

New tools and old perspectives in the management of the fossil resources

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Although the debate on sharing digital databases involves every scientific and humanistic field, it seems that most of the problems arise when it concerns physical (and valuable) objects. In anthropology this means mostly “fossils”. In this sense, paleontology is different from most of the other scientific and historical disciplines, a fact that is evident in its earliest steps (Cadbury, 2001). In this discipline (and considerably more so when fossils are related to human evolution) everything flows around a geopolitical barycentre which is the fossil itself. Investments, mass media, academies, gravitate around the “objects”, more than around their meaning. If the objects move, everything moves together. Palaeontology is the only science centred on specific individual “objects”, a feature generally reserved to very distant fields, like art. The object is sufficient to support the social status of the discipline. If you are an engineer, you are an engineer. If you are a physician, you are a physician. But, whoever you are, if you find in your garden a fossil from the following day you are a paleontologist. If it is a valuable fossil, you will be a famous paleontologist, too. This means that you have gained the right to access media, funds, be invited in international meetings, or to write in international journals. The almost complete exchangeability between expertises and responsibilities is leading toward an undisciplined multianthropology more than toward a multidisciplinary anthropology (Bruner, 2008). Of course, every scientific discipline has its non-scientific framework. But maybe for paleontology, this

obsessive gravitation around the “unique” object of study has transformed sometimes physiological oscillations of the every-day social parameters in worrying pathological excesses. For primatology (including hominid evolution) there is a further bias: the fossil-rich Countries are often resource-poor Countries, while the resource-rich Countries are generally fossil-poor Countries. Because fossils can be moved more easily than expertise and prestige, “collaborations” risk sometimes producing unidirectional flows of information.

In this framework, one can easily imagine what kind of disorientation can be associated with the transformation of “the object” from physical to digital, a sort of de-structuring of the whole historical paradigm of the paleontological geopolitics organised around the uniqueness of the fossil specimens.

At a first glance, it seems that digital supports can resolve all those disagreeable (and scarcely professional) attitudes related to the “self-managing” of the fossil specimens. And, of course, there are many more paleoanthropologists without fossils than those who keep one in their drawer. But it is not so strange that the competitive nature of the human mind has hampered quiet and spontaneous applications of such solutions. In the end, after these first years of attempts, there is no agreement or consensus on the issue. The call for sharing clearly comes mainly from the resource-rich fossil-poor Countries (Weber, 2001), and the few promising ongoing experiments are not void of general problems (Elton &

Cardini 2008; Kullmer 2008). Even within the Western Countries, once the resources have been moved from their original areas, there are comprehensible problems between their management and their integration in the research networks (Gilissen, 2009). In this sense, it is as if the digital tools have not improved the current situation, but have simply shifted the already existing problems to a different scale: the troubles are the same, just more visible because ... enlarged.

Hence, it seems we have now a tool to better understand the problem, but not to solve it directly. The dynamics associated with the access to the fossil record characterise the whole history of paleontology. We may state it is the key to understanding the evolution of the discipline. Every paleontologist well knows the weight of this factor in orienting the directions of the evolutionary advances. It is worth noting that, such business being mostly generated and managed by the Western Countries, such a "confession" is openly admitted and discussed only when the core of the system itself is affected by some "side effect" (Gibbons, 2002). I think we must admit that we are not currently prepared for a proper collective management of these resources. In this sense, the "complex relation" between fossils and paleoanthropologists (Mafart, 2008) is becoming more and more entangled, with consequent risks for the equality of the opportunities, the impartiality of the information, and the already cited respect of the cultural heritages. Paleoanthropology still retains much of its original sins, but now has access to the powerful (methodological) weapons of the 21st century. The determinant role of the "objects", together with the rapid and globalised flow of information, may currently raise more problems than advantages, when the advances are not handled with care. This does not mean renouncing the use of the tools, it just means caution. After all, while the scientific establishment

keeps on discussing and debating excesses and defects, good friends and professional colleagues are day by day enjoining the potentialities of the digital resources, without needing authorised rules or official agreements. But on a large-scale, the recognition of a "paleoanthropological deontology" is far from being properly developed. Being the expertise, techniques, and facilities (including the media) largely concentrated in few Countries/Institutions, I wonder where, for the sake of knowledge, we must recognise a boundary between scientific progress and ethics. Given the doubt, I suggest the latter should be guaranteed first.

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