## The ghosts of authorship

For some time now we have witnessed professional writers that lend their services to celebrities who are unaccustomed to putting pen to paper themselves, but who (perhaps through vanity) wish to see their "autobiographies" published. Politicians also rarely write their own white papers or speeches, seeking the services of professional writers. Relying on the services of such professionals, known as "ghostwriters", is thus a common practice which few go to the trouble of contesting, as long as it is limited to the political or commercial spheres. Nevertheless, difficulties emerge (and even appear in the media) in dealing with "ghost authorship" whenever it enters the scientific/academic community.

Authorship is central to the credibility of the contemporary academic and scientific system. In the more competitive basic science fields, authorship of a scientific article is directly related to the author's primacy over a given discovery. Recognition of authorship in theses and dissertations, articles published in specialized journals, and books provides the basis for institutions to award academic degrees and for funding agencies to assess the researchers' curricula vitae, evaluate courses, and in the final analysis, define promotions, bonuses, tenure, and resources to fund further research.

Over the years, and especially in the second half of the 20th century, we witnessed the spread of a new type of "author", namely the co-author. Relatively rare before the mid 20th century, publications in co-authorship became the rule in many fields, including the health sciences. In light of the ethical and legal implications of such expansion, numerous international scientific associations are concerned with defining authorship and co-authorship, making it clear that those listed as authors should have participated with a major share of the data analysis and drafting of the work. They further highlight that the authors, regardless of their position on the list, must be capable of publicly assuming responsibility for the work as a whole. Therefore, authors are not only candidates for reaping the laurels of a scientific publication (prizes, promotions, royalties, etc.), but must also assume ethical and legal responsibility in case the work is challenged. The system's foundations crumble with the onslaught of ghost authorship.

Unfortunately, there is evidence that such practice is undergoing full expansion. With a quick search on the Internet, one can retrieve addresses for a surprising number of specialized professionals and even small companies specializing in ghost authorship, who advertise their services, even for writing theses and dissertations. One such website reads: "Working with a ghostwriter is a great way to ensure that your message gets out and comes across clearly. This solution can help you meet deadlines and grasp opportunities, without sacrificing other priorities and commitments."

Another novel situation is ghost authorship associated with what we might call "authorship lending". A recent case involved a physician from a prestigious American university who was contacted by a communications firm (hired by a pharmaceutical company) in order for her to "sign" an article reporting the test results on a new drug. The physician-researcher blew the whistle on the case, which had extensive repercussions, including in Brazil (*Folha de S. Paulo* 2005; 15 Apr:A16-7).

Such situations expose the enormous vulnerabilities currently surrounding the author figure and the concept of authorship. The well-known motto "publish or perish" has never been so ubiquitous. Given the situation's complexity, to ensure honesty and transparency in the production of scientific knowledge in all its stages is a task that cannot be delegated to a handful of "gatekeepers of science". Members of review panels for public admissions exams, editorial boards of scientific journals, and advisory committees for funding agencies play a central role in this process and should seek to determine the authenticity of authorship in any work that comes under their scrutiny.

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