

Editorial

Palaeoinsights—Editorial Tips

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Quaternary promotes a special type of papers called ‘Palaeoinsights’, which are essay and opinion papers addressing author’s personal views on different Quaternary topics in relation to either the discipline itself, its potential interest for society, or both. ‘Palaeoinsights’ are aimed at providing a forum for constructive conceptual, theoretical and philosophical discussion on important topics in Quaternary science. Important objectives are to progress towards agreement on controversial issues, to introduce new unconventional approaches to existing problems, to find novel pathways of scientific progress and to enhance the scope of Quaternary research as the basis for a more integrative view of our discipline within the framework of earth sciences. Introspection on the nature and peculiarities of Quaternary research, its historical development and its potential impact on society are also relevant matters of concern.

As a natural science, Quaternary research relies on empirical evidence. The interpretation of this evidence, however, is not always straightforward, due to the inherent complexity of the natural world and the interdisciplinary character of Quaternary studies. This may result in differences among researchers and research groups that could lead to disparate views of the same fact or phenomenon. It could be argued that such subjectivity is contrary to scientific practice, where objectivity is imperative. But idiosyncratic differences are inherent to human nature and we should deal with them, not only in science but also in all aspects of life. One of the foundations of this topical collection is the conviction that, rather than dismissing or ignoring differential traits, we can take advantage of them to produce better science. After all, science is a collective activity that largely relies on constructive discussions of different ideas and approaches to understand the world in which we live and to use such knowledge for the benefit of humankind. To achieve this, we should openly expose our own ideas to the scrutiny of the scientific community, rather than insisting on the validity of our personal points of view and dismissing the suitability of others. Scientific objectivity emerges from the discussion of all possible explanations, approaches and points of view. Relying on a single approach to explain natural phenomena is useless to science as, sooner or later, new evidence comes out that requires a different or a more general explanation. Science is not a dogmatic enterprise and scientific reliability requires permanent revision of the existing theories. An open-minded attitude is thus the better recipe for scientific progress.

‘Palaeoinsights’ also provides room for speculation, an underrated intellectual exercise that is frequently censored in scientific publications as it is considered worthless for scientific progress. However, speculation can also be viewed as the first step of scientific reasoning in the way towards the explanation of the observed natural phenomena. Indeed, it is hard to understand how a testable hypothesis could be erected without a previous speculative scrutiny. In addition, the difference between speculation and other widely unquestioned scientific realizations such as hypothesis development or modelling is not always clear; therefore, avoiding speculation may run against scientific progress [1]. ‘Palaeoinsights’ welcomes speculation provided it is scientifically sound and able to contribute to the progress of earth sciences.

Another rationale of this topical collection is the belief that scientists would like to think, not only in terms of what we do—i.e., the scientific research itself—but also in other aspects such as why we do

it or why we do it in the way we do. This represents an upgrading of our research activity to consider ourselves as science practitioners, at a personal, collective and institutional level. Eventually, we might also want to ask about the special features of our particular discipline in relation to other natural and earth sciences and within the general context of knowledge generation. By doing this, we will be able to put our discipline and its achievements in a wider intellectual context that will hopefully improve our capacity for professional self-consciousness and self-criticism and, therefore, our own personal and professional integrity. Quaternary science has a place in the general context of cultural evolution, not only because of its scientific achievements but also because of the specific underlying principles that make our discipline unique and the philosophical consequences that are eventually derived from the analysis of these particularities.

Social responsibility is also a relevant topic that can be addressed from two different angles, one practical and another more altruistic. From a practical point of view, Quaternary science provides past analogues that may be useful to deal with present and future events and processes. With this knowledge, we can, for instance, improve risk assessment in the face of natural hazards, develop long-term predictions of global warming and sea-level rise or evaluate the sensitivity of organisms and ecosystems to environmental shifts, which is useful for conservation planning. It is thus evident that Quaternary study has profound social implications involving our own future and that of our planet. Therefore, Quaternary scientists should be able to participate in decisions about these topics, not only as part of advisory entities (as for example the IPCC) but in strictly scientific organizations with the same executive power as political and economic ones, provided they exist in the near future (let us hope so!). Last but not least, Quaternary science, and science in general, makes sense by itself as it contributes to the advancement of knowledge, which is the most valuable heritage of humankind [2]. This is the basis of academic education –an activity that is often overlooked when speaking about the applications of science– and also the cultural improvement of society, in general [3]. Beyond education itself, knowledge makes us more civilized and increases our personal free will, an essential quality to acquire freedom and manage it appropriately, thus becoming less prone to manipulation.

The tone of ‘Palaeoinsights’ should always be positive and aimed at improving Quaternary research, its scientific soundness and its social utility. Scientific quality is essential. Argumentation should be authoritative, constructive and free from emotional burden. Antecedents of the topics discussed should be fairly introduced and all original ideas and views of other authors should be properly credited. ‘Palaeoinsights’ are neither balanced reviews on a particular subject nor commentaries on specific published papers but personal approaches to topics of interest for the Quaternary audience. Reviews and commentaries should be submitted as regular *Quaternary* papers. ‘Palaeoinsights’ should not include original and unpublished data, but already published data can be freely used and re-evaluated, if necessary. A list of suggested topics is provided below but contacting the editor for additional proposals is encouraged:

- Opinions on controversial topics
- Novel perspectives and unconventional approaches to persistent problems
- Current challenges of Quaternary research
- Philosophical issues involving the Quaternary
- Peculiarities of Quaternary science
- History of Quaternary research
- The future of Quaternary science
- Research careers in Quaternary science
- Teaching the Quaternary
- Quaternary science and society
- Popularization of Quaternary science
- Quaternary science and future environmental change
- Contribution of Quaternary research to policies and regulations

Unless invited by the collection editor, potential authors interested in submitting a 'Palaeoinsight' should first contact the Editor-in-Chief or the Managing Editor and send a proposal including a title, a summary and a short representative reference list. If the proposal is approved, the author will be invited to submit a complete manuscript for peer review. Initial editorial decisions will be based on appropriateness and scientific soundness, and peer review will consider more specific criteria related to the particular subject of the manuscript. There are no specific regulations on the length of manuscripts, but it is recommended to remain below 6000 words, although short essays are also acceptable. As in other *Quaternary* papers, there is no limit for tables, color figures and references but reasonable numbers of them are recommended. As these are opinion papers, we recommend a maximum of three authors. There is no deadline for this topical collection, which will remain permanently open for submissions.

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