

# **Jahrbuch für Europäische Wissenschaftskultur**

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## **Yearbook for European Culture of Science**

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## INTRODUCTION

*Dominik Collet and Roy MacLeod*

Academic collections date from the earliest universities in Europe, and have been a prominent feature of every university ever since. Today, they are widely called upon for their uses in teaching and research, and feature prominently in the modern university's ever-expanding commitment to public engagement. But whereas the history of universities and university museums has enjoyed a large and growing literature, the relationship between the two – the *university of things* – has remained strangely neglected. However, the time has come to look at this relationship more closely, not least because of the sheer number, size, and cost, and their role in teaching, research, and outreach.<sup>1</sup>

Academic collections offer a rich field for an object-led approach to the social history and sociology of knowledge, spanning the arts, sciences, and medicine. Since the 'scientific revolution' of the 17<sup>th</sup> century, their role in shaping knowledge has followed from the rapid expansion and diversity of the university. As agents of representation, application, and commodification, they constitute an extraordinary resource for inter-disciplinary research.

The *university of things* is not just a by-product or a handmaiden of scholarship, but the material representation of practices that have helped shape the research university. The design of this volume explores these practices, in focusing on a selection of historical and contemporary cases.

### CONTACT ZONES, BOUNDARY OBJECTS, EPISTEMIC THINGS

It is customary to treat the history of academic collections as a subset of disciplinary history, in which 'objects' – whether natural or artificial – are viewed as resources for explanation, interpretation, or theoretical confirmation.<sup>2</sup> However, we

1 A recent survey has identified more than 1000 academic collections in Germany alone: [universitaetssammlungen.de](http://universitaetssammlungen.de), retrieved 1 September 2013.

2 Cornelia Weber, 'Universitäts-sammlungen und -museen', in: Ulrich Rasche (ed.), *Quellen zur frühneuzeitlichen Universitätsgeschichte. Typen, Bestände, Forschungsperspektiven*, (Wiesbaden: Harrasowitz, 2011), pp. 83–118; Anke te Heesen, 'In medias res. Zur Bedeutung von Universitäts-sammlungen', *N.T.M.*, 16 (2008), pp. 485–490; Udo Andraschke & Marion Maria Ruisinger (eds.), *Die Sammlungen der Universität Erlangen-Nürnberg. Begleitband zur Ausstellung „Ausgepackt. Die Sammlungen der Universität Erlangen-Nürnberg“* (Nürnberg: Stadtmuseum Erlangen, 2007). Horst Bredekamp *et al.* (eds.), *Theater der Natur und der Kunst. Wunderkammern des Wissens* (Berlin: Henschel, 2000).

wish to propose a more integrative perspective, drawing upon an intradisciplinary language of zones, boundaries and things.

### UNIVERSITY COLLECTIONS AS *CONTACT ZONES*

Some time ago, the anthropologist James Clifford suggested that museums should be understood not as closed systems but as relational spaces. By now, it seems well accepted that museums create stages where objects and observers interact. As Clifford stressed, this ‘exchange’ is not limited to the diffusion of knowledge amongst professionals. Instead, the academic collection constitutes a space of inter- and infrastructural translation, a “borderland between different worlds, histories, and cosmologies”.<sup>3</sup> Clifford’s concept of museums as *contact zones* has had a profound impact on both museum theory and practice.

More recently, Peter Galison has suggested that scientific practice involves the creation of ‘trading zones’ between theory and experiment, ideas, and materials.<sup>4</sup> In academic collections – from *Antiken* to *Zoologie* – we see such ‘zones’ at work, in organising and facilitating the circulation of ideas, lending an active voice to an otherwise passive construction of custodial knowledge. This requires us to lift our sights from a preoccupation with ‘things’ in themselves, and towards their multiple uses, and from the collection as a fixed entity, to the practices that have informed its origins and development. It seems clear that academic collections must be conceptualised not as mere assemblages of objects, but as action spaces, where knowledge is created in a collaborative and social setting, complete – as Clifford puts it – with ‘conditions of coercion, radical inequality, and intractable conflict.’<sup>5</sup>

