Ethical[1] and Meta-Ethical[2] Issues in Peer Reviewing

Nagib Callaos

Founding President of the International Institute of Informatics and Systemic (www.iiis.org) and Editor in Chief of the Journal of Systemics, Cybernetics, and Informatics
(JSCI, http://www.iiisci.org/journal/sci/home.asp)

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Abstract

As we informed in the abstract of a large and detailed paper (Peer Reviewing: Weaknesses and Proposed Solutions, 2011). **"In a survey of members of the Scientific Research Society, "only 8% agreed that 'peer review works well as it is'."[3]** *(Chubin & Hackett E. J., 1990, p. 192) [Italics and emphasis added]. "If peer review was a drug it would never be allowed onto the market," affirmed Drummond Rennie, deputy editor of the Journal of the American Medical Association and "intellectual father of the international congresses of peer review that have been held every four years since 1989." [Referenced by (Smith, 2010, p. 1)]. If peer review was a drug, it "would not get onto the market because we have no convincing evidence of its benefits but a lot of evidence of its flaws." (Smith, 2010, p. 1). Richard Smith (2006, p. 116) also affirmed that regarding peer review there is "more evidence of harm than benefit…[and] Studies so far have shown that it is slow, expensive, ineffective, something of a lottery, prone to bias and abuse, and hopeless at spotting errors and fraud."*

The above represent just a few examples that were collected in a more comprehensive literature review, made in the article (Peer Reviewing: Weaknesses and Proposed Solutions, 2011); which first draft was written in 2006.

The purpose of the present short article is to refer to the ethical and meta-ethical issues[4] associated with authors, editors, and conference organizing committees. Reviewers' ethics is more known and will be addressed in a second extended version of this article. Our hope with this article is to

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[1] Notice that we are using the word "ethical" as an adjective and not "Ethics" in the substantive form, i.e., we are not referring to Ethics in the sense of Science of Morals; we are referring to ethical thinking and doing.

[2] Notice that we are using the word "meta-ethical", as an adjective and not meta-ethics as a substantive. This is because we are using it in the sense of the ethical responsibility in 1) avoiding unethical behavior or 2) ethical enforcement, not in its usual sense of meta-ethics, i.e., the philosophical study of the nature of ethics

[3] Is it correct to continue using traditional peer reviewing methods with only 8% agreeing that "peer review work well as it is." Is peer reviewing not the most important pillar on which scientific communications, including publications, is based? Can anyone understand how the most important pillar of scientific and academic communication is accepted, as effective, **by just 8% of scientists?** Can any industrial product survive with such low credibility? How did it survive in the temple of the Truth with such a low level of effectiveness and credibility? Is it not an ethical obligation for scientists and academics in both Deontological and Consequentialist Ethics? The latter will be treated below with details, and will be summarized according the objective of keeping this article short, with the purpose of hopefully triggering a process of more awareness about this issue, more articles on this issue, and potentially more attempts to solve this problem and the paradox generated by it. Indeed, it is a paradox that the most fundamental base of scientific and academic communication (especially in publication) is not addressed in a scientific and academic way.

[4] Tons of books and articles have been written on Ethics and Moral. We do not dare here to even make respectable summaries of the theories and intellectual perspectives on these issues. Consequently, we will make unquestionable quotes from reputable sources in order to support what is related to the purpose of this article.

increase awareness about this issue, trigger more reflections, and research, oriented to solve or, at least, improve the presently accepted peer reviewing methods.

Improving the Effectiveness of Peer Reviewing Via a Systemic[5]/Cybernetic Methodology

Since the year 2006, and based on the suggested solutions made in (Callaos, 2011), we (in the IIIS) initiated a systemic/cybernetic methodology to *improve the effectiveness of peer reviewing*. This methodology is based on a systemic combination of incremental planning (Braybrooke & Lindblom, 1970), Action-Research (McNiff, 2013), Action-Learning (Marquardt, Banks, Cauwelier, & Ng, 2018), (Callaos, Co-Evolutive Action-Design Methodology, 1997), Reflexive Research (Etherington, 2004), and Reflexive Methodology (Alevsson & Sköldberg, 2001) to continually[6] improve the peer-reviewing process of the International Institute of Informatics and Systemics (IIIS, www.iiis.org).

In the context of Incremental Planning, we had two increments each year, which coincided with the two conferences organized by the IIIS each year. These two increments were applied to the systemic/cybernetic methodology that combined the methodologies mentioned in the previous paragraph.

