

2.3. Abstract

TF&SC does not require “structured abstracts,” as some other journals do. Yet your abstract should signal (usually in one sentence each):

- The research question.

- Importance of the question.
- Technique(s) used to resolve the question.
- Key results.
- Example of management or policy implications of results.

Here is an abstract, from a submitted paper, that succinctly conveys each of those items.

Are mobile technologies important prerequisites for entrepreneurship growth in developing countries? The answer is yes, but we argue that its importance is dependent on the prevailing business environment. We test this assertion using a panel of 56 developing countries (2006–2016). Using the System Generalized Methods of Moments (SGMM) estimation technique we find that mobile technologies are associated with increased entrepreneurial activities: Internet technology is more impactful than mobile phone usage. We find that the unfavorable business environment is associated with a lower impact from mobile technologies on entrepreneurship in developing countries.

An abstract should not say, “Policy and management implications are also discussed.” We certainly hope they are discussed! Instead, the abstract should give brief *examples* of policy/management implications and action recommendations stemming from the research. The abstract above does not exactly do this, but it does give an example of a *finding* (a key result). This particular finding strongly suggests an action path for policy makers.

Do not use formulas, undefined acronyms, or references in the abstract.

On-point titles and abstracts help editors quickly make the decisions that you, the author, are waiting for. When titles, abstracts or introduction sections are ambiguous or confusing, we may put your paper aside until we have time to carefully read the paper in its entirety, trying to understand what you are saying, before deciding whether to send it to peer review. This may take a while.

The journal also requires “Research Highlights.” These are not an abstract of the abstract! They are meant to interest lay readers, including journalists, in your work. If making your research visible to the public is of interest to you, mind the rules for the Research Highlights.¹

2.4. Methodology

State the methodology to be used, and use the methodology you stated. Empirical papers will state one methodology for data collection, and another methodology for data analysis. If you are proposing a new method, compare its performance to an existing method. The new method need not be superior in all situations, but you should note in what kinds of cases the new one yields superior results.

Multiple-methodology studies, though not required, make stronger papers.

TF&SC welcomes both qualitative and quantitative studies. Qualitative research is at risk of descending into undisciplined storytelling, and quantitative research may display mathematical virtuosity without revealing any new knowledge about technology management. Carefully choose and use a methodology in a way that yields

¹ The Highlights must state what your paper SAYS, not what your paper DOES. These short bulleted items should STATE (not characterize) your research results, as specifically as possible (e.g., “Uptake of nanotech is faster in the auto industry than in agriculture,” NOT “Analysis shows differences in uptake among industries”) and succinct, impactful interpretations and policy implications (“Agriculture in Europe is missing a two-billion-euro opportunity”). The Highlights should NOT be a condensation of your paper’s abstract, but should be framed as if for a press release. Think of the educated press (*The Economist*, *WIRED*, *Technology Review*, *Foreign Policy*) and the trade press of the industry your article addresses. Attention from those publications increases your own reputation as well as TF&SC’s.

meaningful results.

Our editors can be skeptical when a junior researcher uses a methodology that requires judgmental input. Papers using Grounded Theory or latent variable methods (except for simple factor analyses) cause the editors to wonder whether the author has developed the mature judgment needed to use those techniques. Especially when n is borderline-sufficient in a SEM study!

Some methodologies, like text mining and multi-level models, have become practicable only with recently increased computer power. They can be fascinating, but use them (or really, any techniques) only when there is a good research reason for using them. My students know that one of Phillips' Laws is, "The worst reason in the world for doing something is *just because you can*." The Law supplements the old saying, "When your only tool is a hammer, every problem looks like a nail."

We almost always prefer causal models to time-series forecasting models. We tend to reject conceptual models that lack supporting evidence, as well as studies using only university students as survey/experimental subjects.

Researchers used to have to justify using secondary data, as journals preferred original (primary) data that perfectly fit the research question. Times have changed! There are now myriad data sets online, from which you can choose appropriate samples of many thousand points. If your sample is primary and just a few hundred, you must justify why you did not use a secondary source. This is especially important when authors set forth eighteen or twenty hypotheses (as many tend to do). Testing such an ensemble on a single smallish sample virtually guarantees a few false negatives or false positives.

