John Wesley Powell
As John Wesley Powell stood on the banks of the muddy Green River on 24 May 1869 to start his now-famous journey down the river, he knew that a successful trip was by no means assured. In fact, despite all his planning, it was still a crap shoot, a roll of the dice. But he probably knew that success would bring him fame. He also might have guessed that he could write a popular account of the trip. And always confident in his abilities, he might have surmised that this trip could catapult him into prominent positions in government science. But surely none of his men foresaw as much. Nor probably did his wife or supporters in Illinois and Washington, D.C., foresee Powell’s future unfolding in so many directions. In the spring of 1869 Powell was a virtual unknown, a wild card in science, exploration, and adventure literature. Twenty years later he stood at or near the height of all those fields.

John Wesley Powell: explorer, writer, geologist, anthropologist, land planner, bureaucrat. Which one do we focus on? Do we concentrate on the trailblazer who explored the last blank spot on our nation’s map? Do we look at the artist who wrote one of the great, real-life adventure stories in American literature, *The Exploration of the Colorado River*? Or do we turn to the scientist who produced significant works in geology, anthropology, and land policy, such as *Report on the Lands of the Arid Region*? In fact, one cannot ignore any part of his multi-faceted life. Powell was a polymath, a jack of many trades who excelled at them all. His divergent interests resemble one of those braided streambeds in his beloved canyon country, branching out in many directions, but ultimately beginning and ending in the same stream. Few men or women in
the nineteenth century pursued as many avenues of intellectual study and fewer still performed so well. And John Wesley Powell started from a distinct disadvantage: he had little formal education.

Powell’s story in many ways reads like the story of other famous, frontier-bred Americans. His parents, Joseph and Mary Powell, immigrated to New York from England in 1830. A Methodist preacher, Joseph Powell was a “diligent reader, a terse speaker, a sound thinker; honest, precise and devout” (Lincoln 705). The father’s severity was offset by the mother’s gentleness. Later in life Powell would recall his mother with more affection than he felt for his father. Suffice it to say that both parents had some education, good minds, and high moral principles, all of which their son Wes would inherit and build upon.

Joseph Powell possessed religious zeal and a restless spirit. Gradually he pushed the family west across New York. At Mount Morris on 24 March 1834, his second son, Wes, was born. After eight peripatetic years in New York, the family moved to Jackson in southern Ohio. Like many border communities, Jackson was a hotbed of debate about abolition. Joseph Powell argued actively and publicly against slavery. It was this public stand that forced Wes out of the local schools, where his classmates called him “abolitionist” and threw rocks at him. He ended up studying with his father’s friend, George Crookham, probably the most learned man in Jackson County.

The three-hundred-pound Crookham offered to educate young Wes along with four other young men. Thereafter followed a course of studies and pedagogical methodology that Powell would later use with his own students in Illinois. We now call it the “field trip.” Crookham and young Powell would amble along places like Salt Creek Gorge, with Crookham illuminating all the natural history along the way. Teacher and pupil also dug in the Hopewell culture mounds that dot the southern Ohio landscape. Later Powell reflected on this educational experience as one of the most
important influences on his life. Unfortunately, their association ended in the mid-1840s when anti-abolitionists burned Crookham’s schoolhouse. Shortly thereafter, feeling the same pressure, Joseph Powell moved the family farther west to a farm in Walworth County, Wisconsin (Lincoln 706-08; Darrah, Powell 6-16). By this time at age twelve, Powell’s intellectual interests in natural history and ethnology had been fired and stoked. Now ensued a long period of self-education.

If southern Ohio had been the golden days of Powell’s education, southern Wisconsin and later northern Illinois proved to be the school of hard knocks. But no evidence exists that Powell resented these teen-age years. Indeed his early life farming in Ohio, Wisconsin, and Illinois must have agreed with him because he spent the better part of his professional life with the United States Geological Survey and Bureau of Ethnology trying to help other Americans—Anglo and Indian—achieve the same kind of agrarian life.

As soon as Joseph Powell acquired land in Walworth County, he struck out to preach on the ministerial circuit; he entrusted the breaking of the land and farming to twelve-year-old Wes’s hands. Somehow Wes and his ten-year-old brother Bram managed to do it all: by the third year they had cleared sixty acres and were hauling wheat to market. But Wes hungered for book learning. Like his future Commander-in-Chief, Abraham Lincoln, Powell got books any way he could. He spent those years reading widely in history, science, and philosophy. His favorite book was John Bunyan’s *A Pilgrim’s Progress*.

In the 1850s after quarelling with his father over the elder Powell’s insistence that Wes become a minister, Powell left home and began the first of a series of teaching jobs in Illinois. He also squeezed in a few terms as a college student. In the summers he collected fossils on the Ohio, Mississippi, Illinois, and other Midwestern rivers. Powell wanted to be a scientist, and while his formal training lagged, the field knowledge and self-confidence he
acquired on these river trips proved immeasurable. No doubt he also learned many valuable lessons about water travel and watercraft which later helped him in 1869 on his famous voyage down the Green and Colorado Rivers.

When war came in the winter of 1860-61, Powell promptly enlisted and within a month rose to the rank of second lieutenant. Stationed at Cape Girardeau, Missouri, he came under the command of General John C. Frémont. One can only speculate about what Powell, if he did gain the opportunity, asked Frémont about the West. In the fall of 1861 Powell received from newly appointed commander Ulysses S. Grant a one-week leave of absence to marry his first cousin, Emma Dean of Detroit. Powell and his bride rushed back to Missouri to find that he had been commissioned a captain in the artillery. Then the following April at the Battle of Shiloh, he took a bullet in his right arm. As was standard medical practice at the time, the battlefield surgeon promptly amputated the arm near the elbow. Although he recovered and returned to active duty, Powell suffered pain in his stub the rest of his life.

