

EDITORAL

To Engage, Inform, and Inspire: The Many Facets of Scientific Writing

James Houran editor@scientificexploration.org orcid.org/0000-0003-1725-582X



Why does anyone invest the time and effort to write (or even to read or review) journal articles? It is easily presumed from the long history of scientific publishing that the obvious answer is to communicate new knowledge or information. In fact, the demand by many journals for submissions with lower word counts arguably encourages an economy of expression that better engages and collectively benefits publishers, authors, and readers, all of whom compete in an information-saturated society which has a shrinking attention span (Lorenz-Spreen et al., 2019). For example, shorter and easier to understand article titles tend to garner more interest and citations (e.g., Habibzadeh & Yadollahie, 2010; Letchford et al., 2015). This is critical intel given Meho's (2007) research indicating some 90% of papers published in academic journals are never cited and that 50% of papers are apparently never read by anyone other than their authors, referees, and journal editors. In some sense, academic writing is revisiting its historical roots as simple correspondence between colleagues (Kronick, 2001). But other literature suggests additional facets or purposes of scientific writing — some transactional, others transpersonal. These are worth noting and even protecting because they are in danger of being stifled as greater emphasis is placed on brevity versus creativity. Three key categories neatly describe these broader and equally legitimate author motivations.

SCHOLARLY & HISTORIC DOCUMENTATION

To be ignorant of what occurred before you were born is to remain always child. (Cicero, 1913, p. 395)

https://doi.org/10.31275/20233131

PLATINUM OPEN ACCESS



Creative Commons License 4.0. CC-BY-NC. Attribution required.

There are meta-realities to many articles that transcend topical summaries of new information or cumulative knowledge. *First*, papers can be real-time archives of technical information that increase the transparency and access to important raw data for verification or extended analysis, as well as critical details that enable others to conduct strict or conceptual replications. Data sharing used to be a common and expected part of academic etiquette, but sadly has become an increasingly thorny issue (e.g., Evans, 2010; Gewin, 2016; Nelson, 2016; Parka & Gabbard, 2017; Soranno et al., 2015; Tenopir et al., 2011). Thus, one may understandably ask what constitutes too much detail or data to share with readers? Authors can sometimes file information with online repositories, and a number of journals likewise offer options for archiving datasets or other supplemental material. On the other hand, authors or journals do not always have these options or capabilities, which can introduce multiple steps for interested readers or researchers. There is something constructive, therefore, about papers being conveniently self-contained and comprehensive. Simply put, saving readers' time is surely as desirable as conserving journal space.

James Houran EDITORAL

Second, articles of all types often and unwittingly serve as records of time, place, or other contextual variables that will help future researchers to understand the academic eco-system of the day that produced those works. Publications can thus reveal important insights about scientific trends or switching behavior (akin to "fads or crazes," see, e.g., Zeng et al., 2019) across themes, approaches, or ideologies that define a particular Zeitgeist. Cyberpsychology was all the rage 20 or so years ago when the internet became a tool of the masses, whereas twenty years from now, scientists will undoubtedly revisit with fresh and discerning eyes the assumptions and conclusions that dominated the myriad of studies on purportedly "conspiratorial thinking and misinformation" about the COVID-19 pandemic. Superficial content analyses of article titles or keywords are always feasible, but studies that aim to explore complexities and nuance arguably can only be done with material containing rich details.

PROFESSIONAL LEARNING & DEVELOPMENT

Publish or perish (Coolidge, 1932, p. 308)

Career pathing and self-improvement—key elements of a professional scientist's self-concept—are obvious and potentially strong tangible benefits of academic writing. A transpersonal perspective might go further to suggest that some papers can promote an author's "self-expansiveness." This term denotes the malleable nature of self-concept, which can expand under certain situations and cause people to understand their identities as something beyond the limitations of "self" and the here-andnow (Friedman, 2013). For example, the ongoing process of writing (and reading others' works) provides important lessons about the best ways to organize or articulate one's observations or arguments. Influential publications indeed bring a certain level of prestige by demonstrating research productivity or establishing ownership of ideas, that is, taking public credit for ground-breaking methods, important observations, or innovative conclusions (see e.g., Rawat & Meena, 2014). This can positively affect a researcher's job prospects and ability to be promoted or gain tenure, as well as other financially profitable arrangements in academia or even overtures for commercial consultancies. But other direct rewards are no less profitable. The writing process and aftereffects of articles can set roadmaps for new work or bring invitations or introductions to fruitful scientific collaborations that push an individual's personal and professional development. Expanding one's professional networks or intellectual boundaries are wonderful outcomes that also advance the scientific process, but be wary of giving undeserved (or "honorary") authorship or not being formally acknowledged for one's contributions to published works, i.e., "ghost" authorship (Pruschak & Hopp, 2022, p. 1)

