袁雁悦.筹备一场兼具当代性与国际性的临时展览:以伦敦科学博物馆的一项前期策展研究为例(英文)[J].科学教育与博物馆,2019(3):214-225.

At the intersection of temporary, contemporary and international: Curatorial research on a touring exhibition on history of Chinese science and technology at the Science Museum, London^{*}

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Abstract This paper introduces the research project that the author conducted at the Science Museum, London to develop an exhibition narrative for a future touring exhibition on history of Chinese science and technology. Reflecting back on the key stages of the research, the author highlights main challenges and lessons learnt at both practical level and conceptual level. The case can further offer insights to temporary exhibition planning with the goal of integrating contemporary aspects and promoting international collaborations and connections. It also hints towards possibilities of further dissolving the boundaries between different types of museums.

Keywords temporary exhibition, science museums, Chinese science and technology, contemporary, international

0 Introduction

From March to July 2018, I was appointed as "UK-China Rutherford Curatorial Research Fellowships" by Science Museum Group to create a preliminary framework for a touring exhibition (to be held around 2022/2023) within the broad scope of Chinese science and technology. In this article, I take a retrospective look at this five-month research project with the aim of providing some insight into curatorial research of an exploratory nature, in particular the challenges that emerged at both practical level and conceptual level. To situate this curatorial project in a bigger context, I start with a brief history of the Science Museum, London (one of the five museums of Science Museum Group).

The origin of the Science Museum, London can be traced back to the Great Exhibition of 1851 held in the Crystal Palace in London. Henry Cole, who organized the exhibition together with Prince Albert, was a main advocate for science and art education at that time. In 1857, Henry Cole became the first director of what was then South Kensington Museum (transitioned from the Museum of Ornamental Art in Malborough House) under the Department of Science and Art. A majority of the collections were pur-

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chased from the Great Exhibition. Gradually the Science and Art collections at the South Kensington Museum were separated and in 1893 a director was appointed to attend specifically to the science collections. In 1899, Queen Victoria laid the foundation stone for the new building for the Art Museum, which then became the Victoria and Albert Museum. Ten years later, in 1909, the Science Collections were officially separated from the Victoria and Albert Museum and the Science Museum, London came into existence. A few decades later, physical expansion of the museum outside London led to the opening of the National Railway Museum in York in 1975 and the National Museum of Photography in Bradford (now the National Media Museum) in 1983. From 1984 to 2012, the Science Museum, London and the two sister museums started to be administered by a Board of Trustees and were known as "the National Museum of Science and Industry". In 2012, the name was changed to "Science Museum Group" (as it is known today) and in the same year, the Museum of Science and Industry, Manchester joined the Group.

Even from this condensed version of Science Museum Group's history, it can be noticed that the current the Science Museum, London was once closely connected to arts (and in particular applied arts) and that it has been transformed into a multi-site museum network under the management of the Board of Trustees. Under the National Heritage Act 1983, the Board of Trustees bear statutory duties to establish the Science Museum Group's policy, review performance, and endorse appointments to key management positions ^[1]. Science Museum Group is currently described by the UK government as "an executive non-departmental public body, sponsored by the Department for Digital, Culture, Media & Sport".

The curatorial project under discussion in this paper can be further contextualized by referring to Science Museum Group's current vision and strategy. In the Science Museum Group's report *Inspiring Future Strategic Priorities 2017-2030*, the section *Extend Our International Reach* explicitly maps out the goal of establishing global partners and establishing the group as an international organization by enhancing international cooperation on research and lending, offering more touring exhibitions to diversify the profile of visitors, promoting digital outreach, and sustaining and creating engagement initiatives. What is also stressed in the action plan is to "undertake market analysis for designated regions and activities, and initiate new collaborations accordingly; China will be the first priority".^[2]

Actions have already been taken to implement the above strategies. One noticeable example is the museum's temporary exhibition "Illuminating India: 5 000 Years of Science and Innovation", held during October 2017 to April 2018. The exhibition features India's contribution to science, technology, and mathematics and is put on display in parallel with a photography exhibition "Illuminating India: Photography 1957-2017". The timing of the temporary exhibition was carefully planned to commemorate 70 years of the independence of India and to be part of the British Council's UK/India Year of Culture.

