



Any system that tries to draw a line between contributors who are “important, substantial, significant, or whatever” (authors) and those who are not (people to be acknowledged) is bound to produce not only acrimony but also dissent and confusion. How can we compare the apple of A suggesting the research but doing nothing more, with the orange of B producing the protocol and then moving on, the banana of C collecting and analysing the data, and the mango of D writing up the study? We cannot, but we probably can agree who did what. We might even make E, who runs the institution, hired B, C, and D, and invited A to be visiting professor to guarantee the research. Indeed, I, as an editor and a reader, don’t mind if you include E as contributor so long as you don’t try to deceive me into thinking that he was actively involved in the research. “But,” squeal those who are unhappy with what seems to be a simple, workable, and transparent system, “if we have no authors, how can we decide who will receive academic credit—tenure, promotion, a chair, a fellowship, a Nobel prize, whatever?” I don’t see the problem.

First, the bodies who dole out academic credit need to consider much more than publications; for example, teaching and organisational ability, and leadership skills. Second, when they do consider publications they will want to be clear exactly what the candidates did. If they want a head of department, they might be happy to appoint somebody who has been named in 100 papers in the previous year but whose contribution has been restricted to hiring the researchers and creating a space for them. You would not, however, want to give such a person a Nobel prize. Likewise, you would not want a head of department whose contribution to 20 papers has been restricted to collecting and analysing the data, but such a person might make an excellent research manager.

Academic credit will be allocated to individuals much more fairly and meaningfully if it is linked not simply to authorship with no indication of what the person did (perhaps nothing) but rather to an identifiable contribution.

Long live the deans!

Mario Biagioli

Although everyone agrees that responsibility is a must, most of those who uphold this imperative are also sceptical about the feasibility of having one person understand, check, and take real responsibility for all the claims published in a paper. That little or no progress has been made toward solving this contradiction suggests that a redefinition of responsibility is overdue. After a contribution by Rennie and colleagues¹ I propose to think of responsibility less as a negative category (mostly connected to liability and punishment) and more as a set of constructive procedures to avoid misconduct, limit its damages, and restore a productive work environment in the scientific community in its aftermath.

Rennie and colleagues report that, when confronted by evidence that junior colleagues had falsified data, Collins promptly accepted “responsibility for the aftercare of his work” and “corrected the published literature by exposing the tainted data in 5 articles...”. To them, this is what a good guarantor should do. Strikingly, they do not praise Collins for taking personal responsibility for the falsified data, but for taking charge of cleaning up after his teammates. Their position underscores a crucial distinction: the guarantor is a sort of auditor who is responsible for the auditing, not that which is audited. Furthermore, the guarantor’s task is less to punish those who committed the misconduct (though they are indirectly punished indirectly by being exposed and having their publications retracted) than to shield the community from the consequences.

One may say that such definition of responsibility lets the guarantor off the hook too easily. If our top priority is, however, to avoid misconduct and to shield the community from its effects (rather than to have rare exemplary punishments of those who committed it), this may be a reasonable definition of responsibility. If, instead, we hold the guarantors fully liable for the missed detection of misconduct and the misconduct itself, then they will probably work hard at denying charges to avoid severe sanctions. Not that we should think of guarantors as informers to be rewarded with leniency, but if we want guarantors to be effective, there should be reasonable incentives as well as responsibilities. Also, if we make the guarantor responsible for the sins of the whole team it is hard to imagine who would want that job.

Rennie and colleagues’ innovative notion of responsibility is a shot in the right direction, but cannot, I

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think, be successful in the framework they propose. For instance, if the guarantor is selected by the group (as they propose) junior members may be nudged into that job by senior researchers more concerned with credit than responsibility. In that case, the guarantor would risk becoming a disposable shield to the team (not to the public) from the consequences of misconduct.

The grounds for assessing the guarantor's credit and responsibility differ from that of other contributors. Contributors are asked to describe what they have done. Guarantors are asked to assess what they have done (overseeing, double-checking, etc) and what they may have to do after publication.

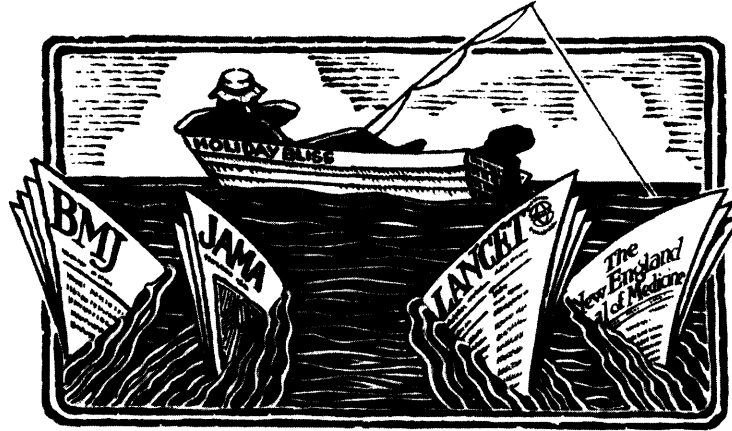
In one case, the team is asked to negotiate the value of a job already done, in the other it is asked to assess the cost of a sort of insurance premium, whose main beneficiaries are the public and the scientific community.

To avoid adding up apples and oranges, I propose separation of the two dimensions of a guarantor's task, assigning them to different people, and giving them different kinds of credit. The task of supervising and double-checking (but not the aftercare of the publication) could be assigned and rewarded as any knowledge-making task performed by the other contributors. The label guarantor would not be needed in this context because that person, like any other contributor, would be held responsible only for the specific task performed (ie, the auditing, not the truth of all the published claims). I would reserve the term guarantor only for the person in charge of handling possible future difficulties (who may not be the same contributor in charge of auditing). The guarantor should not be rewarded with the same kind of credit as the contributors because his or her work (if it becomes necessary) is not part of producing a publication. Also, the primary beneficiary of the work of the guarantor is not the research team itself, but the scientific community academic

institutions, and journals.

If we think of the guarantor as a manager in charge of fact-finding and mopping-up (like the chief executive officer of a company who publicly responsible for its products but not personally liable for damages that could be caused by those products), his or her credit could resemble what universities call "service" (as distinct from publication credit). Because of this role, the guarantor's job could be taken out of the team and assigned to department chairs or deans whose job descriptions, skills, and resources correspond better to that of guarantors.

In its current form, the role of the guarantor is too open to conflicts of interest and power and it calls for tasks and credit that, in my view, are not best performed and assessed by members of a research team. My proposal does not dilute responsibility but distributes its management and makes it more effective. Contributors (including the supervisors) would receive credit and have responsibility for the



specific tasks that, as required by Rennie and colleagues, should be described in their publications. The external guarantors would have the authority and resources to hold the contributors liable for what they said they did, shield the scientific community from possible damages by exposing misconduct and retract articles, and communicate their findings to funding agencies and, perhaps, to the legal system. Guarantors would be rewarded with a kind of credit that is commensurate to their task: "service". The guarantor is dead. Long live contributors and deans.

Several of the ideas presented here emerged during discussions with my students Karen Encarnacion, Lonnie Jaffe, and Gibbs Johnson.

References

- 1 Rennie D, Yank V, Emanuel L. When authorship fails. *JAMA* 1997; 278: 583.