Powell distinguished himself at Vicksburg and elsewhere under Generals Grant and Sherman, and in 1865 returned to civilian life in Wheaton, Illinois, a “Major.” Several opportunities for employment quickly presented themselves, most notably a county clerkship of DuPage County, worth the lucrative sum of $5,000 per year. Illinois Wesleyan University in Bloomington countered with a professorship in geology, worth $1,000 per year. Not surprisingly, the Major chose science over politics. Eventually, however, science would lead him back to politics, but on a national stage.

When Powell began to teach science—his duties included not just geology but all the natural sciences—he remembered the kind of field study to which Crookham had introduced him. At every opportunity he led his students into the surrounding fields and forests to gather plants, search for animals, and collect rocks. Although he probably did not realize it, Powell was revolutionizing the teaching of science. And when he took a group of students on
an extended field trip to the Rocky Mountains, it was the first such trip of its kind in the annals of American higher education (Morris 16).

Following a short stint at Illinois Wesleyan, Powell moved to neighboring Illinois State Normal University. He also became secretary of the Illinois Natural History Society and curator of its museum. In that latter capacity, Powell decided immediately to increase the museum’s collections. Spurred on by the wanderlust that had characterized his father’s life and his own adolescence, Powell organized a scientific expedition to Colorado. Composed mostly of students and a few faculty colleagues, the expedition received funding from a rainbow of sources. Powell’s old commander, U. S. Grant, arranged for him to buy rations from government commissaries at government rates. While all the students and other expedition members agreed to pay their own expenses, Powell obtained $500 from the Illinois Natural History Museum.

Various railroad lines gave the group free passage, and the Smithsonian loaned him the necessary scientific equipment in return for any topographic readings his party made. Powell also used some of his own money to help finance the group’s expenses. Until he won an appropriation from Congress after the successful 1869 trip down the Colorado, Powell financed three seasons in the West by this patchwork method (Darrah, Powell 81-82).

Green but enthusiastic, Powell’s party tumbled into Denver in July of 1867, and shortly thereafter climbed Pike’s and Lincoln Peaks. Emma Powell, nearly always with her husband on his explorations, was the first woman to climb Pike’s Peak. The Powell group spent the better part of the summer collecting specimens of all sorts for the Museum. In Denver, Powell met O. G. Howland of the Rocky Mountain News and Jack Sumner, brother-in-law of the News’ editor, William Byers. When the Major left Colorado in the fall of 1867 to return to Illinois, he had formulated a plan to explore the last blank spot on the map—the canyons of the Colorado River—and had secured the services of Howland, Sumner, Billy
Hawkins, and William Dunn to help him the following season (Stegner, “Jack” 61-69). These men would form the nucleus of the river expedition two years later.

Powell spent the winter of 1867-68 teaching, sorting through his collection, and organizing a return trip to Colorado. He also went east to gain support from the Smithsonian and from Congress for his proposed exploration of the Colorado River. As Smithsonian secretary Joseph Henry explained in a letter of introduction to James A. Garfield, then the most influential member of the House, Powell’s survey of the Colorado River would give special attention to the possibilities of irrigation in this arid region. With but one season in the West, apparently Powell was already formulating ideas about arid lands agriculture. These ideas flowered into a classic statement of environmental history, Report on the Lands of the Arid Region (1878; hereafter Arid Lands Report). He later wrote that he first became interested in reclamation and arid lands agriculture while discussing the future of the West with William Byers of The Rocky Mountain News, soon-to-be Vice-President Schuyler Colfax, Samuel Bowles of The Springfield Republican, and numerous other luminaries he camped with in Middle Park, Colorado, in 1868 (Powell, “Press Release” 3).

Powell’s second expedition to Colorado in 1868, called the Rocky Mountain Scientific Exploring Expedition, boasted three professional biologists among its twenty-one members. The party spent three months collecting for the museum, taking measurements and studying the Rocky Mountain flora and fauna. Powell himself encountered a band of Ute Indians, and this rekindled an interest in native cultures that he first acquired through Crookham in southern Ohio. The Major began to study their language and thus began another life-long endeavor. This one would eventually lead him not only to direct the Bureau of Ethnology, but also to help establish anthropology as a federally funded science.

When the rest of his party traveled east in the fall, Powell moved his camp farther west to the lower White River near present-day
Meeker, Colorado. With the core of his next year’s river crew, plus his brother Walter, Powell spent part of December and January exploring the Yampa River as well as the Green River near Brown’s Hole. Otherwise he visited with the local Utes, studying their language and recording their myths and customs. The budding anthropologist could not have had a better situation for study. In early spring Powell hopped a train to Chicago where he designed the boats (modeled after the “ferrytenders” he had seen on Midwestern rivers and lakes) that would carry him into “the great unknown.”

Because Green River, Wyoming, lay on the recently completed transcontinental railroad line, Powell decided to start his river adventure from there. Besides what scant information Powell might have gleaned about the Green River from fur trappers by word-of-mouth or from William Manly’s *Death Valley in ’49*, little was known about that river and nothing about the Colorado. A miner named James White claimed he went through the Grand Canyon in 1867. After being dragged off a raft at Callville, Nevada, near death, White said that he floated from near the San Juan River. Although Powell sought out White, possibly near Fort Bridger, he came away unconvinced that White had actually passed through the Grand Canyon. Most river historians now think that White probably drifted down the Colorado from below Grand Wash Cliffs, and hence below the Grand Canyon proper. But a few believe his story (Bulger).

