

Summary Transcript of 3rd Network Conference on *Botanical and meteorological history of the Indian Ocean, 1500-1900*

Sussex University May14th

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At the outset of the meeting, network director Vinita Damodaran welcomed participants, extending particular gratitude to Dr Bhojvaid of Forest Research Institute (FRI) based in Dehra Dun, India and Dr Venugopal of the Indian Museum in Calcutta for their efforts in travelling to the UK to attend. While noting that the end of the network's initial period of funding and the fulfillment of the goals set out for this first phase were approaching, Dr Damodaran emphasised the huge potential for future collaborative projects and the development of international links between scholars and institutions opened up by the network which now connects over 100 members, working all over the world, representing an enormous collection of expertise and academic experience. According to Dr. Damodaran the aim of this final meeting was to come to broad agreement as to the goals for the next phase of the network's existence, the route envisaged to their accomplishment and to develop a concrete implementation plan that would tap this great potential. A significant part of this implementation plan would be the technical road map for the development of a large scale digitization project bringing together digital archives held by institutions associated to the network, the archival knowledge of scholars and material digitized under the aegis of the network itself.

Co-director Prof. Deepak Kumar described important work already done by network members while noting the new levels of collaboration and knowledge sharing enabled by its ever broadening membership. Prof. Kumar brought particular attention to the importance of incorporating pre-colonial, indigenous sources and non-English language sources more generally in the envisaged large-scale digitization project. In the long-term, the inspiration of new generations of scholars and researchers to take on this work, to develop archives and to take forward the mantle of environmental history in the Indian Ocean region was highlighted as of primary importance.

Alan Lester described his own complex role within the network acting both as a researcher; a historical geographer of British India contributing to the publishing output of the network, notably as co-editor of a volume to be released next year on the East India Company and the Natural World, and as director of interdisciplinary research at Sussex. Dr Lester described the rapid growth in ambition of the project from modest beginnings to the point where its goal has now become the complete reassessment and transformation of the study of Indian Ocean history and – from the point of view of funding – the great advantages of the network's success in bringing together scholars

from such disparate fields as social history, geography and climate science.

Academic work by network members.

Sussex / Kew Hooker India Project - current and future and its relevance to the wider network project- Vinita Damodaran (Sussex) and Jim Endersby (Sussex)

Vinita Damodaran gave a brief history of the network describing the main goal as the safeguarding and opening up to historians and other scholars of the enormous resources often well hidden in botanical gardens and other such institutions around the world, the focus on the Indian Ocean and the time frame of 1600-1900 rooted primarily in an interest in the development of the nature and the concept of 'the tropics'. The success of the pilot project on the letters of Joseph Hooker run jointly by the Centre for World and Environmental History at Sussex – directed by Dr Damodaran - and Kew Gardens, which is now available online, is noted while the expansion of the model developed in the context of this project is described along with the potential for expanding such a model to incorporate the vast array of sources held in Europe and around the Indian Ocean region. Examples of other projects which could be brought together under the umbrella of the network are given including George Adamson's work on El Nino in India and Rob Allan's attempts to recover daily and sub-daily weather data used by the Madras observatory in the construction of published monthly averages.

Jim Endersby described his involvement with the network stemming from work on the history of science, an interest in C19th botany, Darwin and Darwinism. He described his work on Joseph Hooker's India letters which include numerous types of information such as maps and drawings as well as personal information, botanical and ethnographic descriptions. The digitization of such records is seen as advantageous in multiple ways, beyond the obvious opening up of access to such resources Dr Endersby noted the particular advantage of the lack of prejudgement in a mode of presentation where the object itself could be viewed in its entirety.

Using the example of a well-known portrait of Hooker in India in which he is depicted as a kind of 'Botanical Emperor', Dr Endersby described the huge wealth of information, on economic use of plants and geographical spread of plant species potentially retrievable from such a source and the huge variety of questions yet to be answered most notably in term of indigenous knowledge and plant use. Huge gaps remain in our knowledge of the uses and meaning of plants in different pre-colonial Indian cultures, of how these meanings and uses were transformed by the coming of British influence and later power and negotiated as the plants themselves permeated different knowledge systems in India and in Europe. The ability to trace a single plant, garden, region or collector across multiple and disparate sources is seen to be of huge benefit to any scholar engaged in such work.