### UNIVERSITY COLLECTIONS AS *BOUNDARY OBJECTS*

Objects in academic collections attract a heterogeneous audience. They bring together scholars and amateurs, but also scientists of different backgrounds. To use a phrase from Barbara Kirshenblatt-Gimblett, academic collections embody *disciplinary objects* that enable scholars to ‘materialise’ fields of knowledge. As such, they initiate and delineate disciplines, create and legitimate research spaces, and valorize scientific practices, so becoming important foci of interdisciplinary de-

3 James Clifford, ‘Museums as Contact Zones’, in James Clifford, *Routes. Travel and Translation in the Late Twentieth Century* (Cambridge, MA: Harvard University Press, 1997), pp. 188–219, p. 212.

4 Peter Galison, *Image & Logic; A Material Culture of Microphysics* (Chicago: University of Chicago Press 1997).

5 Clifford, ‘Contact Zones’, p. 192.

bate.<sup>6</sup> Moreover, as Susan Star and James Griesemer have observed, collections can be understood as *boundary objects*, both material and conceptual.<sup>7</sup> Collections are both plastic enough to encourage cooperation and robust enough to maintain a coherent identity. “They have different meanings in different social worlds but their structure is common enough to more than one world to make them recognizable, a means of translation”.<sup>8</sup> This definition attached easily to the many collections gathered in the course of European expansion in the Americas, Asia, Africa, and the Pacific.<sup>9</sup> Scholars of interdisciplinarity have stressed that it is precisely this pliability that has enabled interdisciplinary ‘borrowing’, without participants being forced abandon the methodological resources of their field.<sup>10</sup> In the *university of things*, it is not just individual objects but the collection itself that asks to be seen as a *boundary object*. These definitions have mediated the encounter of cultures in the past and continue to do so today.

### UNIVERSITY COLLECTIONS AS *EPISTEMIC THINGS*

In his work on the material culture of science Hans-Jörg Rheinberger reminded us of the “power of objects in the process of the acquisition of knowledge”, in which objects can be conceptualised not only as empirical tools, but also as theoretical markers – as *epistemes* – whose very existence arouses our interest. As such, the organisation of an academic collection reveals the epistemic assumptions of a given stage of academic life, with its historically specific, conceptually normative lines of inquiry and explanation. Rheinberger highlights the role of “artful science” and suggests differentiating imaginaries, whether in the form of inanimate or animate objects or specimens.<sup>11</sup> In this way, *epistemic things* allow the reconstruction of contexts that unite objects and observers. Such an object-led epistemology can usefully supplement theory-based approaches to the history of

- 6 Barbara Kirshenblatt-Gimblett, ‘Reconfiguring Museums: An Afterword’, in: Cordula Grewe (ed.), *Die Schau des Fremden: Ausstellungskonzepte zwischen Kunst, Kommerz und Wissenschaft* (Stuttgart: Steiner, 2006), pp. 361–376.
- 7 Susan Leigh Star & James R. Griesemer, ‘Institutional Ecology, ‘Translations’ and Boundary Objects: Amateurs and Professionals in Berkeley’s Museum of Vertebrate Zoology, 1907–39’, *Social Studies of Science*, 13 (1989), pp. 387–420.
- 8 *Ibid.*, p. 393.
- 9 Roy MacLeod & P.F. Rehbock (eds.), ‘*Nature in its Greatest Extent*’: *Western Science in the Pacific* (Honolulu: University of Hawaii, 1988); Roy MacLeod, ‘Museums in the Pacific: Reflections on an “Introduced Concept” in Transition’, in: Martine Barrère (éd.), *Les Sciences hors d’Occident au XXème Siècle*, vol. 5: *Sciences et Développement* (Paris: ORSTOM Editions, 1996), pp. 275–280; Roy MacLeod, ‘Post-colonialism and Museum Knowledge: Revisiting the Museums of the Pacific’, *Pacific Science*, 52 (4) (1998), pp. 308–318.
- 10 Peter Weingart, ‘The Paradoxical Discourse’, in: Peter Weingart & Nico Stehr (eds.), *Practising Interdisciplinarity* (Toronto: University of Toronto Press, 2000), pp. 25–42.
- 11 Hans-Jörg Rheinberger, *Towards a History of Epistemic Things: Synthesizing Proteins in a Test tube* (Stanford: Stanford University Press, 1996).

knowledge, and bring a fresh approach to the practices of knowledge-gathering and representation.

