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Other ways of seeing: towards an interdisciplinary approach to university heritage

Introduction

In 1851, Britain lost probably one of the greatest painters of all time: Joseph Mallord William Turner died, whose paintings can instantly be recognised and remain to this day the treasure of nineteenth-century impressionism. The collection of his paintings, now held at the Tate Britain and in the Ashmolean Museum of the University of Oxford, was put together at the time, patiently catalogued and arranged with extreme care through the work of one man: John Ruskin, university teacher, art critic, would-be geologist, and temporary executor of Turner's will. This example may sound completely outdated, and yet I would like to suggest that it encapsulates many issues that need addressing in relation to university heritage today. For this is a story where conservation and the sense of a legacy was crucial, and where the links between university and general access to knowledge had to be firmly established and reinforced both by individuals and by institutions. Without Ruskin and Oxford University and the many schemes developed to properly house the collections of paintings and the numerous drawings of the artist, Turner's oeuvre would probably have been sold and scattered throughout the country or even the world[1].

Now, Toulouse is not Oxford, and our time different from the Victorian period, but this paper looks at the local history of the Toulouse Natural History Museum through the lens of the multidisciplinary approach of the time, first by examining the context and background, and then by analyzing recent experiences of collaboration between academics and institutions.

[1] For more information about Ruskin and Turner, see: M. Hewison, I. Warrell, S. Wildman, *Ruskin, Turner, and the Pre-Raphaelites*, London, Tate Publishing, 2001.

Context and background

In Toulouse, the connection between the academic world and the museum has always been very strong since the foundation of the Natural History Museum. Indeed, the Museum, which was founded in 1796, was first created by Philippe-Isidore Picot de Lapeyrouse, a local figure of the Toulouse political scene and a famous naturalist. Among the many things he did, one can note his passion for shells: in 1781, he published a book called "Description de plusieurs espèces d'orthocératites et d'ostracites", that is, the description of several species of orthoceras (a genus of extinct nautiloid cephalopod) and ostracites.

After the French revolution, he worked as a professor at l'Ecole Centrale de Toulouse, at l'Ecole des Mines in Paris and also at the Science faculty in Toulouse (where he was elected Faculty Chairman in 1811). From 1800 to 1806, he was elected to the function of city Mayor, thus establishing a lifelong history of kinship between the academic world and the city's broader political affairs. When visiting the Natural History Museum on Allée Jules Guesde, it is therefore worth recalling these historical links to understand the museum's distinctive approach to learning and knowledge. Although the Rangueil campus located outside of town and the downtown museums are now two different sites, it seems that both places not only share a common background but also a similar vision of the need for an interactive and innovative mode of teaching and learning[2].

In particular, the reopening of the Museum in 2007 after ten years of closure for renovation purposes has led to a remarkably modern approach to scientific heritage and the sense in which a museum is as much "user-generated" so to speak, as it is "content-generated". On the Museum website, the visitor, an avatar of the real-time visitor to the Museum itself is invited to participate in the museum experience by transmitting his or her own appreciation of the place. The Museum blog as well as the heading "Image en partage" (image-sharing), which entails a section where everyone can leave their own picture of their Museum visit, offers a counterpart to the museum's own pictures of the collection, which focuses on one particular object.

Even though such a novel approach displaying natural history objects allows a gain in exhibition area and a very flexible viewing space, it does not go without questions. First, there is the notion that a collection implies displaying a series of objects all at once so as to let the viewer's gaze select a specific order, something you cannot do when viewing items one by one on a screen. For this, you would have to imagine a website that would allow the viewer to assemble her own collection or her own musée imaginaire in the way Malraux envisioned it for example. Showing a specimen thus implies not showing a multiplicity of others and making a choice among objects that find themselves excluded from public attention. At the same time, since not every object can be shown, one can easily understand that technology offers many ways of infinite display with no storage constraints (via virtual archives and web links).

