

The Darker Side of John Wesley Powell

Like other early American geologists, the man who explored the Colorado River did anthropologic research that presupposed the racial inferiority of Native Americans

By Tamara Pico on September 9, 2019



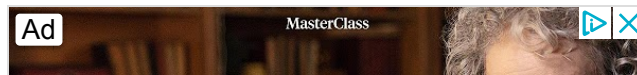
John Wesley Powell on horseback ear Flagstaff, Arizona circa 1891. Credit: National Park Service (NPS)

The year 2019 marks the 150th anniversary of the 1869 Powell Expedition, the first U.S. government–sponsored expedition through the Colorado River into the Grand Canyon. In honor of the famous expedition, the United States Geologic Survey sponsored the “[Sesquicentennial Colorado River Exploring Expedition](#),” retracing the path of Powell’s boats and engaging the public along the way about this historic geologic expedition.

How we recount science history events is important because the way we tell these stories relays values and cultural norms to the next generation of scientists. Early geologists are often discussed in terms of intellectual contributions, strong personalities or heated debates. But what was the historical context and the motivation behind their work? This

context is inseparable from scientific contributions to geoscience, and contributes to the culture within the geology community today.

John Wesley Powell (1834–1902) is a foundational figure in American geology, and is extolled as an exceptional scientist, explorer and environmentalist. One hundred and fifty years later, Powell is well-known for leading an expedition rafting down the Colorado River into the Grand Canyon in 1869. Powell’s legacy in the geology community is that of an explorer: a relentless adventurer who fearlessly blazed through the unknown.



Though Powell is regarded as a hero in geology, he did more than map out rocks and landscapes. He also conducted ethnographic work on Native American tribes with the goal of “civilizing” Native Americans. As the director of the USGS and head of the Bureau of Ethnology at the Smithsonian, Powell played a powerful role in government decisions around Native American affairs. The 150th anniversary of this renowned expedition marks an opportunity to revisit the legacy of early American geologists such as John Wesley Powell in light of their social and political impact.

GEOLOGY AND WESTWARD EXPANSION

In the U.S., the discipline of geology developed in parallel to westward expansion. Overlap between military imperialist ventures and geologic expeditions was quite clear, as the U.S. government was invested in mapping out these territories, identifying valuable resources and removing indigenous people from these lands. In the 1860s several expeditions were commissioned by the U.S. Secretary of the Interior with the goal of detailing the topography, geology and natural history of the recently annexed U.S. western territories.

National recognition of geology as a discipline was tied to government sponsorship through the establishment of the U.S. Geological Survey (USGS) in 1879. From 1867 to 1876, during the transition to an officially recognized USGS, major expeditions including the Hayden survey in the Yellowstone region, the Wheeler survey west of the 100th meridian, the King survey in eastern California and Wyoming, and the Powell survey in the Rocky Mountain region (including the Colorado River) served to examine the potential resources in these territories. These survey leaders were formative to the history of geology, and their proposed geologic interpretations were written alongside recommendations for resource development and Native American removal.

MAPPING AND POWER

Powell published the first report of his explorations in 1870, in a travel book entitled *New Tracks in North America*, which contained a compilation of stories about adventures in the West. Also included in this anthology were the adventures of another white man who rafted through the Grand Canyon on the Colorado River several years before (admittedly in poorer conditions than Powell, as he was half-consciously pummeled by the river until rescued by a group of Native Americans). The British editor, William Bell, explains in the preface that these explorations are especially necessary to produce knowledge about western North America, because this country contains “cradles for nations which are destined to spring from our own hardy and prolific stock.”

This language was common in 19th century research in geology and geography, which connected physical landscapes and climates to human race characteristics. Scientists argued that certain topographies and climates produced humans who could not rise from a “grade of savagery”, and were destined to be developed by “civilized races,” even suggesting that North America was especially well-suited for the institution of slavery.

Despite Powell's later interest in ethnographic studies, during his first expedition down the Colorado in 1869, he made remarkably few notes in his diary about the presence of ruins or recent Native American camps. In fact, over 250 archeological sites have been found in the region of the 1869 expedition, 37 of them directly on the route that Powell reportedly took. Other members of the expedition made more extensive notes than Powell about the presence of other humans on their path, noting they "found the camp of an Indian today with meat bones that had been picked within two months." Invariably, Powell skewed the narrative of his expedition to appear more uncharted than it truly was.



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Because the expedition had been justified on the basis of mapping the course of the river and its geology, Powell similarly downplayed topographic knowledge held by Native American communities. Though he underlined that their intense familiarity with the landscape was crucial to the expedition, putting his ability to remember topographic features "to shame," he emphasized that his knowledge (presumably using and producing Western maps) captured the most important aspects, which he deemed essential in describing the large-scale features of a country. Indeed, mapmaking is a "form of knowledge and a form of power" which was used as an intellectual weapon of imperialism to control space and its inhabitants.

Powell employed this knowledge of topography as a resource for power. In *Exploration of the Canyons of the Colorado*, Powell explained to Native Americans that he was not interested in trade, but instead,

"I tell them that all the great and good white men are anxious to know very many things, that they spend much time in learning, and that the greatest man is he who knows the most; that the white men want to know all about the mountains and the valleys, the rivers and the canyons."

By mapping topography and possessing knowledge of landscapes, Powell could make the Colorado River legible to the U.S. government as capital to be owned and exploited.

Powell published extensive anthropological studies on native people and language, including the Ute people inhabiting these canyon lands, seeking to provide evidence for the inferior status of Native American culture and expounding a stepping-stone between "barbarism" and "civilization." In a report to the U.S. government entitled "On the condition of Ute Indians of Utah," Powell proposed:

"... next to teaching them to work, the most important thing is to teach them the English language. Into their own language there is woven so much mythology and sorcery that ... the ideas and thoughts of civilized life cannot be communicated to them in their own tongues."

Advocating for government funding to be used to "civilize" Native American populations, Powell pushed for the teaching of English, Christianity and Western methods of farming and manufacture. The study of ethnology was used as a tool for scientists to demarcate social categories in order to justify government-sponsored programs that exploited newly adopted land and its inhabitants. Although today we view the field of ethnology as

separate from geology, 19th century scientists such as Powell likely viewed this work together, and these studies were published side by side in reports to the public and the U.S government.

A COMPLEX LEGACY

Origin stories, such as Powell's expedition to the Grand Canyon 150 years ago, are told in introductory Earth science classes and are instrumental in setting cultural norms in geology. This culture can powerfully determine who feels a sense of belonging in a classroom or in a career as a geologist. Powell, among other early American geologists, furthered anthropologic research invested in the racial inferiority of Native Americans, and was motivated by military imperialism.

This history makes it challenging to cleanly separate the story of a geology hero from the complex motives underlying the explorations that built the foundations of Earth science. A century and a half later, as the talented pool of geoscientists becomes increasingly diverse, we can revisit how we tell the legacy of early American geologists. Their stories, which reinforce values in the discipline, merit a fuller understanding of the broader social landscape that shaped the course of research by U.S geologists.

The views expressed are those of the author(s) and are not necessarily those of Scientific American.

ABOUT THE AUTHOR(S)

Tamara Pico

Tamara Pico finished her PhD at Harvard University in Earth and planetary sciences, with a secondary field in women, gender and sexuality studies in May 2019. Her research interests include ice sheets, landscapes and the origin of social cultures in geoscience. Using quantitative and qualitative methods, she works to document and analyze how social conventions and cultural practices affect women and underrepresented minorities in the geosciences.

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