Powell had very little to go on, especially for the Colorado River itself. What he heard from Anglo and Indian alike were tales of horror: of a current that disappeared beneath the ground, of canyon walls a mile high, of great waterfalls. And while an element of truth hangs on all those fables, the prospect of a waterfall seemed the most real threat. Yet Powell the scientist already understood enough about the key to Colorado Plateau geology—erosion—not to fear for waterfalls. Years later Harvard geologist W. H. Brewer asked him if he wasn’t afraid of such falls as he
planned his river trip. Powell replied, “Have you never seen the river? It is the muddiest river you ever saw.... I was convinced that the canyon was old enough, and the muddy water swift enough and gritty enough to have worn down all the falls to mere rapids” (Brewer 381). He was correct, as he was to be about most of the basic Plateau Province geology.

The crew that Powell assembled in Green River hardly qualified as a group of distinguished scientists. In fact none of them had any scientific training whatsoever. What the Howlands, Sumner, Dunn, Andy Hall, George Bradley, and Walter Powell could claim, however, was experience in the outdoors. A last-minute addition, Englishman Frank Goodman, could only claim enthusiasm. Thus, whatever science was accomplished on the trip would be the Major’s responsibility.

Much has been written about Powell’s motley crew, about his poorly designed boats, and about his overbearing military demeanor throughout the trip. Suffice it to say that Powell’s crew handled the difficulties of river travel well enough, even if they did not contribute much to science. The boats themselves proved they could make it through big water when they had to. As for Powell’s martinet-like behavior, undoubtedly he sometimes pulled too hard on his men’s strings.

When Powell’s men pushed off from Green River on 24 May 1869, many of the locals turned out to see them off, some to shout warnings. With nine other men and four boats, Powell had stowed provisions calculated to last ten months. Moreover, for scientific work he had “two sextants, four chronometers, a number of barometers, thermometers, compasses, and other instruments” (Powell, Exploration 8).

Walter Powell and George Bradley manned Kitty Clyde’s Sister; Billy Hawkins and Andy Hall oared the Maid of the Canyon; O. G. Howland, Seneca Howland, and Frank Goodman rode in the No Name; while Powell, Jack Sumner, and Bill Dunn led in the lighter Emma Dean. This latter boat measured sixteen feet, was
constructed of pine, and was built for the speed a scout boat required. The other three boats boasted oak frames, were twenty-one feet long and contained water-tight compartments fore and aft. During the first sixty miles of canyons, the crew experienced a few minor mishaps, but on 2 June when they floated into the meadows of Brown’s Park, their spirits soared. Six days later, in Lodore Canyon, disaster struck.

Numerous versions of what happened have come down, but all accounts agree that the No Name, with Goodman and the Howlands aboard, missed the signal to pull over above the big rapid. The boat then hit a rock and careened. The men lost their oars, and shortly thereafter the craft hit another rock and split in two. All three men managed to grab onto some rocks in mid-stream. After some fancy oaring by Sumner in the Emma Dean, the swimmers, shaken but unharmed, all grabbed onto his boat and made it to shore. Powell wore the only lifejacket on the trip.

Named Disaster Falls, this rapid not only cost the expedition a boat, many food provisions, and scientific instruments, it put a damper on the trip. And according to some accounts, it sowed the seed of enmity between Powell and the Howlands (Stanton 147, 177). Whatever the truth of that latter item, the expedition now suffered in many ways, especially in the amount of time they had to measure, map, and geologize. Although they recovered some instruments and food downstream, this was, as Bradley put it, “a serious loss to us and we are rather low-spirited [sic] tonight” (Darrah, “Exploration” 36). Nothing calamitous happened through the rest of Lodore, Whirlpool, and Split Mountain Canyons, but when the expedition reached the Uinta Basin, Goodman left the trip. The Major traveled to the Uinta Indian Agency to replenish food supplies, but returned with only a small amount of flour. In all likelihood, the Agency was low on supplies, plus Powell had little money to purchase such.

For the better part of July the men toiled through the rapids of Desolation and Grey Canyons, floated the smooth water of
Labyrinth and Stillwater Canyons, and in 100-degree heat portaged the big drops of Cataract Canyon. Still they made it through. Glen Canyon brought cooler temperatures and relief from the rapids, but the party could not linger to enjoy the beauties of that now-flooded canyon. The men wanted to press on, even though Powell, always the scientist, persisted in stopping to take latitude and longitude measurements. Bradley seemed to speak for the whole group when he wrote, “we are willing to face starvation if necessary to do it [measurements] but further than that he should not ask us to wait and he must go on soon now or the consequences will be different from what he anticipates” (Darrah, “Exploration” 57-58). In his zeal to survey the territory and to succeed, Powell sometimes ignored his men’s needs. In fact, he seemed not to notice the frayed nerves and sinking morale.

Early August saw the group pass from Glen Canyon into Marble Canyon and that meant many rapids and more portaging. Yet despite the slow pace and toil, Powell, Bradley, and Sumner all commented on the many beautiful spots in Marble Canyon. Bradley called the towering waterfall at Vasey’s Paradise “the prettiest sight of the whole trip” (Darrah, “Exploration” 61). Speaking of the polished limestone walls, Powell was moved to write, “And now the scenery is on a grand scale. . . . Through a cleft in the wall the sun shines on this pavement and it gleams in iridescent beauty” (Exploration 75-76).

When the group arrived at the Flax or Little Colorado River on 10 August, Powell commanded the party to stop a few days to take barometric, latitude, and longitude readings and to explore nearby Anasazi ruins. But as Bradley wrote in his journal there, the men were “uneasy and discontented and anxious to move on.”

Once in the Grand Canyon proper, the party faced some of the worst rapids in North America. In the first forty miles they tried to portage, but in some cases had to run some fearsome rapids now known as Unkar, Nevills, Hance, Sockdolager, Grapevine, Horn Creek, Granite, Hermit, Tuna Creek, and Sapphire—all dan-
dangerous rapids currently rated between 5 and 9. Midway through that horrid stretch they stopped on 16 August at Silver (later Bright Angel) Creek to fish, hunt bighorn sheep, patch boats, and reshape oars. To add to their troubles, rain brought many sleepless nights since their now-shredded ponchos provided little shelter. Cold, hungry, in tattered clothing, running some deadly rapids, it is a wonder that Bradley could say that even though he was hungry and sick, he was “still in good spirits” (Darrah, “Exploration” 67).