However, other aspects cannot easily be addressed by technology, for a natural object has multiple dimensions and demands to be seen in real space, as much as in its envi-

[2] For more details, see: G. Astre, *Le Museum d'histoire naturelle de Toulouse – ses galeries.* Toulouse, Muséum d'Histoire Naturelle, 1950.

ronment so that it can be apprehended in its volume and size. In the Toulouse Museum, the crocodile issue is a fairly good example of how one object may by itself encompass a whole experience. The famous "Nile crocodile" (from Madagascar) used to be the star in the old Museum where it occupied centre stage on the first floor. It was then removed in the new Museum and its absence bitterly denounced by the audience who had known it from childhood (Fig. 1)[3].

A few months ago, a photograph of the crocodile appeared on the Museum website, with a message saying: "you said you missed it, here you have it back". But of course, the picture of the crocodile does not replace the actual object for as even the surrealist Rene Magritte underlined in his work on the semiotics of art, the representation of an object is hardly the same as the object itself (*Ceci n'est pas une pipe*). One can also imagine that, chances are, those who had made the remark were not necessarily computer literate, if only because of the generation involved, and perhaps never saw the "reclaimed" object. This also points to the fact that cultural heritage has to do with all aspects of memory, which are not limited to the recollection of the past.

As Roland Recht underlines in his book *Penser le patrimoine*, the one dimension that is required from any cultural object is the mnemonic dimension, which is what binds people together and also opens the museum to the future, as it reactivates past experience and makes it current and relevant to the present through this unique aspect. To the visitor familiar with the way the museum used to look, the reconstruction of the new museum at large, with its radical move towards the 21st century, something of the past may seem to have been lost. However, as the last stage in that crocodile saga shows, the loss of the original site also meant envisioning visual experience in a new way for in the recent temporary exhibition called "10 years of Museum re-creation", both times, past and present are integrated and memory brought in so that viewing includes truly remembering, that is putting things together and piecing up the past with the present to envisage the museum as a place for future exhibition (Fig. 2).

Finally, the challenges and opportunities of a multimedia approach allow to truly imagine a museum which is not a sanctuary or a temple only open to a few believers but a place of learning that integrates the past as part of an all-time experience, both present and future. It is also a useful way to revisit the museum's historical links with the university in all its dynamic aspects: education, teaching and research.

Views of the past for a vision for the future

Another aspect that is worth considering in the case of the Toulouse Natural History Museum is the question of how to better integrate the collections in the university proper and attract interest from as many quarters and levels in the university as possible: if research students studying materials from the various collections are aware of the wealth of university heritage, many newcomers to the university are simply not regular visitors

[3] For comments on the subject, see: http://www.museum.toulouse.fr/explorer_3/les_collections_20/zoologie_56/crocodiliens_96/crocodile_du_nil_2_1925/?lang=fr (Accessed 17 January 2010)

to the Museum and sometimes not even aware of the strong connection between university and museum. Why is it so?

In my three years' experience at the Paul Sabatier Université teaching languages and culture, I have been able to identify at least two main causes, the first of which may not be specific to Toulouse and has to do with the way culture is taught in France. Just as there is no teaching of art in secondary schools, history of science is also seldom taught. For some scientists, the general history of science even appears as an obstacle to the development of future science, a point made by Jean-Pierre Dupuy in his latest book on science and religion[4]. The result is that, even last year, when the bicentennial of Darwin's birth and the 150th anniversary of the publication of the *Origin of Species* were being celebrated everywhere in France, and all over the world, some students in class were unable to name even the title of Darwin's seminal book, the *Origin of Species*. One problem here is perhaps the fragmentation of knowledge, and the idea that specialization involves turning away from general knowledge of culture and history. It often implies that art and science should not go hand and hand, a view that is completely foreign to the 19th century culture as Jules Verne's novels amply demonstrate[5]. Contrary to our modern view that to separate rather than confront science and art, earlier this year, the *Explora* project, initiated by two of my colleagues from the Mirail Université and in collaboration with Francis Duranthon from the Museum exemplified how art and science could be brought together and a dialogue initiated between research in science and in the arts (whether it be literature or painting)[6].