It was also in 2017 that the Science Museum, London started to initiate collaborations with China (during that year, one coordinator was appointed at the Strategy and International Team to work specifically on liaising potential collaborations with China).

1 How the framework came into being

1.1 Narrative framework

At the end of July 2018, a 6 000 word report (excluding appendices) was completed as the main outcome of the five-month curatorial research project. The report features a narrative framework "Shaping China: Materials, Mobility and Transition". This framework is not itself an exhibition outline, but serves as a frame of reference for developing storylines of the emerging touring exhibition, as well as related public engagement initiatives, learning programmes and collaborative projects.

The framework puts forward three key messages. First, the key term "mobility" is applied at two different levels: literally, it refers to physical movement of people and objects; metaphorically, it hints towards the way ideas travel. The main idea is to explore how mobility at these two levels manifests itself in the Chinese context from ancient to contemporary times. The second highlight is "materials", with the goal of introducing the major materials made and used throughout Chinese history and more importantly to ignite discussions on how the production, processing, consumption and recycling of different materials could have influenced and been influenced by cultural and natural landscapes. A third focus is placed on "problem solving", allowing transition of attention from iconic objects to human endeavours behind scientific and technological research and practices. This can potentially provide a global perspective with key emphasis on collective wisdom rather than unduly emphasizing certain aspects as exclusively Chinese, echoing Mark Elvin's remark that, "in any future impasse that China faces, whether of resources, water, or food, (either) the world will ... be part of China's solution, or China will become a large part of a global quandary".^[3]

Within this broad conceptual framework, I further stresses six approaches to communicate the above three key messages:

(1) Embed reflective thinking with question-oriented format rather than simply showing facts.

(2) Focus can to be set on global connections and collective wisdom so that discussions can be stimulated around intercultural exchanges and knowledge transfer rather than reinforcing China as a standalone geopolitical region.

(3) Effort needs to be made to celebrate diversity within China in terms of its changes across time and its many ethnic groups and cultures across different regions.

(4) Demonstrate a forward-looking vision to manifest a contemporary picture and make connections between past, present and future.

(5) Deliver a multi-sensory experience, considering that sound and music has been playing an important role in Chinese culture, and inclusion of sense of touch and olfactory sense can link well with the focus on materials.

(6) Emphasize people power to demonstrate human endeavours, with recognition of not only legacies and influences made by key agents (famous scientist and inventors for instance), but also of ordinary people who played a key part in history of science and technology.

In the report, I have proposed seven potential sections (they should also be viewed as running titles indicating possible themes rather than titles of exhibition sections) to illustrate how the above ideas can be implemented in exhibition-related practices. Under each section, examples are listed to indicate potential exhibits (from Science Museum Group's own collection or potential loans), directions for further research, and connections with contemporary social trends and topics. The seven sections are: "Palatibility and Salubrity" "Home is ..." "Getting around" "Silk and what else" "Trade and encounter" "How ideas travel" "Spiritual journey".

The first section "Palatibility and salubrity" focuses on production, consumption and exchanges of food, drinks and medicine. Stories can include agriculture-related practices. For example, in ancient China water wheels were already applied for irrigation and stone mills were made to process crops. The history of processing soybean into new types of edible sources of food can be traced back to at least East Han Dynasty, with the evidence of a stone relief from a tomb in Henan province during that time as the earliest survived visual document of making soy-

bean curd. When it comes to the "materials" related to food culture, strong contrast can be made between disposable and synthetic materials for making food containers and more natural materials (such as bamboo) used for carry groceries and meals. The former type is much prevalent in our contemporary daily life. It is perhaps best exemplified by hyperbusy food delivery scenes and online purchases, both of which have contributed to China's leading position in plastic production and consumption. The later type of materials reflect a different lifestyle with a much slower pace, and perhaps with more respect and appreciation of the craftsmanship involved in making physical objects. These food containers are likely to be used repeatedly and to enjoy a longer life. Another potential topic to be explored in this section is tea originated in ancient China. The different materials for making tea pots hint towards the different roles tea play throughout history, various ways of consuming tea and its association with different social classes and cultural contexts (typical materials include bronze teaware, purple clay teapot, ceramics).