Dr Endersby concluded by describing a possible future project conceptualized by himself and Dr Damodaran looking to digitally rebuild and re-collate of the material which contributed to the construction of Hooker's *Flora of British India*. In part, the project's value is seen as residing in the possibility of uncovering and thus the shedding of historical light on the indigenous contribution to this major work, which remains the only full scale survey of India's flora. The project is suggested as a possible use of the £100,000 available to the network as 'follow-on' funding from the AHRC.

During questions Prof. Deepak Kumar noted the significance of work done at the University of Leiden while emphasising the importance of mining local knowledge and suggested a series of regional conferences and associated publications. Further prof. Kumar pointed to the significant collections and work of George Watt as a complement to the work done by Jim Endersby and others on Joseph Hooker. Finally the importance of encouraging students on the ground in the Indian ocean region was emphasised, Dr Venugopal's intention of funding studentships focussing on the

previously mentioned local knowledge was applauded. Vinita Damodaran noted how the Hooker project revealed the often unique holdings of Indian institutions which complement archives held in Britain – the particular example of a Hooker notebook held at the Indian National Archive copied for the network by Anna Winterbottom is given.

Debjyoti Das noted the significant materials and collections held by private people in sometimes remote Indian regions, in the Sundarbans he reported his own experience of finding some 70 small museums often housed in private homes with entirely unique archaeological collections as well as rare books and texts in local languages which had never been translated. The possibility of a digitization project aimed at these sometimes small but often unique collections was raised.

Jim Endersby spoke in favour of such a project, particularly noting the possibility of using funds raised in Britain to help Indian institutions preserve their collections and the digital repatriation of specimens as a kind of reverse colonialism. He also raised the possibility of utilizing public enthusiasm for processing huge quantities of data held by institutions such as Kew on plant transfers pointing to the success of the Met Office's 'Old Weather' project.

Calling on his own experience of working on indigenous plant use in Malawi, Brian Morris noted the often rigid divisions between botanical science and everyday plant use. Describing botanists he worked with at Kew as uninterested in the cultural uses and meaning of plants in their original context and only in collections as scientific specimens noting that interest in plant use is too often limited to anthropology.

Dr. Venugopal spoke in favour of travelling exhibitions taking some of the hooker collections back to Indian museums.

Reanimating Archives: Historical museum collections and local communities; case of Sierra Leone- Paul Basu (UCL)

Paul Basu, a museologist working with museums in Sierra Leone spoke on reanimating historical collections, describing his own work as situated at meeting points of anthropology, history and the study of environment. He spoke on different types of archives noting, at a previous conference, James Fairhead's description of the forest as an archive, he spoke on how information needs to be effectively mined from archives and materials particularly in terms of their use and cultural significance in order to move beyond their mere appearance. The difficulty of engagement in very poor countries is noted, particularly where internet connection is far from ubiquitous.

Describing his work in Sierra Leone, the paucity of collections in the country itself and the embarrassment of riches in some museums in Europe and the USA, Dr. Basu spoke of mapping a diaspora of objects and attempting to effectively convey the meaning of such objects within Sierra Leonean society. The website Sierraleoneheritage.org is shown and described as are the attempts to facilitate engagement with a wide variety of users, from academics to those with no background knowledge. A central feature of the project became object research which was used to bulk out often all too brief museum label descriptions and elsewhere, in video format to show articles in use with discussions of the cultural background to their use. The commissioning of videos from local NGO workers helped to engage not only with indigenous knowledge but also with modern communities in their day-to-day. The project then is not seen as digitization for digitization's sake but as a route to engaging modern populations with their own heritage. Due to the existence of a large Sierra Leonean diaspora, particularly in USA, social media has become a key communication device for friends and families, in light of this the project website has worked to embed such platforms in an attempt to engage those who, while interested in Sierra Leone itself might be unlikely to actively engage with a museum collection but might more easily relate to some particular object brought to

their attention by a friend or family member.

In questions Jim Broughton of the NHM described recent debates surrounding the 200th anniversary of the India museum on the repercussions of a focus in collections of colonial specimens, and how issues of engagement with contemporary audiences can be confronted and therefore how historical, structural issues of access and control of knowledge can be overcome.

Paul Basu and Vinita Damodaran spoke on the breaking down of institutional boundaries in a digital space, how collections can be made to effectively speak to each other and therefore create a more enriching environment for study and knowledge transfer.