My main contribution to the project was the idea to export research outside the walls of the university – a blessing in times of national strike but also a true opportunity to break down the invisible walls between science and the humanities, museum culture and university culture. In the three distinct symposia (on ice, Darwin, and scientific culture), the point was to bring in people to truly question a subject and show the complexity of its history, reality and its future[7]. More particularly, the second symposium used some of the specimens in the Museum collection to illustrate the topic and show how the representation of natural objects (such as skulls) went with a political discourse that was all but innocent. The event was interesting, at least as far as research was concerned, but practical difficulties were numerous for the event organizers, and attendance could have been better, had the event been truly relayed and publicized among students in science for, although open to the public, it only attracted a limited audience (of about 20 people) that was mainly composed of literary students and lecturers from the English faculty. All in all, that kind of experience shows the need for institutions to come together and better use the potential of experts in different fields. In its originality, it paved the way toward exploring science from many different angles, a common practice abroad that is still met with a lot of resistance in France[8].

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[4] J.-P. Dupuy, *La marque du sacré*, Paris, Carnets nord, 2001, p. 64.

[5] See for example, M. Clamen, *Jules Verne et les sciences, 100 ans après*, Paris, Belin, 2005.

[6] For information about the Explora project, see: http://w3.cas.univ-tlse2.fr/spip.php?article129 (Accessed 17 January 2010).

[7] The three symposia were called: "Mythe, science et représentations littéraires et picturales de la glace au dix-neuvième siècle", "Darwin, Etats multiples, l'évolution et ses représentations", and "Enfance, savoirs et environnement".

[8] For example, the latest conference held by the International Society for the Study of European Ideas in Helsinki in 2008 dealt with the issue of "language and the scientific imagination".

Another example of such interactions between art and science directly involves the Natural History Museum and a glass case where a remarkable collection of plaster models of foraminifera sat, quietly waiting to be rediscovered. When the collection curator Francis Duranthon first drew my attention to them, he pointed out the aesthetic aspect of the collection, which he thought would appeal to a non-scientist. The models are perfectly preserved and appear to be a superb artefact and a perfect example of nineteenth century craftsmanship, certainly to an art connoisseur (Fig. 3).

However, their value does not simply lie in their beauty, because they illustrate major advances in the history and the teaching of science, as I will show. These aspects justify the models being shown to a larger audience and studied as a key element in the representation of 19th century science. The Toulouse collection was designed by Vaclav Fric (1839–1916) under the direction of Professor A. Reuss and Dr. Anton Fric, and represents a complete set of around hundred models that have only two other equivalents in Europe, both at the Natural History Museum in London, originally called the British Museum (Natural history).

Vaclav Fric was a natural history dealer of international stature based in Prague where he established his business in 1862. He was also the brother of Anton Fric, curator of the zoological and palaeontological collections of the Natural History Museum in Prague from 1854 to 1913. August von Reuss was Professor of Mineralogy at Prague University where Anton Fric himself held a professorial position for a time (Miller)[9]. The models were meant to illustrate the classification of the foraminifera based on the groundbreaking work of Alcide d'Orbigny who is considered even today as the founding father of micropaleontology, and as the inventor of stratigraphy. The Reuss and Fric foraminiferal models were supposed to complement d'Orbigny's classification by adding more taxa. Beyond their scientific interest that testify to the naturalist's effort to classify new species, these models are also evidence of a turning-point in the study of natural objects and the need for new ways of considering access to scientific culture.

As a scientist, Alcide D'Orbigny himself had conceived the idea of magnifying the various foraminifera he had found "with a view to giving greater publicity" to his work and "with the object of making it available to everybody without entailing the necessity of observing the numerous foraminifera under the microscope" (Miller, 263). Models designed by Fric were used in teaching and as early as 1823, a subsequent set of 25 plasters of the Paris models that had been carved in limestone, were sold in four instalments to accompany D'Orbigny's *Tableau méthodique* of the Cephalopods (Fig. 4).

In this original endeavor, one main aspect was the sharing of scientific knowledge among experts (as we can gather from the correspondence between D'Orbigny's father and great scientists of the day, like Adolphe Brogniart and Cuvier[10]) but the didactic goal was equally essential. At a time when the electron microscope was not yet invented, these models made it possible to see the microscopic animals enlarged by 40 to 200 times. Moreover, the idea of making them visible to the naked eye also meant that they could be displayed in public places as objects of admiration. Miller thus notes that "Nu-

[9] For more details about the collection, cf. C. Giles, Miller, *Micropalaeontological Models at the Natural History Museum*, London, "The Geological Curator" 7 (7), p. 263–274.