Considering the dominant role agriculture has played in Chinese culture, seeds can also serve as an excellent metaphor. One specific example listed in this section was the project initiated by a Chinese Professor, Yang Zhong. Professor Zhong's passion for collecting, preserving and studying seeds was partly influenced by his visit to Kew Garden in London. Zhong's team spent almost a decade working under hard conditions in Tibet and has brought back 8 000 seeds to the biggest seed bank in China, Kunming Institute of Botany's Germplasm Bank of Wild Species. Zhong's recent death was greatly mourned, and also drew attention towards the crucial role of seed science. This story around Professor Zhong can also serve as a starting point for further revealing global connections. One possible link is the Seed Cathedral, the UK Pavilion of the 2010 World Expo held in Shanghai, designed by Thomas Heatherwick. Zhong's

team donated many seeds as part of the 250 000 plant seeds stored in the 60 000 rods projecting from the walls of the architecture.

Beyond the above summary of a potential narrative framework, the report also poses a few questions for further research with the goal of demystifying visitors' past beliefs, fostering cultural diplomacy, and nurturing cross-sector collaborations. The questions are:

(1) If the Victoria and Albert Museum has collected Wechat (as part of their digital collecting experiment), which routes can/shall the Science Museum, London take in terms of contemporary collecting?

(2) What is the potential of bringing about "objects in dialogue" and exploring and showcasing diverse problem-solving strategies towards humanity's common issues (as the approach adopted by the Pitt Rivers Museum)?

(3) How can we integrate current discourses, responses, and representations relating to science, technology and medicine in science museums?

(4) What can be the Science Museum, London's roles in engaging and promoting scholarly and public discussions of the future (considering that the Victoria and Albert Museum has already curated a temporary exhibition "Future Starts Here")?

(5) While "science museums" continue to be a specific "standalone" category of museums, what kind of collaborations can be initiated to bring about new practices (to go beyond the binary choice between "history of science" and "science centre")?

In the following section, I will further unpack the research process and discuss how this report took shape in the short time span of five months.

1.2 Research agenda

In December 2017, I learned about the job opportunity of this research position via a friend. The job description of the position, UK-China Rutherford Curatorial Research Fellowships states that "the purpose of the role is to identify and provide preliminary evaluation of the key elements for a major museum exhibition and other public programmes about historic and contemporary science and technology in China. In your role you will work with a number of colleagues, including those in the Collections, Contemporary Science, Touring and Research & Public History Departments".

My initial self-evaluation and conversations with the staffs (later my colleagues) both revealed that my main strength lied in strong independent research capabilities gained during four years of doctoral training in the UK and two years early-career research experience back in Shanghai. This was supplemented by my practices in designing educational programmes for museums and knowledge of the historical contexts and current landscape of the museum sector in both China and the UK. The one weakness of my professional profile was that I had very little educational background and research experience in the area of history of science and technology. This could, however, be reframed as an advantage as I would potentially approach this project with a more fresh perspective, which could be helpful at this early stage of framing the exhibition narrative.

The core team that worked on this project consisted of three people: one other curatorial researcher (hereinafter referred to as researcher B), a leader who acted as the "line manager" (hereinafter referred to as leader C) of researcher B and myself. At that time, researcher B would soon complete her doctoral research in history (with a focus on visual representation of ethnic minorities in modern China), and she joined this project as a part-time researcher and to carry out archive and object research to identify China-related objects and information within Science Museum Group's own collections. Leader C was assigned the role of guiding and supporting us at Science Museum Group. Besides taking care of this research project, she also served as acting head of the Research & Public History Department to supervise the day-to-day operations of the department.

As shown in Table 1, Report 000 was completed when I worked from home in March 2018 (while processing all necessary paperwork and visa before heading off to London). I was given a guideline to present a written report that maps out "conceptualisation and delivery of a commercial, touring exhibition for 2022 onwards on historic and contemporary Chinese science and technology, including a critical appraisal of recent, current and upcoming relevant museums and science centre exhibitions and festivals". At that stage, I had very little idea of the exact positioning of my role and of how this touring exhibition connects with Science Museum Group's overall agenda, so the main focus was placed on desk research to offer a list of key museums, collections, exhibitions, expertise, science and technology related institutions, and relevant events and festivals. This initial scanning could serve as a mini-database of potential resources for framing later stages of research and exhibition preparation.