From this point on it appears that Powell recognized their dire situation and curtailed his insistence on geologizing. Nevertheless, he continued to observe. His geology notes from this part of the trip show his grasp of the basic history of Inner Gorge geology. Still, it was everything the men could do just to make their way down the canyon on what little food they had. On 26 August the party found a patch of corn and squash at Spring or Indian Canyon, probably planted by Shivwits Indians. Ripe enough to eat, the squash provided a welcome relief from a constant diet of unleavened biscuits, coffee, and dried apples.

But the next day they reached what Bradley and others agreed was “the worst rapid yet seen” (Darrah, “Exploration” 69). Separation Rapid, as it has since become known, proved the expedition’s undoing. Pages and pages have been written, analyzing what took place there. Some believe everything Powell said in his book. On the detractors’ side stand Otis Marston, Robert B. Stanton, Julius Stone, and others. They assert that Separation merely exacerbated long-festering tensions which started at Disaster Falls and worsened because of Powell’s overbearing manner.

Powell himself, in an account written five years after the event, depicts the parting as tearful and in good friendship. His actual trip journal—always extremely brief—merely says, “Boys left us.” Jack Sumner reports that the Howlands and Dunn left, though he mentions nothing in the way of acrimonious feelings. Bradley, who
wrote expansively in his journal and never feared criticizing the
Major there, wrote, "There is discontent in camp tonight and I fear
some of the party will take to the mountains but hope not. This is
decidedly the darkest day of the trip but I don't despair yet." Then
the next day he said, "They left us with good feelings though we
deeply regret their loss for they are as fine fellows as I have ever
had the good fortune to meet" (Darrah, "Exploration" 7).

Whatever the exact circumstances, whatever the exact mood in
camp, the three men clearly feared for their lives and thought they
stood a better chance of climbing and walking to the Mormon settle-
ments of St. George or Toquerville. They never made it. Some
Shivwits Indians mistook them for miners who had killed a
Hualapai woman on the south side of the river. The Indians killed
Powell's men. That, at least, is the story Powell heard the next
year when he visited the Shivwits area with Mormon scout Jacob
Hamblin. A few historians have suggested that the men were
killed by Mormons who mistook them for federal agents searching
for polygamists (see Haymond 120 and Larsen). No one knows for
sure how Powell's men died.

After leaving the three men, Powell and the other five men
rowed successfully through Separation and Lava Cliffs Rapids
(they now lie under Lake Mead). In two days they passed beyond
Grand Wash Cliffs to the mouth of the Virgin River. There, some
Mormon settlers spotted them, took them to a cabin, and fed them.
Powell and his brother left for Salt Lake while Sumner, Bradley,
Hawkins, and Hall pushed on down the Colorado. While Powell's
account certainly ranks with the great American adventure sto-
ries, these four men were the true adventurers.

Many have said that Powell made it through the canyon by sheer
luck, and he acknowledged as much himself years later. But
Powell has endured another rap: that the 1869 expedition accom-
plished little science. This is both true and false. In tangible terms
the statement is accurate. No map was drawn. If Howland carried
one out, and it is doubtful he did, it disappeared when he died on
the Shivwits Plateau. No rock samples came out of the canyon and no scientific monographs appeared right after. But in the larger sense, Powell accomplished much. As his geologic notes indicate, Powell's eye took in the broad geologic outlines of the canyon country. Already he grasped its basic structure: that the river preceded the canyons and then cut them as the Plateau rose.

These and other ideas about erosion he bequeathed to his later collaborators, the brilliant geologists Grove Karl Gilbert and Clarence E. Dutton. In the process these three men rewrote aspects of geology. Powell made his greatest direct contribution with the terms he introduced to describe Colorado Plateau drainage systems. In the Geology of the Eastern Uinta Mountains (1876) he classifies three kinds of river valleys: "antecedent," "consequent," and "superimposed" (Rabbitt 7). Moreover, he introduced the term "base level of erosion"—the level below which dry land cannot be eroded. In these and other conceptions, Powell laid the foundations, as Harvard geologist William Morris Davis said, "of what may be fairly called the American school of geomorphology" (29).

With these ideas about the Colorado River country in mind, Powell returned to Illinois a national hero. His river exploits had captured the fancy of an Eastern public starved for news of Western adventuring. Powell promptly hit the lecture circuit, mostly in the Midwest. Although his voice hardly boomed like Ralph Waldo Emerson's baritone, he lectured the way he later wrote—with clarity and precision. These skills would help him years later when testifying before Congress. Also, in talking about his trip, he was shaping, refining, and expanding the story that would become his most famous book, The Exploration of the Colorado River of the West.

Powell's immediate problem in 1870, though, was funding. To continue his survey over a number of seasons, he needed to show Congress tangible scientific results. And a second expedition would produce what the first one did not—a map and scientific publications. But Powell knew how to ride the crest of his fame and par-
lay it into financial support. Once again he sought the aid of Joseph Henry and Spencer Baird of the Smithsonian and Representative James A. Garfield. Largely through their influence, Congress appropriated $10,000 and $12,000 for the next two years for “The Geographical and Topographical Survey of the Colorado River of the West” (Darrah, Powell 152-53). Although it later acquired different titles, it has always been known as the “Powell Survey.”