The trigger of the evolutionary methodological process, to improve the effectiveness of peer reviewing, was a short article written by the highly cited author David Kaplan, entitled "***How to Fix Peer Review***" (Kaplan, 2005)***. His suggestion is impeccable, especially from the perspective of Ends/Means Logic.[7]***

Kaplan correctly affirms that *peer review has two functions, or purposes: 1) to improve the paper; and 2) to improve the decision-making of the editor(s) or, we may add, the Organizing Committee of a conference. Improving the quality of the paper should be mainly the responsibility of its author*

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[5] **Systemic** methodologies include using methods in parallel to explicitly feedback and fee-forward each other, while **systematic** methodologies are mainly sequential (in series), which diminish the probability and the possibilities of cybernetic loops among the methods being used. This is why systemic methodologies are more **synergic, adaptable, and creative**, while systematic methodologies are ***more ordered, and hence more efficient***, contain less uncertainty, and are more plannable, according to the traditional planning methodologies, which thereby makes them more predictable. Adequate systemic methodologies are more ***effective and adaptable*** while systematic methodologies are more ***efficient, but less adaptable***. The real problem in peer reviewing is effectiveness and, in multi-disciplinary conference, adaptability. Hence, systemic methodologies have benefits that overweigh the costs of lowering their efficiency. Indeed, it makes no sense to be efficient and with no minimum level of effectiveness.

[6] We presented this systemic methodology in several articles, e.g. (Conjoined Co-Evolutive Incrementalism for Information Systems Development, 1994), (Callaos N. , Co-Evolutive Action-Design Methodology, 1997), (Callaos, Callaos, & Belkis, A Systemic Methodology for Information Systems, Analysis and Synthesis, 1992c), etc.

[7] I am using italic and/or bold fonts in order to draw the attention of the reader to important words or notions, not to express a subjective emotion. However, we are not against the use of signs and special fonts to express emotions, especially because 1) there is no effective Logos without an associated Pathos and 2) the frontier between subject and object disappeared with the Copenhagen Interpretation of quantum mechanics and Heisenberg's uncertainty principle. So, in my opinion, declining to use italics and bold fonts in order to avoid being perceived as subjective and not objective is an antiquity that remains in some standards (i.e. APA). This same reasoning applies to the use of the first-person singular. It is not honest to express personal experience or implicit knowledge using the polite "we" or the passive "it is", as in the case of, for example, "it is suggested". It is more honest (in our opinion) to say "I suggest", or other "author name" suggests, or "we suggest", when the author is suggesting some kind of consensus about a suggestion, or because it was produced by a research team or in the context of a meeting.

and improving the decision-making regarding accepting or not a submitted article should be made by the editor, the editorial board, or the conference Organizing Committee.

David Kaplan explicitly affirms that

> "***Review of a manuscript would be solicited from colleagues by the authors.*** The first task of these reviewers would be to identify revisions that could be made to improve the manuscript. Second, the reviewers would be responsible for writing an evaluation of the revised work. This assessment would be mostly concerned with the significance of the findings, and the ***reviewers would sign it.***" (Kaplan, 2005) [Italics and emphasis added]

This is, in good part, why we based our reviewing methodology on Kaplan's great suggestion of *differentiating the two objectives of peer reviewing and applying to them different methods in the context of a systemic dual methodology of reviewing*: 1) the suggested Kaplan method, via non-anonymous reviewing; and 2) the traditional method of peer reviewing, via double-blind reviewing. In other words, this means applying one method (non-blind) for the objective of improving the content of a paper and another method (the traditional double-blind) to improve the selection decision of the Editor or the organizing Committee. *Both methods are necessary conditions for acceptance and none alone should be a sufficient condition.*

This dual methodology is more rigorous than any of the two methods of reviewing because to accept an article, both kinds of reviews must recommend (via the respective reviewers) the acceptance of the paper. Applying the majority rule to each of the two kinds of reviews is a necessary condition to accept a paper but not a sufficient one. This has been published on the conference web page and the journals' websites since 2006. We think that it is our ethical responsibility to clearly and explicitly explain both: our peer-reviewing methodology and our acceptance policy.

We keep auditory tracks in our systems as support for quality assurance regarding the decision to accept or not to accept a paper.

The methodology we used to continuously design and implement the mentioned dual methodology is the systemic/cybernetic one summarized at the beginning of this section along with footnote 2 and found in the published articles listed as examples in footnote 4. Hence, a significant amount of Action-Learning was captured in each cybernetic cycle from anonymous and non-anonymous reviewers, authors, and organizers. This provided input to Action-Design, in the context in the context of the systemic methodology summarized in many publications, for example, the ones listed in footnote 5.