After my arrival in London in April 2018, I officially started my "research residency" at the museum. It was only by then that I learnt I was also expected to help organize an academic workshop. A set amount of funding within this project was set aside by the funder to host conference-related events. While this new task added many additional workloads, it turned out to be a key occasion to gain insights from recent practices and scholarly debates.

A medium-scale academic workshop "Chinese science, technology and medicine: Cultures, histories and global connections" was held in June 2018^{*}.

^{*} See Science Museum Group. Chinese Science, Technology and Medicine: Cultures, Histories and Global Connections International Workshop [EB/OL]. (2019-03-20) https://group.sciencemuseum.org.uk/our-work/research-public-history/research-projects/china-curatorial-research-residency/

Date	Research into relevant literature and resources	Exchange of ideas	Writing up	Logistics
March 2018	desk research on related resources in China (museums and institutions, collections and exhibitions, expertise, events and festivals related to science and technology)	visited a number of museums in Shanghai and discussed the project informally with friends and colleagues in the museum sector		paperwork and preparation
April 2018		feedback on Report 000	Report 000 (summary of preliminary desk research)	new staff training programmes
May 2018 June 2018	research into books, manuscripts, archives (mainly at the Dana Research Center and Library of the Science Museum, London, supplemented by visits to others museums of Science Museum Group)	co-organized the academic workshop "Chinese Science, Technology and Medicine: Cultures, Histories and Global Connections"		
		1st oral presentation (internal meeting of the collections team)	report on the academic workshop (co-written with colleagues)	
July 2018		•	final report (with the proposed framework "Shaping China: Materials, Mobility and Transition")	
September 2018			a reflection article (co-written with researcher B, published on the annual report of Research and Public History)	

Beyond offering cases around particular topics in relation to the history of Chinese science, technology and medicine, the workshop helped to provide critiques and propositions for further ponderings on the conceptual framework of the potential exhibition. Most delegates cautioned against the problematic framing of "China" as a single and static entity. Many scholarly debates and practices have shown that different values of technologies in different contexts and cultures need to be respected and that China needs to be viewed as a more dynamic and changing notion. In this spirit, the exhibition framework also needs to take into consideration of knowledge transmission and technologies of major services in daily life, and integration of bottom-up and local perspectives.

Another key inspiration from the workshop was the interlude session of film clips screening introduced by an invited delegate, Michael J. Clark, as a representative from the project "YiMovi". This experimental project was first initiated by Vivienne Lo, Senior Lecturer at University College London whose research focus lies in medical humanities. In their own words, "YiMovi" is concerned with "how the body has been used as a site of personal cultivation, social conformity or political contestation is all made visible in film". This episode echoed some points emerged during earlier research that medicine seemed to be a paramount aspect not to be missed in the exhibition. Medicine also forms a significant part of the Science Museum's collections. In 1976, the Science Museum, London formally acquired a collection from the Wellcome Trust, which were previously on loan to the museum. During my research residency, the medicine galleries were under reconstruction with new funding support and the galleries will cover more than 3 000 m². The project "YiMovi" also prompted to think about what curation might mean. Where shall we draw boundaries when conceiving related exhibits and programme related to the topic of the history of Chinese science, technology, and medicine? If the broad category of medicine-related films can serve as a vehicle to explore the social and cultural conception of "body" in contemporary discourses, what other forms of possible exhibits can be brought under discussion?

Parallel to our research and organization of the workshop, researcher B and I also arranged trips to other museums and institutions to meet curators and scholars. The trips were designed around two major purposes: for us to learn about the current practices in different types of museums and to gain different perspectives from other researchers and curators; and meanwhile we could spread the message about the plan on this touring exhibition to avoid unnecessary overlaps and to bury seeds for future collaborations (especially to discuss possible touring sites outside Science Museum Group). For instance, during the conversation with a curator at the Manchester Museum of Science and Industry, we learnt that they had received a large sum of donation to build a new extension to host two new galleries (to be opened in 2021): South Asian Gallery and Chinese Culture Gallery. As the second biggest city of Chinese migrants, new exhibitions at the Chinese Culture Gallery would lay more emphasis on social history of local Chinese community and their contemporary life.