During the summer and fall of 1870 Powell returned to Utah with two goals: find routes down to the Colorado to cache food for the upcoming 1871 expedition and determine the fate of the three men who reportedly died on the Shivwits Plateau. In both of these endeavors he enlisted the aid of Jacob Hamblin, the Mormon buckskin apostle. Thereafter, the two traveled to Fort Defiance in Arizona to help negotiations between the Mormons and the Navajos. Largely through Powell’s efforts, both sides signed the Treaty of Fort Defiance on 3 November 1870. Thus ended a decade of strife between the Mormons and the Athabascan-speaking Indians from the Four Corners area.

For his second expedition Powell once again neglected to hire any noted scientists. Still, his crew of mostly fellow teachers and students constituted a significant step up in professionalism from the first trip. Professor Almon H. Thompson, a brother-in-law, served as the geographer and second in charge. Frederick S. Dellenbaugh, also a distant relative and a talented artist, later became one of the most prominent Colorado River historians and wrote the only account of the trip, A Canyon Voyage (1908). An outsider, E. O. Beaman of New York, came along as the trip’s professional photographer. Another outsider, John K. Hillers, signed on in Salt Lake City as a boatman when winter snows delayed Jack Sumner. Hillers went on to great fame as a U. S. Geological Survey photographer, a skill he picked up on the 1871-72 expedition. The others were relatives, colleagues, or students of Powell’s. This expedition proved one of the most documented in nineteenth-century Western
exploration: nearly every member of the crew kept a detailed jour- 

Powell’s passion for river exploration on the second trip clearly 
did not match that of the first trip. For various reasons he left the 
expedition numerous times before it reached Lees Ferry in late fall of 1871. Powell left Thompson in charge, and the geographer held 
the sometimes grumbling crew together while accomplishing im- 
portant topographical work. He not only produced the first map of 
this previously blank spot, he also “discovered” the United States’ 
last major river, the Escalante, and the last mountain range, the 
Henrys, named after the Smithsonian’s Joseph Henry. 

In mid-August of 1872 when Powell continued river exploration 
below Lees Ferry, he had been a father for eleven months. Mary 
Dean Powell began life in Salt Lake in September 1871, and by 
December she, Emma Powell, and Thompson’s wife Nell had trav- 
eled to Kanab where the survey party had set up winter camp. 
Ironically, Powell had also recently become fatherless. Reverend 
Joseph Powell had died in December. And fortunately for Wes, he 
had long since forgiven his son for becoming a scientist instead of 
a minister. The son of a minister, Powell became what Wallace 
Stegner called “The High Priest of Science” for late nineteenth-cen- 
tury America. 

From 17 August to 8 September the party toiled through the 
Grand Canyon to the mouth of Kanab Creek. Numerous flips and 
rising waters convinced Powell and Thompson that navigating the 
rest of the canyon would accomplish little science. As Dellenbaugh 
said, “We were in the field to accomplish certain work not to per- 
form a spectacular feat” (A Canyon Voyage 243). Compounding 
these difficulties, a message arrived from Jacob Hamblin stating 
that the Shivwits Indians planned to ambush the party in the 
Lower Grand Canyon area. Therefore, Thompson determined he 
could map the rest of the canyon from various points on the North 
Rim. On 10 September the party tied up the Nellie Powell, the 
Canonita, and the Emma Dean and packed out Kanab Creek.
Now Powell went straight from Kanab Creek to Congress and requested $20,000 for the 1873 season. He wanted to resign from his position at Normal, take up permanent residence in Washington, and direct a more or less permanent survey. He succeeded. Moreover, with funds from the sale of the expedition’s photographs, he purchased a house at 910 M St. NW in the nation’s capital. In doing so he fully committed himself to a life in federal science.

In addition to directing his survey, largely from Washington, Powell received a special commission with Indian agent G. W. Ingalls to investigate the problems of the Ute, Shoshone, and Paiute tribes of Utah and eastern Nevada. Powell took up the assignment with relish. It allowed him to complete his series of Numic vocabularies, record mythologies and social institutions, and collect for the Smithsonian artifacts relating to Indian dress, food, arts, warfare, and ceremonies. Since his first encounter with the White River Valley Utes, his professional interests had been changing from geology to ethnology.

Between intermittent field work in 1873 and 1874 and work in Washington, Powell hired geologists Grove Karl Gilbert and Clarence E. Dutton. As Wallace Stegner has said, “During the years they worked together, they were probably the most brilliant geological team in the business” (Beyond 146). Even though Powell’s interests at the time were moving toward ethnology, he had formed many of the overarching ideas about canyon country geology. These concepts he gave freely to Gilbert and Dutton. Their combined efforts represent, no doubt, a richer substitute for the comprehensive work on the area Powell originally envisioned.

Gilbert’s Geology of the Henry Mountains (1877) appeared as a Powell Survey monograph and stands as the classic statement on arid lands erosion and laccoliths (bubble mountains formed of sedimentary layers domed upwards by underlying lava). Gilbert also contributed to Powell’s Arid Lands Report (1878), served as ranking geologist for the United States Geological Survey, and was
Powell’s closest friend.

Whereas Gilbert’s biographer Stephen Pyne describes Clarence Dutton as an “engine of research,” Dutton was something of an aesthete, in the mode of his contemporary and Yale classmate, Clarence King. When reading Dutton’s *Tertiary History of the Grand Canyon District* (1882) and *Geology of the High Plateaus of Utah* (1880), one sees not only a superb geologist working out theories of erosion and volcanism, but also a fine prose stylist and nature writer. Dutton’s descriptions of Point Sublime, Zion Canyon, the Markagunt Plateau, the Escalante country, and other grand scenes in southern Utah and northern Arizona are today studied in literature classes as some of the best nineteenth-century nature writing.