## THE POLYVALENCE OF UNIVERSITY COLLECTIONS

All these concepts add freshness and work well within the *university of things*, in which objects can be configured in ways that inform our understanding of museums, libraries, zoos, and galleries. Academic collections have commonly had their origins in professorial practice, and their use, in the practical purposes of study and teaching. Characteristically, they celebrate not individual masterpieces but series, ensembles and “assemblages”.<sup>12</sup> Historically, they form around particular sets of inquiry, and are aimed (initially, at least) at *savants*, whether official or self-appointed. Traditional rules of representation may not play a major role in their construction or conservation. In fact, their history often embraces the frequent exchange, if not also the sale of their specimens. The same collections can acquire new functions over time. When observations tied to their inventories are documented and made accessible for review, they become destinations for visitors and researchers. Once they achieve disciplinary significance, they take on new educational (and in some cases, industrial and commercial) roles. Gradually, they become important in the dissemination of knowledge to a wider public, manifesting the modern triad of service to research, education and rational entertainment.

Overall, it is the dynamic, changing nature of the academic collection that remains its central characteristic. As an agency of knowing, it is the subject of constant revision. The features that lead to its foundation are those that often accompany a new field, with its taxonomies, rules, models, and systems. As such, collections mirror the differentiation and specialisation of academic disciplines – a process that continues today, in the application of new techniques, such as C14, DNA, and isotope-analysis, to the re-use of old resources.

In these terms, the academic collection differs substantially from other museum-like institutions. By definition, it is a *polyvalent* space. Thus, it is a *repository*, where material is aggregated. It is an *archive*, where research is documented and type material is stored to enable the replication of experiments, and to study failed attempts and near-misses. The collection can also be a *theatre*, where theories are made tangible and classic discoveries are re-enacted. As such, collections are *spaces of self-affirmation*, where disciplinary boundaries are visualised and naturalised. Collections thus build professional identities and secure points of reference. Finally, academic collections provide a *social space*, where exchange and networking take place. Unlike the office or the laboratory, the collection has a semi-public character that encourages interaction. Overall, it is this remarkable *polyvalence* that gives the academic collection its special value, and its importance to the university community and to the wider public.

12 Tony Bennett. ‘Assembling Culture’, *Journal of Cultural Economy*, 2 (2009), pp. 1–2.

## THE UNIVERSITY OF THINGS

Recognising this plurality of functions and dynamics opens a wider perspective on the social life of things within academic life. Integrating the technical, social, and symbolic functions of objects challenges those concerned with their preservation and upkeep. However, they also offer enormous potential for reflection on the social history of knowledge. Their *epistemic things* reveal the assumptions and limitations of experimentalism. Their *boundary objects* illustrate disciplinary differentiations. And as *contact zones*, they shed light on the scientific process as a whole.

In many ways, this perspective has been endorsed by the rise of the modern university museum profession, and in its discourse. However, the path to acceptance has not always been easy. Following the Second World War, academic collections that once featured prominently were ‘orphaned’ by the rapid rise of the laboratory and field sciences, and over the next generation, many were dismantled and dispersed. In the early 1980s, the suggestion that there might be a “Crisis in University Museums” awakened academics and curators across Europe. In 1982, the University of Utrecht launched a survey of Dutch university museums, which was conducted under the sponsorship of the Dutch Ministry of Culture. This inventory revealed at least 128 collections worth preserving in The Netherlands alone, and prompted attempts to persuade all Dutch universities to husband their collective treasures.

In the mid-1980s, the Dutch initiative was taken up in Britain, and led in 1986–87 to a report by the British Museums and Galleries Commission that stressed the importance of making inventories across the university sector. In 1992, a group of Australian universities, led by Peter Stanbury of Macquarie University, followed suit, and the Australian Vice Chancellors’ Committee produced reports in 1996 and 1998 that identified 400 “Cinderella Collections” at potential risk in Australia.<sup>13</sup> From there, it was just a matter of time before Stanbury and others organized a meeting of the International Council of Museums (ICOM) devoted to the conservation and use of academic collections throughout the world.

