Science Writing at Wesleyan University
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Science plays an increasingly important role in our world today, and people who can communicate science well are in high demand. On the one hand, scientists need good writing skills to get papers published in top journals, prepare convincing grant proposals, and to present engaging summaries of their work to the general public. On the other hand, writers who can understand science on its own terms and translate that into the lay public’s language will have a pivotal role in society. The need for good science writing will only grow in the years ahead.

Wesleyan University has exceptionally strong science research and teaching, as well as a vibrant writing program and campus culture of cross-disciplinarity. Wesleyan is therefore uniquely positioned to foster good science writing abilities in its students, and we would like to re-initiate a dialogue in the Wesleyan community about this topic. Prof. Wolfe (Biology) and Prof. Beveridge (Chemistry) developed productive science writing initiatives in the 1990s, and we would like to see a new wave of efforts to build upon their past successes. Below we sketch our ideas for six different initiatives to promote science writing at Wesleyan. We enthusiastically invite the input and participation of a broad spectrum of faculty, students, and alumni in the sciences and allied fields on these and other synergistic initiatives.

I. Conference on the Value of Science Writing in Today’s World
Although Wesleyan has consciously promoted science writing for two decades (or more), it has never yet become a robust, division-wide set of programs. In fact, previous science writing initiatives appear to have waned in the past five years. Because science writing is more an ability than its own academic department, students remain relatively unaware of it. But as mentioned above, there is and will be a strong demand for good science writing in the world. In order to revive awareness on campus of the importance of science writing, we would like to propose a weekend conference with short presentations by a variety of alumni, faculty, and/or outside speakers about the role of science writing in today’s world and how they learned good science writing skills. Although the timeframe is short, we think that ideally such a conference

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should take place this fall at the Homecoming Weekend, as this would provide alumni a convenient opportunity to take an active role in providing their perspectives and experience.

II. Weekend Student Workshop(s) on Science Writing
Currently, even the few science courses labeled “writing intensive” have minimal writing instruction, and we do not believe this is an effective approach to teaching science writing. Science has very specific genres of writing: journal papers, abstracts, posters, grant applications, letters-to-the-editor, study protocols, research reports, perhaps personal webpage summaries for the broader public, and science has its own writing style – concise, precise, logical, and brilliant. Moreover, science students may need to have writing presented to them differently – as an important add-on skill (like some lab technique) – and they may not be able to give writing adequate priority and focus while trying to simultaneously master the content knowledge of a course for their major. We wonder whether it may be more effective to teach writing skills to science majors in the framework of optional, non-graded or fractional credit, short-term “How to” workshops: “How to Write a Good Abstract”, “How to Write a Letter to the Editor”, etc. We would like to discuss further the need for such offerings and how best to deliver them.

III. Teaching Science Writing to Writers Who Are Serious About Science
We are of course also interested in reaching out to those non-science majors (or ex science majors) who have a passion for writing yet also have the willingness to grapple with primary scientific materials – students who enjoy the challenge of reading original papers in science journals and really understanding how scientists research the world. We are interested in exploring ideas about how to teach these students to use their strong writing skills to present primary scientific literature to the general public, as is done in Scientific America or the New York Times, for examples, or to synthesize primary research into focused review reports.

IV. Faculty Development Round-Table
We suspect that many of the Wesleyan Science faculty have a genuine interest in good writing and are themselves excellent science writers, but they may not be too sure how best to effectively teach science writing to undergraduate majors. During this academic year, only 1 out of the 188 courses listed as “writing intensive” is a majors course in ASTR, BIOL, CHEM, E&ES, MB&B,
or PHYS, and to our awareness no other better approaches to teaching science writing have been developed yet at Wesleyan, except co-authoring actual journal papers or writing an honors thesis. If there are NSM faculty who are unsure how best to teach science writing, we believe we can find solutions. Perhaps a round-table of the faculty to share best practices and ideas will suffice. Perhaps it will be helpful to invite outside experts for new ideas on how to teach good science writing. If there are science students who want to learn to write good journal papers etc., we’d like to explore how to help a broad range of faculty find the best pedagogic approaches to transmitting their own excellent science writing skills to the students in their labs and classrooms.

V. Relaunching Synthesis – the Student Journal of Science Writing

Like many of you, we believe strongly in “learning by doing”, and we believe students are more likely to learn good science writing in the framework of a fun student-led activity than in the framework of an official course with homework assignments. Throughout the 1990s, Wesleyan students produced a student publication, *Synthesis*, with students’ writings about science. But it has died off, probably in large part because it did not evolve to emulate a real-world science journal in content or presentation, even if many of the articles were quite interesting and well written. (It was more a mix of newspaper articles about science events and literary writings about the experience of doing science.) By contrast, we are very impressed with the professionalism of some other Wesleyan student journals, such as the Psychology Department’s *Mind Matters*, so we are convinced that Wesleyan science students are also capable of writing and producing a peer-reviewed journal of science, given some faculty and alumni guidance and modest funding. We envision that the journal will consist primarily of short, scientific research papers (hopefully on those kinds of “nifty” topics that only students can come up with), yet we also envision that, like *Science* or *Nature*, there is some space for other kinds of quality writing besides research papers, such as first-person experiential accounts of doing science, thoughtful essays on science policy or science history, and so on. We envision the relaunch of *Synthesis* both in print and on-line with PDF articles, as a student-led science journal of sufficient professional quality to obtain its own self-sustaining extramural funding. In the longer-run, we think it would be quite possible to solicit submissions from students at other institutions, thus making this a nationwide journal of undergraduate science. Perhaps students on the editorial
board could be given academic credit, as for independent tutorials. One of us (MH) is willing as an alumnus to provide editorial/publishing advising and initial seed funding, if there are students willing to jump on this valuable educational opportunity as the student editorial board. Ideally, it should be possible to publish a first issue of the new Synthesis by the end of the Spring semester, and to continue with a new issue each semester, (and perhaps a summer supplement from the summer research fellows). A first step would be to present this idea to all the science majors, in order to determine if there is sufficient student interest to make this viable and worthwhile.

VI. Wesleyan Science Writing Initiatives Advisory Panel

Our longer-term goal is to develop a robust set of activities to promote science writing at Wesleyan University and make Wesleyan known as a school that turns out graduates with excellent science writing skills. Although reaching this goal will require some people with a deeper commitment to the whole project, we believe that broad participation is the key to making this more than a few people’s own pet project. Therefore, we would like to develop an advisory panel, consisting of faculty, alumni, and students (grad and undergrad) who would be willing to meet periodically to discuss how science writing can be widely reinvigorated at Wesleyan. We believe that at this early stage, brainstorming, idea transfer, and diffusion of involvement across people from many different areas will lead further than waiting for one person to dedicate himself or herself to doing it all.

In closing, science writing is a fundamental ability, for which there is a strong and growing demand in society today. It is an ability that most other college graduates will not have, so Wesleyan students who acquire this ability will be uniquely prepared to make valuable contributions to science and society. With its strong intermixture of high quality science and high quality liberal arts, Wesleyan is well positioned to develop solid science writing abilities in its students. What is needed now is a concerted and wide-ranging renewed effort to promote science writing at Wesleyan through multiple channels. We invite you to share your ideas and perspectives with us about how to create a robust set of science writing activities at Wesleyan University.