2.5. Prose

TF&SC must remain readable by academics, practitioners, and policy makers alike. Your paper's English expression must be not just adequate, but excellent. Use a professional scientific editor if you are in doubt.

It is an academic habit to write compound-complex sentences with multiple clauses, semicolons, ands, buts, and however's. It is not a requirement at TF&SC. Short sentences are okay (Subject, Verb, Object). They are especially okay for authors whose English is uncertain. This sentence from a submitted paper – "We can state that the on-going transformation of the education system is related mostly to the dynamic tempo of life and its overall development, which logically were causing the polutaion [sic] to face higher requirements in terms of higher demands on flexibility, productivity, onset at work and requirements for life-long education" – suggests that a reader who makes it all the way to the end of the sentence might be hard pressed to remember how the sentence began.

Use jargon only when absolutely necessary for precision. Otherwise, write in plain language. "If you can't explain it to a six year old, you probably don't understand it yourself" is an admonition attributed to Albert Einstein. It is apt. Although your TF&SC readers are older than six, they represent multiple disciplines, and may not be current with the specialized terms of your research area.

How much didactic material should you include in your paper? For readers of TF&SC, you do not need to explain s-curves. You might need to explain multi-level statistical models. Our readers are on top of many aspects of climate change, but may not know all details of the Intergovernmental Panel on Climate Change's reports. Understand the journal's readership, and calibrate didactic paragraphs accordingly.

Write concisely. Instead of saying "The aim of this paper is" or "This

paper attempts to," tell us simply what the paper did or did not do. (That's what we're interested in knowing, anyway.) Avoid redundant expressions like plan ahead, forecast the future, and advance planning. Your paper's introduction should gift the reader with not more than one opening platitude, e.g., "In today's complex technological world..."

Use active voice unless the passive is absolutely unavoidable. Make each sentence as clear and specific as you can. Put yourself "in the reader's head," imagining how someone without your unique perspective might understand that sentence.

3. Twenty ways to get a paper rejected

Desk-rejection letters include the following twenty items in checklist form. Number 20, "Other," can allow editors to briefly clarify why one of numbers 1 through 19 were ticked. Due to the high number of submissions, we comment in greater detail only on papers that do have a chance of publication in TF&SC. Authors of desk-rejected papers should not expect long critiques of their manuscripts.

1. Too few or no citations of related papers in TF&SC.
2. High iThenticate score suggests excessive use of passages published elsewhere.
3. We have recently received an ample number of papers on this topic. Or, the topic has been covered adequately by recent and in-progress TF&SC articles.
4. Paper should be re-submitted as a different article type.
5. Awkward or ungrammatical English would bias reviewers against this paper.
6. The paper is not written at the level demanded by our readers, editors, and reviewers.
7. The research contribution is too incremental or too narrow in its applicability.
8. The research paper or research note lacks a clear statement of research question, and/or a statement of data collection or analytic technique that will be used to answer it.
9. The importance of the research question is not well established.
10. Paper is unnecessarily long.
11. The topic is already well developed and/or the problem has been solved in prior literature.
12. Technology focus is missing or at most incidental to this research.
13. Insufficient sample size.
14. Concept or model is presented without test.
15. Paper's language is too specialized for our interdisciplinary audience.
16. Research Highlights and/or Abstract does not conform to TF&SC guidelines.
17. Title is too long, non-descriptive of article's content, obscurely phrased, ungrammatical, and/or uses acronyms.
18. Paper falls outside of, or is at best peripheral to, TF&SC's theme and scope.
19. Conclusions are commonsense or broadly obvious even without benefit of research.
20. Other: _____

Do read the Author Guidelines at www.elsevier.com/locate/techfore. Observing the additional advice items in the present editorial will help you write papers that have better chances of publication, and papers that will speed more quickly through the review process.