In addition to Gilbert and Dutton, Powell hired two artists whose work would greatly enhance the later Powell Survey publications. The first, Thomas Moran, had already achieved great fame for his Yellowstone paintings while working for the Hayden Survey. His woodcuts appeared in the 1875 edition of Powell’s *Exploration*. Later his art would help provide a visual equivalent for Dutton’s lush words in the *Tertiary History*. Moran became known as one of America’s best landscape painters. Lesser known than Moran but increasingly recognized for his genius in portraying the canyon country was William H. Holmes. Wallace Stegner claims that Holmes’ detailed illustrations of canyon country geology “represent the highest point to which topographical illustration ever reached in this country” (*Beyond* 189). In our own day Holmes’ “art without falsification” is usually the first choice of editors looking for a nineteenth-century illustration of the Colorado Plateau. Like his boss, Holmes possessed many talents and exercised them well. He began as a scientific illustrator, became a geologist, an ethnologist, and a curator of the Field and National Museums. He also headed the Bureau of Ethnology and the National Gallery.

As Thompson and Powell’s other men finished their reconnaissance of the Colorado River country in the early 1870s, the Major
felt pressure from his benefactors, Baird of the Smithsonian and Representative Garfield, to publish a report of his explorations. Further funding, they argued, would depend on it. Thus Powell put form to a five-year-old story he had been telling and had partially written. In June of 1874 he submitted his first manuscript—The Exploration of the Colorado River of the West. The government published it the following year. As The Exploration saw print and gained a large readership, Powell finished revising The Geology of the Eastern Portion of the Unita Mountains. Taking up where the second part of The Exploration left off, the Uinta Mountains report further propounded Powell’s theories about uplift and erosion.

Although this book was the last geology that Powell would publish, it meshes with his later work on reclamation and ethnology. To understand Powell’s basic philosophy in all his various scientific work, one must understand Darwin and evolution. Powell fully grasped and incorporated Darwin’s theories into his own work. When the Major looked at the geology and physiography of the canyon country, he saw the gradual evolution of a landscape, hastened by uniform processes of erosion and uplift. Similarly, when he studied Native Americans, Powell borrowed from Darwin’s evolution theory and applied it to society and culture. Thus, in the tribes he studied, Powell perceived a gradual evolution of these societies from “savagey” to “barbarism” to “civilization.” Likewise, when he studied the problems of water in the arid region, he would also use Darwin’s idea of “adaptation.” Even though it might appear to some that Powell’s mind was moving in many directions at once, the ideas that informed his work are in large part Darwin’s. And while many American scientists interpreted and followed Darwin, perhaps Powell applied the British biologist’s ideas more thoroughly than anyone else.

In the decade after his first venture west, Powell made almost thirty trips to the Rocky Mountain and Great Basin areas (Darrah, Powell 221). The West had changed greatly in that post-Civil War decade, and Powell did not like everything he saw hap-
pening there. For every example of cooperation he found with people like the Mormons, he found ten examples of greed, exploitation, and environmental ignorance. From the beginning in 1867, Powell, being a good Jeffersonian agrarian, felt that his survey should map the country so that its settlers could know what to expect in terms of water, forest, and grazing resources. Unlike the King Survey, which worked indirectly for mining industries, the Powell Survey oriented itself toward Populist, agrarian concerns. The young man who grew up farming in the Midwest envisioned a West where other Americans could do the same. But one crucial difference separated Powell’s Midwestern agrarian experience and the Western pioneer’s: aridity. Powell saw immediately in 1867 that water dictated the terms of Western settlement. Yet between 1867 and 1894 he had to fight any number of myths about Western agriculture. His first attempt to debunk those myths appeared in his Report on the Lands of the Arid Region in 1878.

In addition to challenging such myths as the rain-follows-the-plow theory (some scientists and booster types erroneously believed that tilling the soil enhanced and increased rainfall in an area), the Arid Lands Report proposed a radically different set of laws for settling the arid West. As I will discuss in a later section of this study, the Arid Lands Report monograph would form the basis of Powell’s Irrigation Survey in the late 1880s. Yet it ultimately would be ignored until the twentieth century, long after much environmental damage had occurred in the West. Nevertheless, it marked Powell’s entrance into the crusade for agricultural reform.

At this time Powell also took up the fight to consolidate the four Western surveys. Besides the King Survey, which by 1878 had already finished its work along the 40th parallel, there was Lt. George Wheeler’s “United States Geological Surveys West of the One Hundredth Meridian,” F. V. Hayden’s “United States Geological Survey of the Territories,” and, of course, the Powell Survey (see Bartlett). Often the surveys had met in the field and overlapped
each other. As one might suspect, jealousy and turf-fighting prevailed. Consolidation, thus, was inevitable. That process began when New York Senator Abram Hewitt slipped the consolidation into a Sundry Civil Expenses Bill in the last-minute rush at the end of a session. Even though recommended by the National Academy of Sciences, Powell’s *Arid Lands Report* did not make it into the consolidation bill. The Powell Survey, however, became the Smithsonian’s Bureau of Ethnology with Powell as the Bureau’s director. F. V. Hayden lost out to Clarence King for the directorship of the combined surveys, a loss which angered Hayden and his paleontologist, Edward Cope (Smith, “Clarence King . . .” 52). Although he worked behind the scenes, Powell was the man who made the consolidation happen.

Clarence King lasted all of a year and a few months as director of the newly established U.S.G.S. When he quit the Survey in March 1881 after a five-month leave of absence, then-President Garfield immediately named Powell to replace him. The self-taught farm youth who had learned about rocks and Indians from another self-taught scholar now headed two government bureaus specifically established to support two growing branches of science. In reality Powell had founded them both. As the two scientific disciplines outside of biology most affected by the Darwinian revolution, anthropology and geology had in America a very capable Darwinian overseeing them. What concerns us now is how he ran the U.S.G.S. and how he administered the public lands. Both endeavors brought him considerable praise, yet both would eventually provide enough ammunition for his enemies’ cannons to blast him out of the water.

