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John Wesley Powell: White Water to White City

Marcia L. Thomas

In 1893 the World's Columbian Exposition, originally scheduled for completion a year earlier to mark the 400th anniversary of Columbus' voyage to the New World, opened its doors in Chicago. The White City's monumental buildings and exhibits of the very best of American culture would dazzle millions of visitors. Along the vaudevillian Midway Plaisance just outside the fair's gates, they marveled at the giant Ferris wheel and encountered exotic peoples from places like Java and Lapland. Among the pleasures was Buffalo Bill Cody's Wild West. Fresh from a successful European tour, Cody's re-creation of the American West included a buffalo hunt with real buffalos, an attack on a stagecoach by real Indians, and a re-enactment of the Battle of Little Big Horn. In just a few years, Cody would retire to the Wyoming town that bears his name, where, he told a reporter, "Irrigation makes farming a pleasure and crops a sure thing."¹

That same summer, a young Frederick Jackson Turner presented an essay to a gathering of historians at the Chicago Art Institute. In "The Significance of the Frontier in American History," Turner first stated his famous thesis, "The frontier has gone, and with its going has closed the first period of American history."² The vanishing frontier had shaped the American character: "That coarseness and strength combined with acuteness and acquisitiveness; that practical inventive turn of mind, quick to find expedients; that masterful grasp of material things...that restless, nervous energy; that dominant individualism."³

Turner's characterization might well be applied to another fair-goer, John Wesley Powell. The director of both the US Geological Survey and the Bureau of American Ethnology, Powell was on hand to see for himself the exhibits mounted by his agencies. From Chicago, Powell would continue west to Los Angeles to address the Second International Irrigation Conference. The West he would encounter on his train ride to Los Angeles was far different from the one

¹ Warren, *Buffalo Bill's America*, 481.

² Turner, "The Significance of the Frontier in American History," 227.

³ *Ibid.*, 226-227.

encountered in 1869, when he led the first successful American expedition down the Colorado River. The political landscape had changed as well. Powell, once a highly regarded and popular figure in Washington, now faced an indifferent public and hostile Congress. In less than a year, he would resign his post as director of the Geological Survey.

The years between 1869 and 1893 were extraordinarily productive for Powell. A study of his work yields an astonishing array of contributions to geology, geography, anthropology, ethnology, natural science, philosophy, and linguistics.⁴ Driven by a conviction that science should be put to practical use for the benefit of the nation and its people, he steered both of his agencies to that purpose. But none of his work would have been possible had he not first gained the attention of the American public. The publicity from his Western surveys and expeditions, coupled with his ability to cultivate political allies, played a significant role in propelling him to a successful career as a scientist and federal bureaucrat.

Major Powell, as the one-armed former Union soldier was known, honed his public relations skills when he secured a professorship at Illinois Wesleyan University following the Civil War. In 1867 he successfully lobbied the Illinois legislature for funds to establish the Illinois Natural History Society Museum in Normal, his hometown. He then persuaded the Illinois Board of Education, Illinois Industrial University, and Chicago Academy of Science to contribute funds for a summer collecting expedition in the Rocky Mountains. Upon his return, Powell reported to the Board of Education that “he hoped to ‘complete the exploration’ of the Colorado River during the next year.”⁵ For a second expedition in 1868, Powell traveled to Washington to secure free military rations from Congress. With a large party of self-funded volunteers, Powell again headed to Colorado, this time by rail. While camped near Grand River, the Powell party was joined by a group of prominent tourists, including William Byers, editor of the *Denver News*, Speaker of the House Schuyler Colfax, and Samuel Bowles,

⁴ See Thomas, *John Wesley Powell: An Annotated Bibliography*.