At first, the prospect was not optimistic an early meeting in Glasgow, in the year 2000, was given the forbidding title, “The Death of the Museum”.<sup>14</sup> Fortunately, the death of the academic collection was much exaggerated. Contributions from British and Nordic universities led in September 2000 to a seminar in Paris on the “Management of University Museums”. This attracted participants from

13 Australian Vice Chancellors’ Committee, *Cinderella Collections: University Museums and Collections in Australia: The Report of the University Museums Review* (Canberra: Australian Vice Chancellors’ Committee, 1996); Australian Vice Chancellors’ Committee University Museums Project Committee, *Transforming Cinderella Collections: The Management and Conservation of Australian University Museums, Collections and Herbaria* (Canberra: Australian Vice Chancellors’ Committee, 1998).

14 Panu Nykänen, ‘The Idea of the University in our Collections: History of the ICOM International Committee on University Museums and Collections (UMAC)’, *MS*, 2012, p. 8. I am greatly indebted to Professor Nykänen for sharing with us an early version of this paper.



seventeen countries, and led to the establishment of UMAC (International Committee for University Museums and Collections), under the umbrella of ICOM.<sup>15</sup>

During the last decade, the value of academic collections has become well established. “To preserve collective memory through sustainable practices”, in the phrase of Lothar Jorden, has become its theme, using objects as “witnesses of the past”. By “evoking the past, shaping the future” academic collections show the interconnectivity of materials, design, theory and practice. What is their future? This question acquires urgency at a time when universities everywhere are exploring the relative value of physical objects as against virtual technologies that appear to make ‘real objects’ redundant. The institutional future is complicated by the fact that, as the historian of ICOM has said, “there is no model for a university museum; all of them have a justification of their own, developed in time and with local characters. The only permanent and common feature [...] is their status as a knowledge bank, an important part of the scientific tradition.”<sup>16</sup> Amongst scholars, this truth remains self-evident, and is not compromised by the fact that, as Oliver MacGregor reminds us, the earliest university museum in England has in its collections an early typewriter, a Japanese mechanical fly-trap, a 19th century clock bird scarer, and an astrolabe belonging to Nostradamus. Whether the values implied in this heterogeneity appeal to modern, cost-conscious university managers remain among many issues waiting to be resolved.

As the essays in this volume suggest, collecting is a social process, which has always required a committed community of travellers, mediators, agents, traders, and curators. An overriding wish to overtake the printed authority of the ancients, and to *see* the world – to refine, in Tony Grafton’s phrase, the autopic sensibility – opened the European university of the Renaissance and the Enlightenment to ways of learning based on both ‘*le mot et le chose*’. Through academic collections, the expansion of Europe and the New World helped shaped the modern university. Established collections continue to structure practices and disciplines, even when they slip from public view. Today, we see objects and collections not as static physical markers but as *polysemes* that carry, enable, and foster changing meanings in changing historical and social contexts. Researching the *university of things* – past, present, and future – should prompt fresh interest in the social practices of museum-building, and in this way parallel the ‘object turn’ in the history

15 Today, UMAC is one of the 31 international committees of ICOM. Membership currently exceeds 200 individuals and institutions from 41 countries, including 31 from the USA, 16 from the UK, and 12 from Germany. UMAC has pioneered many activities, including a world-wide database for University Museums and Collections, inspired by Cornelia Weber and Marta Lourenco.

16 Nykänen, ‘The Idea of the University in our Collections’, p. 3.

of science and the material-culture debate.<sup>17</sup> We look forward to making use of this approach, to highlight the circulation of objects and ideas in a comparative, European and international perspective, the better to see academic collections as a rich resource for our understanding of human culture and the natural world.

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17 See for example, Arjun Appadurai (ed.), *The Social Life of Things: Commodities in Cultural Perspective* (Cambridge: Cambridge University Press, 1988); Peter J. Bräunlein 'Material Turn', in *Dinge des Wissens. Die Sammlungen, Museen und Gärten der Universität Göttingen* (Göttingen, 2012), pp. 30–44; Paula Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley: University of California Press, 1994).

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