PERSONAL LEISURE & ENRICHMENT

Either write something worth reading or do something worth writing (Franklin, 1738, Month: May, Column: 2)

Some authors approach academic writing as a wearying chore or necessary evil. Yet, colleagues more often tell me that it gives them a satisfying sense of building or creating something novel and meaningful. A select few have even described what sounds eerily like enlightening "Eureka or Ah-ha!" experiences during the writing process. The online APA Dictionary of Psychology (2023, para. 1) describes this as "the emotional reaction that typically occurs at a moment of sudden insight into a problem or other puzzling issue. It is the experience one would have upon realizing, for example, how to fix a computer problem, master a dance step, or resolve some other difficulty. In psychotherapy, it is specifically a client's sudden insight into his or her motives for cognitions, affects, or behaviors." This is perhaps not too surprising. Moravcsik (1974) noted long ago that both artists and scientists are similarly motivated by a strong sense of curiosity, with inspiration then compelling these creative individuals to act on their insights and ideas (Oleynick et al., 2014).

Paralleling the idea of self-expansiveness above, Varella (2021) further observed that intrinsic factors (e.g., personal taste, aptitude, fulfillment) typically are more important artistic motivations than extrinsic factors (e.g., the influence of social norms, salary, or prestige). This is certainly not a hard-and-fast rule, as some research has found mixed results concerning the effects of intrinsic versus extrinsic rewards on scientific and artistic creativity (Xue et al., 2020). But, the point still stands that scientific research and writing is inherently a creative outlet for self-expression (Massoudi, 2003). In fact, Qiang et al. (2020) reported that a "creative self-concept" —the belief that one has the capacity to perform creative work effectively (Tierney & Farmer, 2002)—fully mediated the link between critical thinking disposition and scientific creativity.

ARTICLES WITH THE "WRITE STUFF"

It is reasonable to ask what all this means for JSE's standards for submissions. Make no mistake: clear, direct, and concise writing is valued and encouraged. Many examples readily demonstrate that judicious editing can

309

EDITORAL James Houran

transform good papers into great ones (Bem, 2004; Sternberg, 2018). While scientific publishing is not exactly "show business," it is a "show and tell" business. Readers might thus expect articles to capture their attention and interest, next convey critical ideas and information, and finally stoke personal or professional enrichment or spur new thoughts or actions. Simply put, articles with the "write stuff" should altogether engage, inform, and inspire readers. The same also could be said for entire issues of journals. It is, therefore, better for frontier scientists to have the journal space to suitably explain and express themselves rather than editing to the point where large theoretical, explanatory, or contextual chunks go missing. This is a tricky balance, but ease of reading can have a cost in detail. Accordingly, the editorial team tolerates - sometimes to others' irritation - lengthier papers when the scale or scope of exposition seems warranted for various reasons.

Allowing flexibility and creativity in academic writing might further benefit some readers. Hollis (2021) reported that nonfiction writing was valued for its directness, assessable authorship, and questioning. However, fiction writing was found to uniquely drive critical evaluations through the subtle and circuitous way it presented ideas, its complication of veracity, as well as giving rich and deep understandings of the real-world. These findings suggest that fiction reading experiences are connected with critical thinking in ways distinct to nonfiction and could be an avenue for promoting critical thinking or understanding in readers with less technical knowledge of a particular topic. Longer, more "expressive" articles might effectively draw on this principle. Scientific papers certainly should not be book-length, but neither should they constitute a dense collection of dull, tedious, or elitist phrases. Objective and fact-based writing certainly can be infused with energetic elements, descriptive content, and boldly stated insights or conclusions.