Dr Debjyoti Das (Birkbeck, London) – Private collections in the Sundarbans

Debjyoti Das described his work in the Sundarbans and the Bay of Bengal looking particularly at understanding of the experience of cyclones and other natural events. He described how his work in the field transformed the nature of his initial project, shifting its emphasis toward work on lay archives, people's histories, home museums, indigenous writing, poetry and other records of local experience, social change and political changes on the ground, often written in vernacular languages and as yet untranslated as well as archaeology and manuscript collections which shed light on the pre-colonial period. This work, it is noted, undercuts preconceived notions of how understanding of regional ecology and environmental history rested on colonial records, pointing to a rich pre-existing civilisation within the region of the Sundarbans. Records reveal a history of cultural and economic exchange with an influx of regional as well as European peoples, knowledge and ways of thinking which developed into a unique mode of understanding. Dr Das described how the environmental identity of the Sundarbans region as a gigantic flood plain raised structural issues for the understanding of its past and argued in favour of bringing the wealth of small private collections to the attention of institutions such as large metropolitan museums which retain such a central role in knowledge making at the societal level.

The vulnerability of some archives, particularly collections of manuscripts, which are prone to decay is noted. Preservation is expensive, therefore collaboration between academics and owners of small collections is seen as necessary to saving these records which are of particular value in that they contain unique records of subaltern experience reaching back to the medieval era, funding for such digitization of such archives has proved hard to come by in India. The archives of a local land owner named Hamilton who came to the Sundarbans in the very early C20th are noted as of particular value for this later period. The difficulty of gaining funding for digitization of such little known archives is noted. The value of local magazines and local publishing in general which support a rich literary tradition which remains located in the region never coming to the attention of metropolitan publishers, libraries and universities is emphasised.

In comments Penny Brook of the British Library raised the possibility of gaining funds for such projects through the British Library's Endangered Archives programme. Dr Das noted that it was not only money which stood in the way of saving such archives, many collectors had become loathe to share their materials after losing items in the past after opening them to academics or collectors from other areas.

Dr George Adamson, (Kings College London)

George Adamson, speaking as a member of the network steering committee, took time to bring those present up-to-date with that group's vision for the forward motion of the network project at this crucial point, the concluding of the first phase of funding. Dr Adamson described the progress of the network in terms of the success of the previous meetings in Sussex and Delhi, the outputs;

notably the book series on environmental history published by Palgrave, The East India Company in the Natural World, a source book for environmental history in the Indian Ocean region containing expanded versions of papers given at network conferences, Simon Pooley's book on fire in the Cape and a forthcoming collaboration between Dr Adamson and Richard Grove.

Dr Adamson emphasised to complexity and connectedness of climate study, noting in particular the importance of tracing the influence of climatic events into social and political spheres, the significance of networks of people and trade, and how deeper understanding of these and how they have functioned in the region leads to a questioning of historical consensus, placing the Indian Ocean rather than London at the centre of the British imperial project. From his own perspective, coming from a background in geography, Dr Adamson described how, as well as introducing an appreciation of the significance of environment to the study of history it is seen as of great importance to introduce proper historical perspective into the study of the environment, development narratives which root predictions in data only reaching back to the 1970s are given as an example of a whole discipline's naivety in this regard.

Looking forward to the afternoon session Dr Adamson outlined some key ideas for discussion which included the Digitization, on a very large scale, of sources pertaining to the study of environmental history in the Indian Ocean region which has been a central goal of the network since the outset. Such a project would be rolled out in such a way as to facilitate preservation and repatriation of archives, as well as opening up access and integration of currently very disparate collections of materials. After an initial build the future value and potential of such a project would lie in its ability to receive new archives digitised by other groups and individuals which would become integrated and expand coverage. Follow-on funding available from the AHRC of £100k is highlighted as enabling the group to begin work.

The following key phases in the development of the project are identified;

Integration, in which existing materials are brought together in a digital space, a process involving the construction of an umbrella architecture allowing searches and other operations to be performed across all archives simultaneously.

Input, in which some 8-10 archives from around the region, preferably with very long temporal coverage, examples in Zanzibar, Cape town, Oman, Mauritius, Indian Museum, FRI, BSI, Madras and some for S.E. Asia and Australia are noted, are digitized and added to the integrated database.

In the region of £7m is estimated as the cost of such a large project, the European Union's Horizon 20/20 funding project is seen as a possible source.