Powell clearly possessed a genius for organization. Both his supporters and critics commented on his remarkable powers of classification and synthesis. As we saw in his studies of canyon country geology, he quickly grasped and sketched the whole picture that his colleagues Dutton and Gilbert painted in. Powell ran the Geological Survey the same way. He chose very capable assistants,
shared everything he knew with them, then let them work independently. In front of Congressional committees, he organized his facts and presented them clearly so that even the most unlearned congressman could understand them. According to Davis, when he appeared before legislators with his charts and maps, “he had so full command of all pertinent facts that his opponents in Congressional committees were often left with nothing but their opposition to stand on” (55).

Between 1881 and 1894 Powell built the Geological Survey into the pride of American science. It was the largest scientific organization of its kind in the world, and the world took notice. European universities bestowed on Powell honorary degrees and other awards. Moreover, during his tenure the Survey budget grew from a $100,000 appropriation to as much as $719,000. Most important, however, were the number and quality of the Survey’s publications during Powell’s years. One need only turn to any American geology bibliography today to find a number of works from Powell’s men written between 1881 and 1894.

When Powell became the U. S. G. S. director his primary goal was to produce a complete topographical map of the United States. Interestingly, his exploration of the last blank spot on the map of his country led him to initiate and oversee a plan to map that country. But he faced numerous obstacles. His first was to formulate a system of mapping conventions—symbols, colors for different rock ages, nomenclature, and so on. No uniform system existed in America or Europe, so in 1881 Powell pushed through a system that has become the American standard and has influenced European standards as well. Another more formidable obstacle stood in his path. He needed congressional approval to map, and Powell was equal to the challenge. In 1882 he asked a friend on the House Appropriations Committee to add this phrase to the Geological Survey Sundry Civil Bill: “to continue the preparation of a geological map of the United States.” Powell also solidified the Survey’s independence by obtaining from Interior Secretary Carl
Schurz authorization to be Special Disbursing Agent for the Survey. This gave him complete freedom in allocating where Survey funds would go.

This unprecedented power was good news and bad news. Like any successful person in the nation’s capital, he quickly attracted enemies. F. V. Hayden and Edward Cope remembered their snubbing when the Geological Survey was formed in 1879. In the mid 1880s they publicly charged that Powell’s federal science programs hindered private research. Powell put this controversy to bed just as an opportunity arose to implement many of the land reform policies he had first proposed in 1878 with the Arid Lands Report. For almost a decade Westerners had been clamoring, first separately, then collectively, for some sort of federal help with irrigation. Then in 1886 winter brought incredibly cold temperatures and blizzards. A series of summer droughts followed. The Western cattle boom went bust, and all the inadequacies of existing land laws revealed themselves. The rain-follows-the-plow theory blew away like tumbleweeds. Now Powell saw his chance.

Western congressmen, led by Nevada Senator William M. Stewart, pushed for legislation in 1888 to inaugurate an irrigation survey. Powell proved the most knowledgeable and best situated man to do the job, so the Irrigation Survey fell into his lap. Or perhaps it would be better to say that he corralled it. Either way, once Powell obtained his funding—again through the indirect method of a rider to a Sundry Appropriations Bill—he sent Clarence Dutton to New Mexico where he began a school for training hydraulic engineers; A. H. Thompson continued to oversee topographic work, but his mission now focused on locating potential dam sites in the arid lands (Darrah, Powell 301). In the fall of 1888 it appeared that John Wesley Powell stood on the threshold of revolutionizing Western American land law and agriculture.

The following summer Stewart and his Irrigation Committee toured the West talking to local governments and farmers about what the Irrigation Survey proposed to do. Powell caught up with
the group late in the summer, and it quickly became apparent to both the Nevada senator and the Survey director that they harbored different visions for the Irrigation Survey. Stewart saw the Survey locating dam sites and irrigable lands, then turning them over to private enterprise. He wanted laissez-faire capitalism to continue as it had in the West—with a little boost from the government. Powell's proposal bordered on socialism: cooperative control of irrigation by those within a particular watershed, and government supervision over land and water monopolies. The two ideologies clashed, and by the fall of 1889 these two men had become political enemies.

Even as Powell's men located dam sites in Utah, California, and Texas in the summer of 1889, other problems arose. Part of the original legislation for the Irrigation Survey allowed President Cleveland to withdraw all public lands from sale until the Survey finished its work. This mandate protected potential dam sites and prevented speculators from following Powell's men and buying up lands identified as "irrigable." So far so good, but Powell may have pushed his luck too far. He told Congress that a complete map of the arid West should precede any more public lands being sold. Powell's enemies insisted that such a policy might tie up the federal lands for years and that it gave the Survey director far too much power.

At the same time, moreover, his two old enemies Hayden and Cope rose up once again to attack the Major. They claimed that Powell had granted special favors to O. C. Marsh, Cope's rival and enemy; that Powell plagiarized state geological surveys; and that Powell misused Geological Survey funds. Powell and Marsh defended themselves fairly well, but the timing for such accusations was bad. Amid the Hayden-Cope charges and the murmuring among his congressional enemies, Powell appeared before the House Appropriations Committee in June of 1890. Stewart and others were waiting in ambush. They accused Powell of misusing Irrigation Survey funds for topographical work. They claimed that
the Major was ignoring artesian wells as a viable irrigation source. And they charged that Powell encouraged government interference in America’s free-enterprise system. Powell countered with the facts, but facts often fall short in the face of bombast and myth. The Senate reduced his $720,000 appropriation request to $162,500 (Darrah, Powell 310). With that, the Irrigation Survey died, and so did Powell’s dreams of reforming Western American agriculture through scientific planning.