⁵ Worster, *A River Running West*, 125.

editor of the *Springfield Republican*. Impressed with Powell's energy and vision, Bowles gave the Major extensive coverage in his influential newspaper. Powell's plan, he wrote, was to "follow down the Grand River and strike further to the larger branch of the great Colorado River, the Green... The final object is to explore the Upper Colorado River and solve the mysteries of its three hundred mile canyon."⁶

As was often the case, Powell was in the right place at the right time, with the intelligence to recognize an advantage and the ambition to capitalize on it. Then, too, in 1869 America was ripe for the ambitious Major Powell. The nation was in its second age of discovery and infatuated with its newly acquired Western lands. The federal government had appropriated hundreds of thousands of dollars for military surveys of vast tracts of newly acquired territory. By 1861 the government had already published 18 illustrated reports from Western expeditions.⁷ Reports were excerpted and reviewed in national and international newspapers and journals, which then sent their own writers and photographers west of the Mississippi. Oliver Wendell Holmes' invention of the handheld stereoscope in 1859 brought these photographs into the parlors of millions of Americans.

Technical developments in printing, a rising literacy rate, and distribution of publications by railroad, led to a mid-century explosive expansion of the periodical market.⁸ By 1870, over 4,000 weekly magazines were published in the U.S., with a combined circulation of 10.5 million for a population of 30 million.⁹ Dime novels flooded the book market, with as many as 75% set in the West; total sales for one publisher alone approached 5 million between 1860 and 1865.¹⁰ Other technical developments in the form of the telegraph and the railroad played a crucial role in forever cementing the West in the American imagination. By 1861 telegraph lines completely crossed the nation, speeding the travel of news from west to east. The completion of the transcontinental railroad in 1869 not

⁶ Bowles, *The Parks and Mountains of Colorado*, 107.

⁷ Tyler, "Illustrated Government Publication," 148.

⁸ Smith and Price, *Periodical Literature in Nineteenth-Century America*, 3.

⁹ *Ibid.*, 5.

¹⁰ Smith, *Virgin Land*, 91.

only opened the West to a new rush of commerce and settlement, but also marked the beginning of one of the most concerted advertising campaigns and regional promotions the world has ever seen.¹¹

In a remarkable historical coincidence, on May 11, just a day after the Golden Spike ceremoniously united the two halves of the transcontinental railroad at Promontory Summit, Powell arrived by rail in Green River, Wyoming, to prepare for his first exploratory navigation of the Colorado River. One of Powell's final acts before departing on May 24 was to write a letter to the *Chicago Tribune*. Throughout the duration of the expedition, the Major and most of the other nine members of his exploring party maintained frequent correspondence with editors of prominent newspapers throughout the West and Midwest.¹² "Successful passage through the Grand Canyon, then, was potentially Powell's ticket to greater respect as a scientist, and publicity garnered...could only help Powell's wider reputation..."¹³

Publicity was certainly garnered a month into the voyage when a Utah newspaper ran a widely-distributed story based on a sensational claim by John Risdon, who falsely reported witnessing the drowning of Powell's entire party. Following more reliable news that all were very much alive, a *New York Times* editorial opined, "It has been fortunate for the fame of Major Powell...that the rascal Risdon propagated the falsehood of the tragic loss of the whole expedition...since then, the entire country has taken the deepest interest in the Powell expedition. The newspapers have eagerly printed every item they could get hold of about the party, and every letter or note from any of the members has been universally read" (July 26, 1869). When Powell finally emerged from the Grand Canyon at the end of August, he was heralded in the press as a conquering hero. Biographer Donald Worster notes, "Powell heightened his own adventures with a dash of romance, embellished a few anecdotes to dramatize his personal heroism and disregarding his own notes, exaggerated the dangers of some of the

¹¹ Fifer, *American Progress*, 11.

¹² See *Utah Historical Quarterly* 15 (1947) for letters to the press from the 1869 expedition.

¹³ Padget, *Indian Country*, 51.

falls he went over.... He had ambition, determination, and willingness to risk all for the sake of science....”¹⁴

In addition to public lecturing, the Major lobbied Congress, looking for funds to support his research. By May of 1870 he had a Congressional appropriation of \$10,000, in effect creating an official government survey that within a few years would become the Geographical and Geological Survey of the Rocky Mountain Region. Fully aware of the impact that a visual record would have on the public and Congress, Powell staffed his second Colorado River expedition with artist Frederick Dellenbaugh and photographers E. O. Beaman and John Hillers. For an overland survey, Powell courted renowned artist Thomas Moran, who accepted Powell’s invitation to join him at the Grand Canyon in 1873. Journals and magazines were soon rich with Moran’s illustrations and in 1874 Congress purchased Moran’s painting *Chasm of the Colorado* for \$10,000.