Presentations by Indian and British Institutions

Dr P.P. Bhojvaid; Forest Research Institute, Dehra Dun

Dr Bhojvaid described the history of the FRI, which is in part a university. While showing pictures of the buildings which house the institute he noted the naval influence upon their architecture and how this revealed the deep relationship between the navy and forestry, born of the latter's reliance on forests for the raw materials for the construction of ships. The first forest officers were therefore naval officers. He described a vast collection, of the order of hundreds of thousands of samples, held at the FRI including both indigenous and exotic species. The FRI which is visited by 0.5M people per year, also holds one of the oldest and most extensive forest libraries and seven small museums, the renovation of these museums to increase interactivity in order to facilitate public engagement is planned. A collection of stumps is noted as of potential use in pushing back climate

records. Hand written field notes from forest officers. Rare books, letters, journals of forestry, land surveys, forest management guides, many of these records and documents pertain to other regions such as Pakistan and Afghanistan, he emphasised the value of collections not just to the study of forestry but also of botany, geology, knowledge transfer and social and cultural issues..

During questions it is revealed that meteorological data is held at the FRI back to 1927.

It is noted that within Indian institutions, as in the UK, there are widespread discussions surrounding the desirability of opening up resources via digitization and sharing through open access projects, in the context of which the network project may be seen as an appropriate route by which to achieve such a sharing of material, particularly due to the emphasis on digital repatriation and exchange between Europe and countries in the Indian Ocean region.

Speaking of the network project as a whole, Rob Iliffe noted the importance of gathering together a 'critical mass' of scholars, experts and institutional leaders in order to enable the collection of massive quantities of data and the building of a platform and database which will fundamentally change the way the history of the region and the temporal period in question is studied, written about and understood.

Dr Venugopal, Indian Museum, Calcutta.

Dr Venugopal described his previous position as director of the National Museum of Natural History and his current role as director of the Indian museum. The India museum is both the largest and oldest museum in India having been founded in 1814 by Nathaniel Wallich, the Danish botanist who worked for the East India Company in the Calcutta region and was instrumental in the early development of the Calcutta Botanical Gardens.

A renovation project which formed part of the museum's bicentennial celebrations is outlined, as are many of the problems which beset the first phase of this work which is now coming to a close. In particular a poor choice of architectural partner, appointed before Dr Venugopal's arrival at the museum and more accustomed to designing shopping centres, is highlighted. It is hoped that the second phase can, with Dr Venugopal's leadership and the assistance of British institutions, many of which have been through similar processes, be more successful.

Dr Venugopal counselled in favour of deeper connectivity and more collaboration between institutions in India and abroad. In questions Dr. Bhojvaid questioned the role of museums, choosing to emphasise the museum's role in preservation, if necessary at the expense of other admittedly important projects such as increasing interactivity and widening engagement.

Jim Broughton, Natural History Museum, London

Jim Broughton of the Natural History Museum in London, previously of the British Museum described his role in promoting international engagement, aiming to internationalise the public engagement of the museum which, unlike the academic influence of the institution, has remained centred on the main London site. Digitization is seen a central part of this project and to represent an important point of communality linking the network project to the work of the NHM. In the last six months the NHM has undertaken a survey of its existing digital outputs and formulated significant policies with regard to the future of this particular avenue of engagement with both academia and the general public, looking to build profitable collaboration both between departments within the NHM and other institutions.

The NHM holds some 80 million specimens relating to the Earth and all life on it, from pre-history to the present day, from extinct mega-fauna to living protozoa, it is seen therefore as a particular challenge to identify suitable methods for the digitization of these various types of collections, perhaps ranging from scanning electron microscopy and x-ray crystallography to 3D scans of extremely large, sometimes delicate, animal specimens. The digital platform is seen as of great potential in opening up possibilities for the exhibition of particular specimens whose nature – their size, delicacy, sensitivity to environmental conditions – makes this difficult in the traditional physical space of the museum gallery.

The Centre for Arts and Humanities Research, run by Julie Harvey, is noted for its unique mandate for cross departmental work within the NHM, for its work on understanding the way knowledge is disseminated and understood in an historical context, how the process of collection categorisation and display transforms objects within museum collections and is therefore seen as an interesting potential partner for the network.

A number of existing projects are described including work on the centenary of the death of Alfred Russell Wallace and the collaborative project with the British Museum to digitally rebuild the original Hans Sloane collection which formed the basis of the British museum collections before becoming split between the two institutions upon the formation of the NHM.

In questions the possibility of republishing the memoirs of imperial era forestry officers, perhaps in some digital form was raised.