Journal editors wield tremendous influence as gate-keepers of scientific information (Primak et al., 2019), but at the same time, academic journals often have multi-faceted goals (Rallison, 2015). My own stance is that Editors-in-Chief should promote not only the transactional goals of scientific articles (i.e., the clear and direct communication of quality data and analysis) but likewise recognize and support their creative or transpersonal aspects. This is why we have published, for instance, lengthier Guest Editorials that are citable as "edutorials," i.e., integrative and data-driven commentaries versus mere diatribes or opinion pieces. Most topics covered in the JSE are likewise quite complex and controversial, even to other frontier scientists. Added to this is our request that authors discuss in their papers how their frameworks,

methods, or conclusions might connect to other areas of anomalistics as a means of academic bridge-building or cross-pollination (Houran, 2022).

As a result, scientists need ample space to articulate a productive stream of consciousness that satisfies all the facets or goals of their papers. Some readers might disagree with our occasional tolerance of longer articles. In fact, the JSE has been criticized for other recent practices, such as addressing certain socially-charged topics, calling for citizen science papers, and platforming provocateurs who stir heated debates. Nevertheless, our forum is the Journal of Scientific Exploration — a title that juxtaposes two anchoring principles and conveys a philosophy and mandate to publish content of intellectual merit ("scientific"), along with permission for authors to ponder the different levels of meaning and purpose in their works ("exploration"). It makes perfect sense from this perspective to accept, and even celebrate, certain scientific papers for what they ultimately are...time capsules filled with creative descriptions of intellectual inspirations. Hopefully, our maverick audience will agree that literature crafted with this mindset is valid and supremely worthwhile reading.

REFERENCES

American Psychological Association. (2023). aha experience: entry. APA Dictionary of Psychology. Accessed 2 July 2023. https://dictionary.apa.org/aha-experience

Bem, D. J. (2004). Writing the empirical journal article. In J. M. Darley, M. P. Zanna, & H. L. Roediger III (Eds.), The compleat academic: A career guide (pp. 185–219). American Psychological Association.

Cicero, M. T. (1913). Brutus. Orator. G. L. Hendrickson & H. M. Hubbell (transl). Harvard University Press. https://doi.org/10.4159/DLCL.marcus_tullius_cicero-orator.1939

Coolidge, H. J. (1932). Archibald Cary Coolidge: Life and letters. Houghton Mifflin.

Evans, J. A. (2010). Industry collaboration, scientific sharing, and the dissemination of knowledge. *Social Studies of Science*, 40, 757–791. https://doi.org/10.1177/0306312710379931

Franklin, B. (1738). Poor Richard, An almanack for the year of Christ 1738, being the second after leap year (Poor Richard's almanac). Author. http://www.rarebookroom.org/Control/frapou/index.html?page=6

Friedman, H. (2013). Self-expansiveness as a scientific construct. In H. Friedman & G. Hartelius (Eds.), *The Wiley-Blackwell handbook of transpersonal psychology* (pp. 203–222). Wiley-Blackwell. https://doi.org/10.1002/9781118591277.ch11

Gewin, V. (2016). Data sharing: An open mind on open data. *Nature*, 529, 117–119. https://doi.org/10.1038/nj7584-117a

Habibzadeh, F., & Yadollahie, M. (2010). Are shorter article titles more attractive for citations? Cross-sec-