In 1875 *Scribner’s Monthly* published Powell’s first full written account of the 1869 expedition.¹⁵ His official report to Congress, *Exploration of the Colorado River of the West*, was released nearly simultaneously and sold out almost immediately. In both versions, Powell inserted incidents from the second river expedition into his narrative and neglected to credit members of the second exploring party. According to Wallace Stegner, the report “is to some extent a work of the imagination...he wrote partly with an eye on the scientific reader, partly on the persuasive power the narrative might have on appropriations committees and partly on the public impression he would make.”¹⁶ In fact, Powell enjoyed repeated success before the House Committee on Appropriations in his annual bids for continued funding of the Rocky Mountain Survey. After assuming the leadership of the U.S. Geological Survey in 1881, he shaped the agency into a well-funded and highly influential scientific institution. In a letter to one of his scientists, Powell wrote, “I wish to make the Survey of such magnitude that the whole area of the United States can be properly occupied with

¹⁴ Worster, *A River Running West*, 199-201.

¹⁵ A series in 3 parts: “The Cañons of the Colorado,” “An Overland Trip to the Grand Cañon,” and “The Ancient Province of Tusayan.”

¹⁶ Stegner, *Beyond the Hundredth Meridian*, 148.

a corps of topographers and geographers doing efficient work which will be available during the present generation. In order to grow from year to year, it is necessary to interest a large body of legislators and to obtain the friendly cooperation of the public press.”¹⁷

The Geological Survey grew indeed when powerful Western senators, led up by “Big Bill” Stewart of Nevada, authorized Powell to undertake a hydrographic survey of “lands susceptible of irrigation.”¹⁸ If only the arid lands could be “redeemed” by irrigation, they thought, then millions of worthless dry acres would be transformed into valuable cultivated fields. In 1888 Congress appropriated \$100,000 for the Irrigation Survey, followed by an additional \$250,000 in 1889. But the next year, in an abrupt about-face, Congress cut its funding and Powell was under attack.

What went wrong? Certain recent events had no doubt undermined Powell’s reputation. In January 1890 the *New York Herald* ran a series of articles in which Yale scientist Edward Cope charged Othniel Marsh, one of Powell’s allies and a USGS scientist, with plagiarizing his work. As for Powell, Cope asserted in the January 12 issue, his agency was “a gigantic politico-scientific monopoly, run on machine political methods.” There had been more bad press earlier, when Congress established a special commission in 1885 to investigate waste and overlap among the federal government’s science agencies. Although Powell defended himself and the Geological Survey admirably and there was no evidence of fiscal mismanagement, newspapers carried the rumors under damaging headlines.

The true origin of Powell’s troubles lies in Powell’s remarkable monograph, *Report on the Lands of the Arid Region of the United States*. In this 1878 document, Powell laid out a revolutionary yet pragmatic plan for the settlement of the American West. The West, Powell argued, is distinguished by aridity, with the result that Eastern patterns of settlement will not work. Beyond the 98th meridian, where average annual rainfall drops below 20 inches,

¹⁷ Worster, *A River Running West*, 423.

¹⁸ For a complete account see Sterling, “The Powell Irrigation Survey, 1888-1893,” 421-434.

homesteads of only 160 acres cannot successfully support a family. Furthermore, whoever controls the water essentially controls the land, opening the doors for land speculators and water monopolies. Based on scientific evidence and years of experience in the Southwest, Powell knew that land law reform and water regulation were essential for successful settlement of arid lands remaining in the public domain. Topographical surveys should be undertaken to classify all remaining public lands according to their physical characteristics. Since land intended for pasturage requires water for irrigation, large reservoirs should be constructed at the head of streams and rivers. Settlements in arid regions should be “organized into natural hydrographic districts, each one to be a commonwealth within itself... The right to use water should inhere in the land to be irrigated and water rights should go with land titles.”¹⁹ Powell proposed two land reform bills, one authorizing irrigation districts and the other pasturage districts, both to be organized locally by homestead settlers. Both bills died in committee, although the report itself was something of a best-seller, requiring a second printing.