After the academic workshop and several trips to other museums, I was able to obtain a bigger picture view and had some ideas around possible directions of framing the exhibition narrative. The challenge, however, was that the brainstorming stage was further prolonged and it was hard to settle down on a specific theme and to wrap up all ideas into one framework. In June 2018, I mainly dedicated time to synthesize all inspirations and existing research findings in preparation for an oral presentation to be delivered at the monthly internal meeting of the collections team. In my presentation, I drew attention to three main challenges: (1) the trade-off between two goals: attracting visitors and collaborating partners with blockbuster-style exhibition and exploration of an innovative approach; (2) how to balance the different expectations of diverse visitors within Science Museum Group and other western museums (as possible sites of this touring exhibition), and in particular considering that most visitors might have very little knowledge of Chinese culture and history; (3) the difficulty of offering a comprehensive narrative that covers a wide range of topics spreading across long history.

In response to the above challenges, I proposed four possible directions: (1) China, made from ... : with a focus on the different materials and connection with the natural world; (2) how China works: centered around problem-solving approaches and the value and attitudes attached to different types of labour; (3) the connections and encounters of Chinese science, technology (and medicine): focuses on serendipity and purposeful acts in scientific and technological advancement and how these are related to knowledge exchanges; (4) the mobility of people and objects and international connection and collaborations.

After further explorations and discussions, these four directions were then merged into the framework proposed in the final report. Alongside the submission of the final report for internal use, researcher B and I also delivered our second presentation at the monthly lunch seminar in July 2018, when we were able to communicate our research to more colleagues (both within and outside Science Museum Group).

2 Insights and reflection

I now proceed to highlight the key surprises, challenges and rewarding lessons grown out of this exploratory research experience. I divide my reflections into two interrelated aspects: practical level and conceptual level. The former might help to shed light on how curatorial research can be better organized and managed; the later can potentially probe into the nature of touring exhibition and the agenda of being temporary, being contemporary, and being international.

2.1 Reflections on project management

(1) Museum as corporation

One biggest practical challenge for me during the four months research residency at the Science Museum, London was to squeeze time to deal with everyday logistical issues and paperwork while conducting research. I soon discovered that the museum operates and manages its daily work as an enterprise. Both researcher B and I reported to leader C. Professional career hierarchy is also clearly reflected by job titles. Curatorial jobs usually start from assistant curator, moving towards the ladder of associate curator, curator, lead curator, deputy keeper and keeper, all supervised by head of the collections. When it comes to exhibition development, researchers and practitioners often bear the following titles: interpretation manager, content developer (moving towards senior content developer, head of content).

Many of the museum staffs are on fixed-term

contracts (as were all three of us: leader C, researcher B, and I). Little differentiation is made when it comes to training and orientation procedures. For instance, I had to complete a series of mandatory training programmes, including handling museum objects, accessing object collections (such as the sessions delivered at museum storehouse and archive, as well as the sessions focusing on online databases), and logistical aspects (health and safety in general, fire safety, and data protection). However, the application and registration of training sessions were not designed to accommodate each project or agenda of new staff, so by the time when I finally completed training of online database (and only by then was I offered permission to access the database), I was already halfway through the project.

(2) Departmental sectioning

Alongside the hierarchical structure that can sometimes pose barriers to direct and fast internal communication, curatorial jobs at the museum are categorized into with specific subject areas: technologies and engineering, science, medicine, and contemporary science. While a monthly meeting of the collections team is held to discuss matters related to issues regarding collections and exhibitions, fewer conversations happen between the collections team and other teams that act at practical or strategic levels (e. g. the exhibition team and the strategy and international team). Meetings and informal conversations are often arranged based on needs and out of personal initiatives.

(3) Mentorship and peer support

In relation to the previous two points, I discovered that most work at the museum was arranged in a project-based format. While it has its advantages, the corporate management style can result in a clear-cut hierarchical structure that hinders peer support and mentorship. As both researcher B and I were hosted by the Research and Public History Department, we had the privilege of gaining support from the library staffs who were also managed and based at the same department. This explains why the Head of Library and Archives was perhaps the only person (besides leader C) who knows most about the progress of our research project and who contributed much to help us identify helpful resources.