The described peer-reviewing methodology includes the ethical and meta-ethical levels for both authors and editors (of journals and proceedings).

We will address the ethical issue according to the most related intellectual perspectives (or dimensions) of Ethics. Other ethical perspectives will be, potentially, added in the coming second draft of the article.

Two main perspectives on ethical thinking and behavior are Deontological and Consequentialist Ethics. Indeed, they oppose each other in several aspects. But, in our opinion, they are polar kind of opposites, complementing each other via, potential cybernetic loops, hence, in a synergistic way. Broadly (generally and loosely), we may think that Deontological Ethics refers basically to what we should not do and Consequentialist Ethics is oriented to what we can or should do. Hence, according to this cybernetic perspective, we may conceive a combination of these two ethics as follows: to do and behave according to the consequentialist theory as long as deontological ethics allows it. This is the perspective applied here. Consequently, we will apply both ethics to Peer Reviewing, especially as related to authors and editors.

Deontological Ethical Thinking and Doing of Authors, as Authors

Larry and Moore (2020) affirm, in *The Stanford Encyclopedia of Philosophy, that "*The word deontology derives from the Greek words for **duty** (*deon*) and science or study. (*logos*)" [Italics and emphasis added]. Notably, notions of responsibility and duty are not exactly the same, as they strongly relate to and intersect with each other. In general, "responsibility is something that is your job or duty to deal with." (Cambridge Dictionary). Consequently, **responsibility generates a duty**. On the other side duty is "something that you have to do because it is part of your job, or something that you feel is the right thing to do" (Cambridge Dictionary). Responsibility is accepted and decided by who accepts to take it (i.e., fatherhood, authorship, acceptance of a commitment, etc.). Duty might be something enforced by laws or by moral rules. Responsibility is a self-imposed duty, so it involves respect for oneself because the commitment was freely made, as is the case with an author. The author accepts to create an intellectual product associated with her/his name and hence her/his self-respect requires meeting the commitments made by her/himself to her/himself. Indeed, it is her/his responsibility to her/him and to other human beings who trusted her/him to meet such commitments. To be an author has responsibilities, hence duties, with her/himself, with her/his readers, with editors, and with the reviewers of her/his article, who, usually are volunteers in the scholarly articles' situations.

Is it not the responsibility of the author to improve the content of the paper, before submitting it? Is that not the responsibility of the author regarding her/his own intellectual or academic creation? Is that not a responsibility for her/himself as an intellectual, academic, and even as a human being? Is it not her/his responsibility to have a minimum of intellectual or academic hygiene as a way of respecting her/his colleagues, including the editor to whom she/he is sending the article? Is the author not responsible for her/his own intellect? If not, why should others be responsible for that? Is this multidimensional responsibility not an ethical issue for the writer? Is that not even a moral issue in many cultures, religions, and civilizations?

To answer questions like the above ones, requires, mainly (but not only) Deontological Ethics, i.e., duty Ethics. Is it ethical not to be responsible as an author? Is it intellectually ethical not to be responsible for the author's intellectual creation? Is it ethical not to be responsible for one's intellect? Is it ethical not to care about a minimum of intellectual hygiene?

Authors should have deontological ethical thinking and doing. Moreover, we learned the hard way that editors and conference organizers should also fulfill the meta-ethical level, i.e. do their best to

assure the ethical behavior of the authors. *In other words, analogically to quality assurance, there should be means for ethical assurance.* Indeed, an important part of this ethical assurance is to find ways to assuring the ethical behavior of the authors, which includes the fulfillment of their responsibility with their own articles and intellectual productions, hence, to have ethical thinking and behaving with their own intellects. This is the ethical context for including Kaplan's suggestion regarding the ==*authors' responsibility of asking some of their colleagues to review their paper before submitting it to a journal or a conference.*== It is a responsibility/duty ethics, which requires deontological ethics in their thinking and behaving. It is a duty they have with their own intellectual production, with their own intellect, and even with what was called sociological intellect, although this takes us to Consequential Ethics.

On the other side, it is a *deontological meta-ethical responsibility of editors and conference organizers to assure the reader that the author is fulfilling her/his deontological ethics,* before or after submitting her/his paper, but always before publishing it.