The authorization of the Irrigation Survey in 1888 provided Powell with the opportunity to again address the issue of land use and water rights. In addition to identifying irrigable lands, the plan called for the identification of sites suitable for building reservoirs and canals. Once identified, these sites would be withdrawn from settlement. Surveyors went to work and Powell went on a junket with the Senate Irrigation Committee throughout Great Plains and Western territories. In North Dakota and Montana, he addressed delegates at their state constitutional conventions, urging them to conform their political units to the natural boundaries of watersheds. “There are waters rolling by you which are quite ample to redeem your land and you must save these waters...Don’t let these streams get out of the possession of the people...Fix it in your constitution that no corporation – no body of men – no capital can get possession of the right of your waters. Hold the waters in the hands of the people.”²⁰ The new states ignored his advice. In 1889 the entire Irrigation Survey was dealt a fatal blow when

¹⁹ Powell, *Report on the Lands of the Arid Region of the United States*, 43.

²⁰ *Official Report of the Proceedings and Debates of the First Constitutional Convention of North Dakota*, 412.

speculators in Idaho, trailing surveying parties, staked claims on prospective reservoir sites. The Secretary of the Interior invoked an amendment to the Survey's appropriation bill, authorizing the withdrawal from settlement of all lands within the arid region. The effect was to bring to a halt any settlement on hundreds of millions of acres west of the one-hundredth meridian. All claims filed in the previous ten months were voided.

Politicians, speculators, and private interests were furious. Though the decision to withdraw public land was not his, Powell took the blame. Congress slashed funds for the Irrigation Survey and rescinded the authority of the Interior Department to withdraw lands. In widely distributed newspaper articles, Senator Stewart publicly charged Powell with "ruining the West." Powell struck back. "The struggle that I am at presently engaged in with relation to the irrigation question is a fight against the speculators pure and simple," he said in an interview with the *Washington Star*.²¹ He took his case directly to the public in a series of three articles published in *Century Magazine*. The third article, "Institutions for the Arid Lands," adds a bold new dimension to Powell's vision for Western settlement. Not only should local political units be drawn around hydrographic basins and governed cooperatively, but the United States should retain sovereign ownership of these "commonwealths" and serve as their trustee.²²

For all his efforts, Powell could no longer muster the public and political support necessary to save the Irrigation Survey. In 1892 Congress attacked the Geological Survey, slashing its appropriation by nearly half. Employees were dismissed and Powell was left powerless. By the time he arrived at the Columbian Exhibition in July of 1893, he was also suffering from the pain of an old war wound from the Battle of Shiloh, where his right forearm was shot off. The frontier was gone; the Wild West was a carnival sideshow. But the Major had one last fight left in him.

On October 13, Powell stood before the second International Irrigation Congress in Los Angeles. Organizer William Smith had called the Congress to

²¹ Worster, *A River Running West*, 500-502.

²² Powell, "Institutions for the Arid Lands," 115.

advance his belief that in irrigation lay the economic salvation of the working poor and the future prosperity of the West. When delegates approved a platform calling on the federal government to build irrigation works to water millions of acres that would provide homes for millions of landless Americans, Powell abandoned his prepared speech and spoke the truth they didn't want to hear. "Not one more acre of land should be granted to individuals for irrigating purposes," he said. "When all the rivers are used, when all the creeks in the ravines, when all the brooks, when all the springs are used...there is still not sufficient water to irrigate all this arid land. What matters it whether I am popular or unpopular? I tell you, gentlemen, you are piling up a heritage of conflict and litigation over water rights, for there is not sufficient water to supply these lands."²³ The delegates shouted him down from the floor.

Powell resigned from the Geological Survey on May 8, 1894, citing ill health. He retained the directorship of the Bureau of American Ethnology until his death in 1902 and turned his ever-active mind to anthropology and philosophy. Though he left the battle over water rights and land reform to future generations, John Wesley Powell's science and prescient vision continue to inspire and inform.

²³ *Official Report of the International Irrigation Congress*, 109, 111.