Though the two oral presentations helped the two researchers to gain some feedback, exchanges and discussions with other teams who might later work on the project was after all very limited. Without peer critique and knowledge of the internal agenda, there was little I could do take a step further beyond incorporating the thoughts gained from the workshop and from archive research. In comparison, much in-depth conversations were carried out in other Science Museum Group sites as they had a relatively small team and at the Manchester Museum of Science and Industry, for example, most curatorial and exhibition staffs worked in the same big office so that instant communication is more guaranteed.

2.2 Reflections on the curatorial research project (1)Why temporary?

While I was given a very broad goal with much exploratory freedom, I had very little idea of the connection of my research and the historical contexts of temporary exhibitions at the Science Museum, London. Looking back, Morris' article would be an excellent starting point of probing into the nature and positioning of temporary exhibitions, as he traced the history of temporary exhibitions at the Science Museum, London and noted that "it had become a deliberate policy by the late 1970s to use temporary exhibitions as a way of filling spaces in the museum without using the museum funds or drawing on the services of museum curators".^[4]

Among the temporary exhibitions Morris analyzed, the exhibition "Science and Technology of Islam" held in 1976 was the first official temporary exhibition themed around science and technology of a particular culture outside the UK. Morris identified conceptual and practical challenge while setting up this exhibition. Conceptually, the museum needed to take caution "how to avoid the impression that it was simply a precursor of more recent and hence supposedly 'superior' western science and technology, and also the issue of avoiding 'orientalism' in presenting any aspect of Islamic culture".^[3]

Though more than forty years has passed, I could say that these challenges still hold true when it comes to preparations for potential temporary exhibitions. While I needed not to worry about the actual implementation of the temporary exhibition, the features of temporary exhibitions are the foundation of the conceptualization of the exhibition. During my research, I had little information in terms of the space, sites and possible touring routes regarding the China exhibition.

What emerged during the research was the museum's emphasis on planning temporary exhibitions on special occasions, as manifested in the example of the temporary exhibition on India's science and technology. On top of that, temporary exhibition also serves two major goals: of promoting the museum's branding, and of bringing more ticket sales (temporary exhibitions are the only ticketed items among all exhibitions of public museums in the UK).

(2) What is contemporary

Contemporary element has been repeatedly stressed as part of the research goal (as reflected in the job description) and brought up in discussions with colleagues in and outside the Science Museum, London. During my residency, my major inspirations of linking exhibition themes to our contemporary life was gained during visits to the Victoria and Albert Museum.

When Morris stated that the exhibition "Science and Technology of Islam" made "no reference to Muslims living in Britain at all",^[4] he hinted towards the danger that museum's own conception of temporary exhibitions could sometimes leave the visitors out of the picture. As a result, temporary exhibitions could be turned into a mere occasion to "showcase" of the Science Museum, London's broader scope out of western science and technology.

If temporary exhibition is positioned as the museum's response to emerging science and technology related the topics that can have an impact on our life and the humanity as a whole, science and technology museums may need to think about how to reframe temporary exhibitions beyond making a choice between history of science and interactive science center or a combination of both. Temporary exhibitions could act as experiments and platforms for social engagement of topics around science and technology. During my residency, the learning team at the museum has been working on developing the approach towards science capital as a new agenda of improving STEM education in the UK. While I was not able to further tap into this related initiative, I mention it here to propose that research into new exhibitions can potentially benefit from taking a step back to link exhibitions to museums' other initiatives (learning programmes, events planning, marketing initiatives, etc.)

(3) How international is international?

As mentioned before, one main initiative behind this research project was the museum strategic plan of forging and sustaining international collaborations, and in particular, of initiating connections with China. The Science Museum, London has already started to work on the deliverables in terms of international exchange on exhibition and loans, for example, by taking its Superbugs exhibition to Guangdong Science Center in China and the National Council of Science Museums in India.

