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EDITORIAL

Editor's message: reliability of internet sources

Nowadays, publishing is very easy; almost anyone can post anything in the Internet without any supervision regarding reliability or validation of the information presented. If we look for a misspelled word, most probably we will find someone used it in that wrong form, but that could cause in us the confidence that it was used correctly.

This lack of supervision is responsible for the spread of myths, either frightening or encouraging. Since the Internet has become a primary source of information for many, it is necessary to design some sort of validation tools or a guidance for readers.

Recently, some search engine companies have proposed themselves to help detecting 'fake news' to warn people that are searching for information. This is within the concerns of organizations such as The International Microwave Power Institute, among many others, with the purpose to be the most reliable source of information in their respective areas of interest. Many of these organizations offer their documents in the Internet, in competition with pages showing unreliable information that might even be risky. Indeed, at the time of conducting an Internet search, the latter appear in the same lists, sometimes with higher preference because of ranking systems driven by popularity rather than pondering.

Considering the above concern, it is worth to analyse the comments presented about the proposals made by the search engine companies in several places, also in the Internet, that could be applicable to science publications against myths.

The comments range from having a list of approved sites, and then include that information in the search engine, to implement algorithms that perform crossing information from different sources, confirming that it is not artificially high ranked by being copy–pasted in several sites. For instance, by detecting sentences like 'scientific studies reveal that …' without further references, as well as freighting messages that seem to force selling a good or service.

What the readers can do first is to identify the source of the material. Anyone can claim, for example, that microwaves and cellular phones cause cancer, while wi-fi does not, and that food processed with microwaves is not nutritional. These claims can be very convincing, so the best is to verify if the claimers are strongly related to that field of knowledge, or if they are just posting something found somewhere else. Therefore, readers should select the most convincing sentences in the text and look for them in the Internet confirming whether they are repeated in several places out of context of the subject, for this is more suspicious than finding them in places in the same field of knowledge. It is better if those sentences are also found in university publications or by recognized organizations.

Another aspect is related to common sense and plausibility evaluation. Scholars are not the only ones searching for information, and this evaluation depends on the reader. For the above examples about microwaves, an expert knows that they are not energetic

enough to break chemical bonds and that wi-fi is in the same portion of the electromagnetic spectrum. Reputation of the source becomes more important if the reader is not an expert.

In this sense, the preparation of the journal is aimed to ensure that provided information is reliable, and some steps for doing so include review of the manuscripts by experts, considering plausibility, originality, validity of reported results, discussion and conclusions that fit with well-established knowledge and that are useful as background for future research, offering a recommendation or a guide. Manuscripts are reviewed following a double-blind procedure, which is still common these days, and consists of a method in which only the editor and editorial members know the identity of the authors and the reviewers, but they do not know each other, at least prior to deciding about the acceptance of a given manuscript. This procedure is based more on practical issues than ethical or bias ones, since by avoiding inquiries between authors and reviewers, the manuscript and provided criticism are reviewed based on writing only. Then, the author is instructed to reply by preparing a new version of the manuscript that includes the answers to the criticism. This ensures that the information that leads a reviewer to accept a manuscript is in the document itself, and that those elements will be available to the reader in the published paper.

People that are searching for something in the Internet assume that there is a system of confidence where authors report their findings, and that every contribution is honest, and that is what organizations with good reputation offer.

We cannot stop the myths to be posted and distributed in the Internet, and most recently in social networks, but what we can do is work on being a reliable source of the advances in the sciences and the arts on microwave and electromagnetic energy applications, serving interested individuals in this area, looking forward to dilute misunderstandings and misconceptions in this time that are very easy to spread.

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