[10] Cf. G. Béraud, M.-Th. Venec-Peyré, *Documents inédits concernant les modèles de foraminifères sculptés par Alcide* d'Orbigny, Annales de la Société de Sciences naturelles de Charente-Maritime, "La Rochelle" 2003, 9 (3), p. 327–340.

merous microfossils were displayed in the Great Exhibition of 1851 in London by fixing them to pieces of card and displaying them in glass cabinets" (263). In their size and variety, those objects could easily be viewed by an anxious audience witnessing the reconstruction of gigantic creatures such as dinosaurs, as perfect examples of the care the Creator had put in even the tiniest creatures. The spectacle of minute details in those marine creatures was also part of the contemporary craze for seaside natural history[11].

The Toulouse set of models was produced after the d'Orbigny examples and used as teaching aids. They are presented mounted by a long wire, with the labels glued to a wooden base, which points to their previous use as teaching tools[12]. The Pyrenees room which houses them in the Allée Jules Guesde building is no salle d'Orbigny, like the famous one at the Muséum d'Histoire Naturelle in Paris, and the ways the models can be made accessible to the public, either physically through an exhibition or virtually via the museum website remains to be seen. As a matter of fact, a group of young students is currently working on a project which precisely looks at the way the collection could be enhanced and made accessible to a larger public through digital displaying or book-publishing.

The relevance of the models to modern industry and science was clearly demonstrated by the success of the 2002 international conference on Alcide d'Orbigny, where economic sponsors (such as the oil giant Total) and the wider public came together in the desire to acknowledge the scientist's lifelong devotion to the promotion of science and knowledge[13].

I would argue that the Toulouse models deserve to receive the same kind of attention and become key-pieces for a broader symposium on the various ways of seeing and interpreting the world around us: if, to the oil industry, the presence of foraminifera in the strata of the earth has practical consequences for oil and other resource exploration as well as earth construction, the very shape of these fossils and the structure of their shells also finds an echo in the arts and in literature where shells are very often used as ornaments and symbols. In the Victorian age, an explosion of interest for seaside natural history could be said to have demonstrated the changes taking place in science through the impact of Darwin's discoveries as well as the move towards aestheticism and art nouveau where biological structures and art forms were able to meet. Seen through the lens of research, these models can therefore be interpreted in many ways: as evidence of how the future depends on the past and how the current and future use of natural resources is related to the knowledge of that past[14].

On a completely different level, to a teacher, these objects are the ancestors of PowerPoint and a reminder that research and teaching should not go disconnected and are to be related to the issue of visualization as explored by researchers like Bruno Latour[15]. As

[11] Cf. J. Smith, *Charles Darwin and Victorian visual culture*. Cambridge, Cambridge University Press, 2006, p. 68.

[12] Just like one of the London sets of models, the Toulouse set was apparently mounted on wire at an unknown date in situ to facilitate viewing by the students.

[13] Cf. *Les planches inédites de Foraminifères d'Alcide d'Orbigny à l'aube de la micropaléontologie*, ed. M.T. Veynec-Peyré, Paris, Muséum d'Histoire Naturelle, 2005.

[14] Cf. M. Lynch, S. Woolgar, *Representation in Scientific practice*, Cambridge, MIT, 1990.

[15] B. Latour, *Visualization and Cognition: Thinking with Eyes and Hands* [in:] *Knowledge and Society: Studies in the Sociology of Culture Past and Present*, Vol. 6, 1989, p.1–40.

pure objects of contemplation, these curiosities also possess great aesthetic value and exhibiting them not only in relation to natural history, but also as art is a way to blur the distinction made by Benjamin Gilman a century ago, between the art museum and the natural history museum and to recapture their aura, their magic by giving them a second life[16].