James Houran EDITORAL

- tional study of 22 scientific journals. *Croatian Medical Journal*, 51, 165–170. https://doi.org/10.3325/cmj.2010.51.165
- Hollis, H. (2021). Readers' experiences of fiction and nonfiction influencing critical thinking. *Journal of Librarianship and Information Science*. https://doi.org/10.1177/09610006211053040
- Houran, J. (2022). An introduction and mission of building bridges to reach the unknown *Journal of Scientific Exploration*, 36, 3–7. https://doi.org/10.31275/20222439
- Kronick, D. A. (2001). The commerce of letters: Networks and "invisible colleges" in seventeenth- and eighteenth-century Europe. *Library Quarterly: Information, Community, Policy, 71, 28–43.* https://doi.org/10.1086/603239
- Letchford, A., Moat, H. S., & Preis, T. (2015). The advantage of short paper titles. *Royal Society Open Science*, 2, Article 150266, https://doi.org/10.1098/rsos.150266
- Lorenz-Spreen, P., Mønsted, B. M., Hövel, P., & Lehmann, S. (2019). Accelerating dynamics of collective attention. *Nature Communications*, 10, Article 1759. https://doi.org/10.1038/s41467-019-09311-w
- Massoudi, M. (2003). Can scientific writing be creative? Journal of Science Education and Technology, 12, 115–128. https://doi.org/10.1023/A:1023931609549
- Meho, L. I. (2007). The rise and rise of citation analysis. *Physics World*, 20, 32–36. https://doi.org/10.1088/2058-7058/20/1/33
- Moravcsik, M. J. (1974). Scientists and artists: Motivations, aspirations, approaches and accomplishments. *Leonardo*, 7, 255–259. https://doi.org/10.2307/1572903
- Nelson, A. J. (2016). How to share "a really good secret": Managing sharing/secrecy tensions around scientific knowledge disclosure. *Organization Science*, 27, 265–285. https://doi.org/10.1287/orsc.2015.1040
- Oleynick, V. C., Thrash, T. M., LeFew, M. C., Moldovan, E. G., & Kieffaber, P. D. (2014). The scientific study of inspiration in the creative process: Challenges and opportunities. Frontiers in Human Neuroscience, 8, Article 436. https://doi.org/10.3389/fnhum.2014.00436
- Parka, J., & Gabbard, J. L. (2017). Factors that affect scientists' knowledge sharing behavior in health and life sciences research communities: Differences between explicit and implicit knowledge. *Computers in Human Behavior*, 78, 326–335. https://doi.org/10.1016/j.chb.2017.09.017
- Primack, R. B., Regan, T. J., Devictor, V., Zipf, L., Godet, L., Loyola, R., Maas, B., Pakeman, R. J., Cumming, G. S.,

- Bates, A. E., Pejchar, L., & Koh, L. P. (2019). Are scientific editors reliable gatekeepers of the publication process? *Biological Conservation*, 238, Article 108232. https://doi.org/10.1016/j.biocon.2019.108232
- Pruschak, G., & Hopp, C. (2022). And the credit goes to ... Ghost and honorary authorship among social scientists. *PloS One*, 17, Article e0267312. https://doi.org/10.1371/journal.pone.0267312
- Qiang, R., Han, Q., Guo, Y., Bai, J., & Karwowski, M. (2020). Critical thinking disposition and scientific creativity: The mediating role of creative self-efficacy. Journal of Creative Behavior, 54, 90–99. https://doi.org/10.1002/jocb.347
- Rallison, S. P. (2015). What are journals for? Annals of the Royal College of Surgeons of England, 97, 89–91. https://doi.org/10.1308/003588414X14055925061397
- Rawat, S., & Meena, S. (2014). Publish or perish: Where are we heading? *Journal of Research in Medical Sciences*, 19, 87–89.
- Soranno, P. A., Cheruvelil, K. S., Elliott, K. C., & Montgomery, G. M. (2015). It's good to share: Why environmental scientists' ethics are out of date, *BioScience*, 65, 69–73. https://doi.org/10.1093/biosci/biu169
- Sternberg, R. J. (Ed.) (2018). Guide to publishing in psychology journals (2nd ed.). Cambridge University Press. https://doi.org/10.1017/9781108304443
- Tenopir, C., Allard, S., Douglass, K., Aydinoglu, A. U., Wu, L., Read, E., Manoff, M., & Frame, M. (2011). Data sharing by scientists: Practices and perceptions. *PLoS ONE*, 6, Article e21101. https://doi.org/10.1371/journal.pone.0021101
- Tierney, P., & Farmer, S. M. (2002). Creative self-efficacy: Its potential antecedents and relationship to creative performance. Academy of Management Journal, 45, 1137–1148. https://doi.org/10.2307/3069429
- Varella, M. A. C. (2021). Evolved features of artistic motivation: Analyzing a Brazilian database spanning three decades. Frontiers in Psychology, 12, Article 769915. https://doi.org/10.3389/fpsyg.2021.769915
- Xue, Y., Gu, C., Wu, J., Dai, D. Y., Xiaolin Mu, & Zhou, Z. (2020). The effects of extrinsic motivation on scientific and artistic creativity among middle school students. *Journal of Creative Behavior*, 54, 37–50. https://doi.org/10.1002/jocb.239
- Zeng, A., Shen, Z., Zhou, J., Fan, Y., Di, Z., Wang, Y., Stanley, H. E., & Havlin, S. (2019). Increasing trend of scientists to switch between topics. *Nature Communications*, 10, Article 3439 https://doi.org/10.1038/s41467-019-11401-8