Penny Brook and Antonia Moon, British Library, London

Penny Brook described the continuing work on digitisation of India office records at the BL as well as work on south Asian and African sources. While outlining possibilities for the future it was noted that discussion of future work had to take place in light of cuts in funding which have this year resulted in a number of voluntary redundancies. The considerable quantity of digitized material available online through the BL catalogue was noted while the small proportion of total collections represented by these materials was recognised. Penny Brook also described renewed efforts to publicise collections, specifically those held digitally, through an overhaul of India office webpages. Part of this overhaul will include highlighting of the applications and relevance of digitization projects, including links to the network.

Antonia Moon emphasised the importance of exhaustive and well distributed knowledge of digitized collections to avoid repetition of work. She outlined work funded by the Qatar royal family on records from Bahrain and Qatar, and further noted that while East India Company ship's logs are digitized they are not currently available online. In terms of collections complementary to those held by the Indian Museum and the FRI it was noted that these Indian institutions held large collections of raw data, of field notes, climate data, observations of climate etc. while the BL holds much which pertains to the selection of officers and scientist, their training, their personal lives and reflections on the people and landscapes of India, as well as the reports they authored.

In questions Deepak Kumar noted the extreme paucity of records held in India relating to botany in the period 1930 to 1950. The lack of full records for this period at the BL was also recognised though it was suggested that private papers may help fill gaps in knowledge for this timeframe.

Discussion of the possible future of the project beyond the end of this first phase of AHRC funding.

This final session of the conference began with Rob Iliffe and George Adamson outlining a number of topics for discussion raised at the meeting of the Network steering committee meeting which was held in preparation for this larger meeting of partners. On the largest, most ambitious scale, a project producing an freely accessible, exhaustive digital collection of sources pertaining to the environmental history of the Indian Ocean region was put forward. In temporal terms it was suggested that perhaps the period prior to 1800 would provide the most profitable focus in the first instance. The need for strict delimitation of focus in geographical and temporal terms was noted given that the BL's India Office alone holds some 9km of records. The possibility of capitalising on existing digitized records and focussing work on complementary but currently unconnected and disparate holdings was raised.

The meaning of digitization was discussed, for the purposes of this project, does digitization constitute images of sources? Or a more elaborate collection of metadata enabling searching by date, geographical area etc. which currently requires full transcription? Where does the project lie on issues of preservation? Does this constitute the collection of images or the preservation of physical objects?

It is envisaged that in the first instance the project focus on a core set of high quality, robust archives of great temporal span – as opposed to very rare data - which are fitted into an architecture designed in such a way as to allow for the bolting-on of other archives as these are digitized, either by the network and it's collaborators, by other institutions or via crowd sourcing, thus enabling the collection of very large data sets. The possibility of raw data from Indian institutions with metadata added elsewhere in the network is suggested and accepted as a positive mode of collaboration. Further it is noted that the regularisation of this metadata is crucial to the project, these selection of fields – date, place, person's name, vernacular and scientific plant names, climatic event – are seen as defining the basic functionality of the project.

The discussion then moved on to consider allocation of funds resulting from a successful bid. In the first instance it was agreed that the project would focus on the bringing together of existing data, incorporating data from separately funded digitization projects and adding metadata. Following on from this the project would look to fund suitable digitisation projects which would otherwise not be carried out.

As has been noted previously the possibility of receiving a further £100k follow-on funding from the AHRC is raised and the best use of this funding discussed. The collation of a number of pilot projects, some already underway – the correspondence of Hooker, Wallich, Banks (currently only available printed in five volumes costing £600) – combined with some new project pursued under the aegis of the wider project, within a digital architecture based on open-source programmes to be adapted by Richard Gartner of KCL is seen as a suitable first step. It is recommended that further suggestions of suitable archives are collected by email following the conference.

Once suggestions are received it is proposed that some representative should personally visit archives to assess their suitability, funding for which should be pursued immediately. In this regard the Cape archives, Portuguese archives, Malaysia, Amsterdam Museum, University of Leiden, the Mauritius ship's logs archive, Malawi, Durban, African missionary archives held in the Vatican and the BL collection of private papers are suggested as initial targets, while on a cautionary note focus on European collections noted as antithetical to the principles of the project and at the very least one major archive in Africa is seen as a prerequisite. In addition to follow-on funding an individual scholar bid to the AHRC (either Rob Iliffe or Vinta Damodaran) is suggested as a possibility.

It is agreed that the network should aim to formulate in the near future a document outlining a number of archives to be brought together within a digital architecture produced by the project and to draft a detailed framework/roadmap document for the completion of this work. This should be aimed for by the end of the summer