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History Within

by INGA YANDELL

Marianne Sommer guides us through a fascinating exploration of human origins and the future of culture and chemistry in *History Within*.

Spanning evolutionary and biological depths—encompassing every aspect of human condition and expression. Her investigation traces the passage of modern science, viewing our past with expansive potential.

Author Synopsis…

History Within deals with human histories that have been reconstructed on the basis of bones, organisms, and molecules in the twentieth and twenty-first century. It focuses on the work of Henry Fairfield Osborn, Julian Sorell Huxley, and Luigi Luca Cavalli-Sforza in paleoanthropology, evolutionary biology, and human population genetics. Besides following the history of science, it is an analysis of the circulation of knowledge at the museum, the zoo, through organizations such as UNESCO, and projects like the Human Genome Diversity Project and the Genographic Project, as well as through print, radio, and film. The book illuminates the ways in which the sciences of human origins have contributed to particular historical cultures. How have the evolutionary perspectives informed other scholarly and scientific disciplines, areas from national and international politics to literature and art, and how have they been adapted by individual readers and visitors to their own purposes, 'identities', and orientations in life?

The first part of the book deals with Osborn. His production and popularization of the history within are analyzed during his presidency of the American Museum of Natural History in New York in the early decades of the twentieth century. He invested enormous energy not only into having every 'fossil hominid type' represented in his exhibition hall but also into finding the still 'missing link'. Osborn's work is situated in the museum and education reforms, in eugenic concerns, and in the cult of the wild, the primitive, and 'threats of modernization'. Part II engages with Huxley's production and popularization of history within from the perspective of the new evolutionary synthesis. This perspective and the understanding of the living organism as a museum of evolutionary history informed his directorship of London Zoo and his involvement in organizations such as the Colonial Service, UNESCO, IUCN, and WWF. The third part of the book is about Cavalli-Sforza's history within the gene. In his scientific career, he was instrumental in the development of a mathematical, computational human population genetics. He also popularized the light this science throws on modern human evolution and the genetic kinship of human populations in books and engaged in global projects of blood collection and genetic analysis, most centrally in the Human Genome Diversity Project.

The knowledge scientists created about evolutionary history and human diversity stood in connection with imperialism, colonialism, (inter-)nationalism, or totalitarianism, not least through understandings of race, ethnicity, and gender. While for Osborn in the first decades of the twentieth century, race was a constitutive factor in the human evolutionary past and present, Huxley deconstructed the very concept and was among those interwar intellectuals who argued for a global democracy on a biological basis. Finally, Cavalli-Sforza's postwar endeavors in human population genetics were driven by a belief in the liberating and enlightening capacity of scientific knowledge. Central to all projects was the collection, preservation, analysis, and management of bones, organisms, or molecules at museums, through national parks, and in databanks, but not only the conservation of biological but also of cultural diversity has been a concern. With Huxley's science, popularization, and public work at