Consequentialist Ethics

Walter Sinnott-Armstrong, affirms, in *The Stanford Encyclopedia of Philosophy* (Consequentialism, 2019)*,* that Consequentialism is

> " historically important and still popular theory embodies the basic intuition that what is best or right is whatever makes the world best in the future, because we cannot change the past, so worrying about the past is no more useful than crying over spilled milk. This general approach can be applied at different levels to different normative properties of different kinds of things, but the most prominent example is probably consequentialism about the moral rightness of acts, which holds that whether an act is morally right depends only on the consequences of that act or of something related to that act, such as the motive behind the act or a general rule requiring acts of the same kind.¨

Larry and Moore (2020), affirm that:

> In contrast to consequentialist theories, deontological theories judge the morality of choices by criteria different from the states of affairs those choices bring about. The most familiar forms of deontology, and also the forms presenting the greatest contrast to consequentialism, hold that some choices cannot be justified by their effects—that no matter how morally good their consequences are, some choices are morally forbidden. On such familiar deontological accounts of morality, agents cannot make certain wrongful choices even if by doing so the number of those exact kinds of wrongful choices will be minimized (because other agents will be prevented from engaging in similar wrongful choices). For such deontologists, what makes a choice right is its conformity with a moral norm. Such norms are to be simply obeyed by each moral agent; such norm-keepings are not to be maximized by each agent. In this sense, for such deontologists, the Right is said to have priority over the Good. If an act is not in accord with the Right, it may not be undertaken, no matter the Good that it might produce (including even a Good consisting of acts in accordance with the Right). (The Stanford Encyclopedia of Philosophy (Winter 2020 Edition), 2020)

Systemic Ethics

The contrast made by Larry and Moore (2020), between deontological and Consequentialist ethics, is important. This contrast is, as we anticipated above, a polar opposition and, as such, the opposites do not contradict, but complement each other. With a broad and generic interpretation, we might conceive Deontological Ethics is ***oriented to what should not be done*** (e.g., neglect or ignore one's responsibilities and/or duties), while Consequentialist Ethics is ***oriented to what should or may be done*** for others and the Common Good. The latter is the ethical backbone of pragmatism.

Both ethics might coexist and complement each other in the context of the Systems Approach (Systemic Ethics), especially if it is based on Singer-Churchman's Pragmatic-Teleological Truth (Churchman, 1971). In this context, Ethics and Epistemology are strongly related.

With two different objectives (*telos*): to fulfill a responsibility or a duty and to contribute to the common good, may require adequate relationships between the two ethics roughly described above. We suggest cybernetic relationships between Deontological and Consequentialist Ethics for the specific case of ethical peer review. This can be done with David Kaplan's (How to Fix Peer Review, 2005) proposal. He, rightly, differentiated between two different objectives in peer review, consequently, two different methods may be used and each method may require different ethics. Our dual reviewing methodology has two methods, each of which may have specific ethics. Consequently, a dual methodology may require a duality in "Ethics in Peer Reviewing", as well as two meta-ethics.

Systemic Ethics Applied to Peer Reviewing.

Getting back to our main topic, this means that an author has an ethical responsibility, not just with her/himself, her/his intellectual production, and her/his own intellect and human dignity, but also with her/his environment: readers, editors, reviewers, publishers, Science, Engineering, the Sociological Cogito, and Society at large, besides the Deontological Ethical behavior required toward her/himself, her/his own intellect and her/his own intellectual product or (metaphorically) her/his intellectual parenting toward her intellectual child.

Each author has an ethical and moral obligation, i.e. a moral ***duty*** toward her/his environment. An author should not try to take advantage of the editors, reviewers, and readers for her/his own benefit. Most of all, s/he should not intentionally deceive other scientists, readers, editors, editorial boards, conferences' organizing committees, reviewers, etc. with false reports or with articles whose CONTENT AND FORM QUALITIES s/he did not care about. **One way of not being unintentionally unethical is** *to intentionally take into account what David Kaplan recommended regarding asking colleagues to review her/his article, before its submission to a journal or a conference. The meta-ethics of an editor or a conference organizing committee is to require the author to do so. It is the ethics of assuring ethical behavior from the authors. It is the responsibility of the editors, conferences' organizing committees, etc. to implement procedures that would allow for ethical quality control*. David Kaplan rightly recommends the authors mention the names of the colleagues who reviewed her/his paper. It is good to remind the

reader that according to Kaplan (and we agree 100% with him) the function of the colleagues is to improve the paper and the function of the anonymous reviewers is to improve the decision regarding whether to accept or not to accept a submitted article.

Conclusion:

The suggestion made by David Kaplan is

1) *pragmatic-teleologically effective*, as he suggests, and, as our 18-years-old experience, applying it, confirms, and

2) ==*ethically necessary for the authors and meta-ethically imperative for the editors*, conference organizers, and publishers.== Both: ethics and meta-ethics are, simultaneously, deontological (responsibilities/duties) and consequentialist (positive or negative impacts on others: readers, editors, publishers, Science, and Society at Large.

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