While these exchanges and tangible outcomes manifest the museum's effort of being international, what has not yet emerged is a more systematic plan to foster the collaboration at various levels, and in particular in the area of communicating and collaborating on academic research and building professional networks. Scheinfeldt's brief historical review shows the close historical connection and long-term collaboration between the Science Museum, the Deutsche Museum and the Smithsonian Museum. This ranges from reference to each other's practices (e.g. the Science Museum borrowed some ideas from the Deutsche Museum, e.g. referring to the design of Children's Gallery, strengthening connection with industries) to competitive but friendly relations when collecting and displaying certain iconic objects (e.g. the original Wright Flyer now hangs in the Smithsonian's National Air and Space Museum whild a replica sits in the Science Museum). Most importantly, however, is that increased scholarly activity have been developed from the 1960s and 1970s, as perhaps best reflected by the Artefacts workshop co-organized by curators at the three museums (now the National Museum of American History, the Science Museum and the Deutsche Museum) since 1996^[5].

Overall, Scheinfeldt speaks highly of the Science Museum, London based on examples during its first 100 years of promoting national achievements in science and industry while forging international fraternity of similar institutions to sustain an international science museum community^[5]. Scheinfeldt ends his analysis of this triad connection as examples of the international context of science museums by quoting Queen Victoria's hope of "encouraging the arts of peace and industry" and "strengthen the bonds of union among the nations of the earth".^[4] The current context, however, is drastically different from Queen Victoria's time which marked the rise of imperialism and colonialism.

Linking back to this curatorial research project, the provocative question would be what counts as international collaborations for a museum beyond sending and borrowing touring exhibitions? If the Science Museum, London has mostly worked with European and American museums for the past 100 years, the current initiative of making connections with China and other regions would hopefully add to a more global vision of science and technology in the museum sector.

3 Conclusion

In this paper, I take a retrospective review of my work at the Science Museum, London as a curatorial research fellow, with the task of creating a narrative framework for a major touring exhibition on Chinese history of science and technology. While most of the work has been documented and written up in the final report completed in July 2018, this reflection paper further probes into the challenges of working on this curatorial research project, both practically and conceptually. It reveals that while commitment and efforts have been made to initiate new exhibition proposals with the goal of stimulating international collaborations, more specific strategies need to be created to ensure effective implementation of temporary exhibitions and to make a long-term impact.

While how this project will be taken further remains to be seen, I believe the insights gained from this research experience have wider implications. New initiatives of exhibition plans should, after all, be placed against the bigger framework of contemporary museum practices and the changing conceptual frameworks. Beyond thinking about developing new international collaborations and temporary exhibition proposals within the scope of science museums' usual practices, it might worth revisiting the historical bond between the Science Museum, London and the Victoria and Albert Museum to further challenge the existing categories that divide museums into different types and the usual expectations tied with these categories. Around ten years ago, Friedman noticed that "science today is almost impossible to categorize in the traditional boxes of physics, chemistry, and biology" and "very exciting work is happening at the intersections of science and technology with the arts and humanities".^[6] He foresees that "the next generation of science museums may not be science museums at all, but far broader institutions in which the sciences, the arts, and the humanities are inextricably bound together in exploring vital questions about the universe and its inhabitants".^[5]

Nahum's review of the Science Museum's changing philosophy of exhibition making has revealed, whatever the actual displaying philosophy is, exhibition making needs to think about how to communicate and engage. He further comments that for museum professionals, "exhibition development must be essentially dynamic" and "the rules of production are never completed and it will remain -hopefully- an experimental and evolving medium".^[7] This curatorial project can thus serve as a case for many ongoing and emerging attempts in the museum sector that also sits at the intersection of temporary, contemporary and international. The three questions "why temporary" "what is contemporary" and "how international is international" might be a valuable set of prompts to initiate discussions around exhibition planning.

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筹备一场兼具当代性与国际性的临时展览:以伦敦科学博物馆的一项前期策展研究为例 // 袁雁说 作者单位:上海纽约大学文理学部

摘 要:介绍作者在伦敦科学博物馆开展的一项前期策展研究,旨在为以中国科技为主题的巡回展览搭建一个叙事框架。通过回顾研究的主要阶段,作者着重分享了在项目与概念理论两大层面遇到的挑战与收获的经验。这一案例也将为 未来的临时展览筹备提供借鉴,尤其是希望融入当代元素并推动国际间合作与链接的展览筹备工作。同时,这一研究也 暗示了进一步消解不同种类博物馆边界的可能性。

关键词:临时展览 科学博物馆 中国科技 当代性 国际性