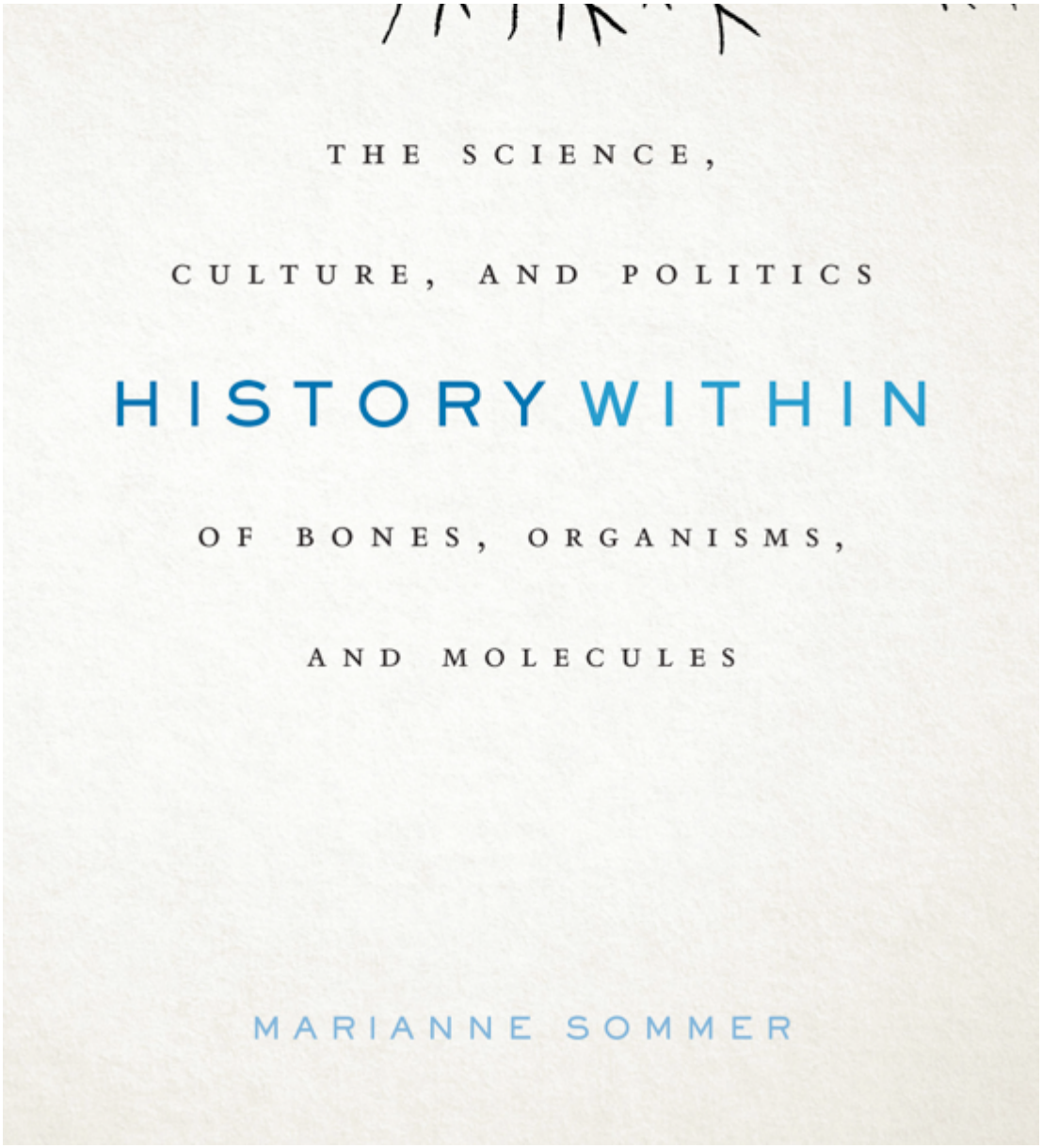
UNESCO and conservation organizations, concepts such as diversity, trusteeship, heritage, applied ecology, and evolutionary humanism gained in currency. All three protagonists also worked with particular understandings of 'memory', as related to biological heredity or as the store of cultural knowledge, and they worked toward what they believed to be progressive human evolution.

The approach taken in the book draws on diverse perspectives from the history of science in order to answer the question how 'bones, organisms, and molecules' were translated into texts, images, or exhibits about 'our' biologically reconstructed past and deep-rooted 'identities' that may then circulate. The book inquires after the role not only individual scientists, but also institutional networks played in the process. It situates the scientists' own understanding of science communication in the developments within history of science from 'the popularization of science' to 'the circulation of knowledge'. It engages with the concept of historical culture and asks after the role of the human origins sciences ('history within') in interaction with other kinds of histories ('history without') as a kind of public history effort. Particular attention is paid to the media and genres of communication, and to the images and metaphors Osborn, Huxley, and Cavalli-Sforza developed to capture human biological kinship, in terms of trees or networks.

The projects of the scientists engaged with in this book were ultimately directed at an improvement of the human condition and to varying degrees at the associated conservation and development of natural environments. In their view, evolutionary biology is the Leitwissenschaft that should inform worldview and guide ideas about the future of humankind. Their practices were accompanied by reconfigurations of 'nature and culture' that encompassed processes of naturalization, de-naturalization, and re-naturalization with regard to human identities. Such processes were marked by an increase in mathematization and technologization that – together with the latest 'historical document', 'the gene'—create an aura of authority and objectivity. Population geneticists today can analyze entire genomes and have computer programs that group people according to them. They can visualize genetic kinship in different ways – as dendrogram or as a mosaic pattern.

What might the future history within look like in view of these developments and those in other branches such as epigenetics?

About the Author: Marianne Sommer is professor in the Department of Cultural and Science Studies at the University of Lucerne. She is the author of *History Within: The Science, Culture, and Politics of Bones, Organisms, and Molecules* (University of Chicago Press 2016).



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