Conclusion

In past years, the university scientific heritage in Toulouse has been dismantled, scattered or ill-kept for lack of funding, its collections only preserved through the care of devoted individuals aware of their unique value. In many ways, it has followed a path parallel to that of the university proper. Today, at a time when reform promises to enhance scientific culture while reuniting all the sites of the three local universities into one major pole, there are hopes that culture heritage will be promoted as a way to initiate educational and social projects and cement new relations between the humanities and science, the public and the private sector, the university and the city at large, town and gown.

STRESZCZENIE

Różne punkty widzenia: interdyscyplinarne ujęcie dziedzictwa kulturowego i naukowego uniwersytetów

Roland Recht w swej książce *Penser le patrimoine* podkreśla, że w czasach kryzysu symboliczne oddziaływanie dzieł sztuki musi ulec koniecznym przemianom. Artykuł wskazuje, że muzea uniwersyteckie również muszą wziąć pod uwagę proces przemian. We Francji problem ten jest nawet bardziej istotny, ponieważ wiele instytucji nauczania, w tym same uniwersytety, stawiają sobie pytania dotyczące swej przyszłości i debatują nad kluczowymi decyzjami w sferze edukacji, nauki i kultury. W Tuluzie w Muzeum Historii Naturalnej zdecydowano się na otwarcie drzwi dla szerokiej publiczności oraz na prowadzenie dialogu z widzami, jednocześnie próbując zachować swą specyfikę kulturalną i historyczne ogniwa łączące to muzeum z Uniwersytetem Paula Sabatier. Biorąc pod uwagę lokalną historię i doświadczenia ze współpracy pomiędzy naukowcami i różnego rodzaju instytucjami, artykuł mój ukierunkowałem na bardziej ogólne zagadnienia dotyczące uniwersytetów i ich wkładu kulturalnego. W szczególności analizuję różne możliwości współtworzenia przez naukę i kulturę nowych koncepcji wzmocnienia dziedzictwa uniwersytetów i nauki.

[16] Cf. B.I. Gilman, *Museum Ideals of purpose and method* [in:] *Museum Origins: Readings in Early Museum History and Philosophy*, ed. H.H. Genoways, M.A. Andrei, Walnut Creek, Left Coast Press, 2008.

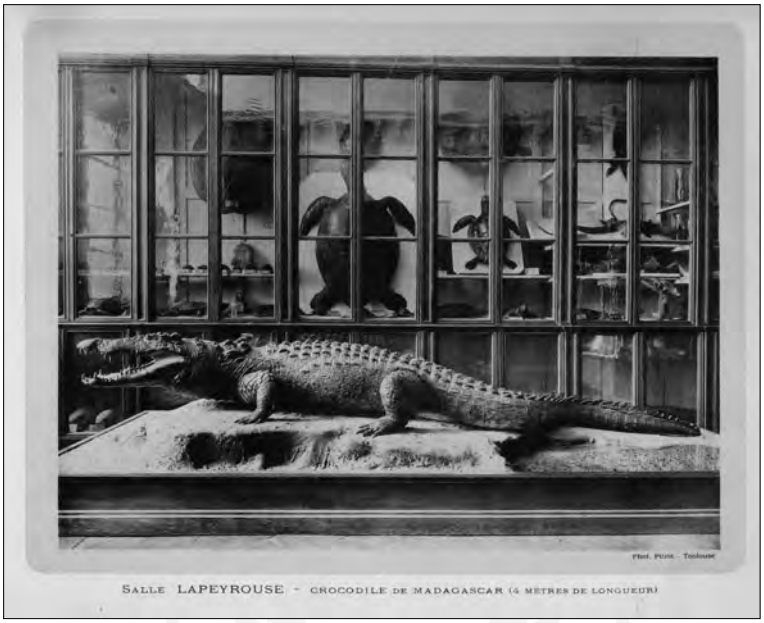

Fig. I. Crocodile de Madagascar (4 m), 1920 (M. Pujol © Muséum de Toulouse. Salle Lapeyrouse)

Fig. II. Crocodile du Nil, exhibition '10 ans de Recréation', Muséum de Toulouse (© Muséum de Toulouse)

Fig. III. Foraminifera models at the Natural History Museum (Mazau © Université de Toulouse/LECP)

Fig. IV. Close-up of the Foraminifera at the Natural History Museum (Mazau © Université de Toulouse/LECP)