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ARCHAEOLOGY OF THE SOUTHERN TAKLAMAKAN:
HEDIN AND STEIN’S LEGACY AND NEW EXPLORATIONS

‘An Interesting Geographical Change’:
Hedin, Stein and Huntington’s Surveys of Climate Change

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Introduction

“It is nice to think that we are going to be given a new slant on our staple subject of discussion by a speaker from abroad.”

Abstract

Studying the contribution of the lakes of Central Asia to the discovery of global warming must touch on science policy in the early 20th century, the uneasy relationship that learned Europe used to have with the environmental history of colonial Asia, and the production and mobility of new and potentially troubling knowledge.

I intend to provide an account of how three independent scholars engaged the Royal Geographical Society of London and the international geography community. I will intertwine their maps, private letters, travelogues and scientific reports from the field with the history of theorizing on climate change.

My analysis of Sven Hedin, Ellsworth Huntington and Aurel Stein’s interactions with their colleagues promises to challenge the current narrative on the discovery of global warming.
The Altai Gobi Desert after the rains of early July 2006.
The Altai Gobi Desert before the rains of early July 2006.
News from the field

Communication policy

The announcement of Hedin’s sudden departure for Central Asia came without research plans that would have been publicly defined. With support from the Indian government, Sven Hedin would explore the sources of the Indus and Brahmaputra, just when entrance into Tibet was denied to British officers. Nothing is said about the curious route through Iran that Hedin took to reach India.

“There is scarcely room for any great amount of exploring work at the sources of these two great rivers. There is, indeed, one really big piece of exploring work still remaining to be done in Tibet—the tracing of the middle course of the Tsampo, or Brahmaputra river, in its passage through the Eastern Himalayas from the Tibetan plateau to Assam.”

“Some surprise has been occasioned…”

Travel and Colonisation, 28th October 1905
“Vive la concurrence!”
(cartoon title)

Scientific claims and national glory seek justice in the international arena.

From left to right: a placid clerk from the *Times*, and Fridtjof Nansen and Sven Hedin, two nationalist explorers.
Great men at home

Note the respective sizes of Scandinavia, Europe and Asia in this cartoon from Stockholm.

For explorers, the true battle is on the home front, securing the best seats at the yearly banquets of scholarly societies.

Sven Hedin had found in Albrecht Penck, the dean of German geography, a powerful ally even before his expulsion from the RGS.
Enduring friendship

Prof. Albrecht Penck’s welcome to Dr. Sven Hedin when he came to Berlin for a university lecture. “Die Deutschen Fronten” was the timely topic of Hedin’s talk. Berlin, 14th May, 1918.
Peer recognition

Scholarly societies, like the Société de géographie de Paris, decided who to honour for his contributions to cartography.

Minutes of the Société’s meeting of 22nd April 1904.
December 11, 1936

Dr. Sven Hedin
N. Malarstr. 66
Stockholm, Sweden

Dear Dr. Hedin:

Please accept my thanks for your summary of your recent work contained in "Neue Forschungen in Mittelasien und Tibet." It must be most gratifying to you to see how these later results amplify your earlier work. It is to me extremely interesting to see the map of Lop Nor, with a lake covering a considerable part of the area which I traversed in 1906. It makes me think of the time when my camels broke through the crust and I was nearly drowned in the mud of the old lake bed.

I hope your plan for coming to America has materialized, and that you will visit New Haven. I have done my best to arrange for a university lecture here at Yale, but I have not heard what has been the final result.

With cordial regards,

Yours sincerely,

Ellsworth Huntington

Collegiality at work

Thank-you letter from Huntington to Hedin, with an invitation to lecture at Yale.
My dear Sir Sven Hedin

Now that it is all over, may I write a line of congratulation to you on an honour in which I am proud to have had a share.

I was annoyed in the spring that the India office had not done it on their own account and so I took upon myself to write to Lord Knollys who showed what I wrote to the King.

In the way we brought about the happy result which however would gratify me much more if I felt assured that it had been found acceptable to you.

Yours ever

Curzon

Public recognition

Letter of congratulations from Lord Curzon, Viceroy of India and President of the Royal Geographical Society, to Sir Hedin, KCBE.
Dealing with the press

How to get reviews in the TLS despite the hostility of the British geography community.

London Library, St. James’s Square, S.W. 1.

July 12, 1923

Dear Sir Hedin,

I am sending you The Times Library Supplement. I was instrumental in having this article written. I hope you will approve of it. I did not write it.

Your political views still raise many to anger.

Sincerely,

[Signature]

[Unreadable text]
Major expeditions to the Kevir, Taklamakan and Gobi Deserts

1893-1897, 1899-1901, 1905-1908: Sven Hedin

1900-1901, 1906-1909, 1913-1915: Aurel Stein

1903 and 1905-1906: Ellsworth Huntington

1907-1909: Piotr Kozlov

1921-1930: Roy Chapman Andrews

1927-1935: Sino-Swedish scientific expedition to the North-western provinces

Index to Maps of Portions of Chinese Turkistan and Kansu from surveys made during the explorations of Sir Aurel Stein, KCIE, 1900-01, 1906-08, 1913-15
Sven Hedin's map of Lop Nor
Map of an archaeological site

Aurel Stein’s map of Loulan and Lop Nor, with:
– In red the locations of archaeological items,
– In black information on the past environment. The dotted lines stand for the surveyors routes.
Map legend

Aurel Stein's map of Loulan, with precise information on past and present land covers.
Huntington’s photograph of the bed of Lake Lop Nor
The Pulse of Asia

“Best geographical exposition of the time [...] novel and interesting conclusions adduced from the array of evidence.” Anonymous review, New York, 1908.
“Is it true that the soil of Central Asia is drying up?”

Known to geographers under various names in the 1900s, climate change was a phenomenon that was:
– Historical and geological,
– Regional and global,
– Progressive,
– Linear or cyclical,
– Recorded, quantifiable and mappable
– Informed by field work from Central Asia.

There was however no consensus among geographers on:
– The significance of climate change for human societies,
– The legitimacy of research on climate change.
A short list of discussion topics on climate change and Central Asia in the 1900s

- Desiccation in Asia and the Middle East
- Sven Hedin’s observations
- Historical evidence from Turkestan
- Ancient prosperous cities killed by drought
- Vanished rivers and dried-up lakes
- Social consequences of river retreats
- Need for irrigation
- Human settlements moving to mountain piedmont
- [...] Bruckner’s cycle
- Impacts of rainfall, logging, and manufacturing
- Water deficit and undersea sources
- Desiccation in Italy and France
- What can we do about climate change?

Conclusion
Findings

Once upon a time, geography and climate studies had simplicity as one of their characteristics, scholarly societies dominated professional networks, and conceptual models and the logistics of data collecting and analysing obeyed the demands of cartography.

One century ago, climate change as exposed by explorers generated a passionate debate on the past and future of humankind. The Kevir, Taklamakan and Gobi deserts were meticulously surveyed, and their climate extremes painfully recorded by parties of geographers, orientalists and archaeologists armed with the best instruments of the day. Journalists and the public fêted their achievements when these explorers came back to London, Paris, and Berlin with long columns of figures, measurements and bearings.

Summary

My paper has addressed the controversy raised by the gap between the rather reliable reconstruction of the environmental history of the ancient civilisations of Inner Asia and uncertainties on what this reconstruction meant for the contemporary scientific ethos and the early 20th century world-order.

Thanks to the exploration of Central Asia, two “interesting geographical changes” eventually occurred: climate change was documented and discussed, and the geography profession elaborated new criteria for review and validation.

THANK YOU FOR YOUR ATTENTION!