Powell had argued for this: Since water scarcity would allow for only three percent of the arid West ever to be irrigated, the development of Western water resources should involve the cooperative efforts of the federal government and local capital. The government would locate the dam sites, then local cooperative associations, in what he called hydrographic basins, would band together to provide the capital, labor, and rules for establishing and distributing water. Powell modeled these ideas not only on the Mormon irrigation system in Utah but also on other irrigation experiments in California, Colorado, and New Mexico (Powell, “Institutions . . .” and “Irrigable . . .”).

Powell’s plan called for the sort of communal, idealistic effort which fueled such Utopian colonies as Brook Farm, New Harmony, and the Mormon state of Deseret. It combined Jeffersonian agrarianism, communalism, and American know-how. And in keeping with the spirit of the times, it was optimistic and progressive. But it also butted heads with the dominant ideology of the American free-enterprise system and the national myth of rugged individualism. Where Powell argued for limited and shared resources, the Stewart group believed that only government interference limited resource development.

Some have argued in retrospect that Powell’s plan was impractical because it required that settlers reach a consensus as the Mormons did (Alexander 155). Either Powell was a walking anachronism whose vision faded the way Plymouth Plantation, Brook Farm, and other utopian communities had, or he was a
prophet whose time had not yet come. Whatever one thinks about that, one cannot deny that Powell’s ideas of federal science helped begin the modern welfare state that came of age during the Depression. No doubt Powell would not have recognized the New Deal as one of his children, but he clearly fathered some of the ideas that moved the American government, especially with natural resources, toward a socialistic notion of the commons.

But in 1890 his grand plan stood defeated, and Powell decided to resign as soon as he could groom a successor. In 1894, his house in order, Powell chose Charles D. Walcott, a long-time associate from the early days of the Survey, to succeed him. Within a week of resigning, Powell checked into Johns Hopkins University Hospital where Dr. William Halstead removed several large nerves that had regenerated in Powell’s stump. The Major finally gained relief from pain that had plagued him for years (Darrah, Powell 350-51).

When he returned to Washington after the operation, he moved all his belongings to the Bureau of Ethnology in the Adams Building. There he revised The Exploration for republication by a private press. Flood and Vincent of Chautauqua Press published Canyons of the Colorado in 1895. An enlarged edition of the 1875 government publication, it clearly served as a coffee-table version of Powell’s adventure story. Powell also wrote three essays for National Geographic, but this ethnologist’s real interest lay in formulating and putting to paper a survey of “man’s knowledge and philosophy through the span of time from the primitive savage . . . to the modern age of science and technology” (Darrah, Powell 354). That effort, Truth and Error, appeared in 1898. The first of a projected-but-never-completed trilogy, this strange book attempted to be an introduction to the philosophy of science. Reviewers did not line up to praise the book, nor has anyone since. Undaunted, Powell pushed on with the second part of the trilogy, Good and Evil, published posthumously. The projected third part of the trilogy, Pleasure and Pain, never progressed further than a few es-
says.

In the years between his resignation in 1894 and his death in 1902, Powell spent increasingly less time running the Bureau of Ethnology. He had largely turned over the Bureau to W. J. McGee. Besides working on his philosophical/ethnographic writings during this time, he purchased a house in Brooklin, Maine, in 1896 and spent long summers there sailing and studying the local Penobscot Indians. In November of 1901 Powell, increasingly frail and in bad health, suffered a stroke. He recovered by the new year, but the next summer in Maine suffered another. He died there on 23 September 1902 at the age of sixty-eight.

A layman reading Powell’s account of the 1869 trip down the Colorado River might not stop to consider that more than one version of the story exists or bother to see which text he was reading. In fact, four published versions of the story appeared in Powell’s lifetime, although only two accounts circulate today. Moreover, some of the material and illustrations differ greatly from one version to the next.

The text that Powell scholars usually refer to has one of those laborious and unending titles typical of Victorian scientific publications—*The Exploration of the Colorado River of the West and Its Tributaries. Explored in 1869, 1870, 1871, and 1872 Under the Direction of the Secretary of the Smithsonian Institution*. The book is divided into two parts. Part One contains an account of three “original explorations.” We will focus on the first two of those “explorations,” both of which were written by Powell and carry the title, “The History of the Exploration of the Canyons of the Colorado.” (Section three was written by A. H. Thompson.) Section one recounts in eight chapters the 1869 trip from Green River, Wyoming, on 24 May to the mouth of the Virgin River on 1 September. Section two, chapter nine, narrates an 1870 journey through present-day Zion National Park across the Arizona Strip to the Uinkaret Plateau. This trip culminated in Powell meeting and talking to the Shivwits Indians who reportedly murdered his
three men the year before—William Dunn and O. G. and Seneca Howland. Part Two is a serious geologic treatise on the canyon country entitled, “On the Physical Features of the Valley of the Colorado.” As with section three of Part One, we will ignore Part Two.

Even though this 1875 version is the official one and predominate in Powell studies, one published account predated it. Another came out simultaneously, and a fourth appeared twenty years later. The first, “Major J. W. Powell’s Report on His Exploration of the Rio Colorado in 1869” appeared in 1870 in W. A. Bell’s second edition of New Tracks in America. The simultaneous version was a three-part series of articles for Scribner’s Magazine entitled “Canyons of the Colorado” with a fourth article, “An Overland Trip to the Grand Canyon,” tacked on. And behind those texts lie at least two journals, numerous newspaper reports, and many oral presentations by Powell in the years between 1869 and 1874 when he completed The Exploration. The fourth version was the 1895 Canyons of the Colorado, published by Chautauqua Press.

It appears that all along Powell imagined a popular account of the trip. But in order to ensure future funding, Spencer Baird and Representative Garfield urged the Major to hurry and complete his report, detailing for Congress his exploration of the canyons. So in the spring of 1874 Powell sat down, finished his manuscript—the sections on exploration and the geological treatise—and submitted it for government publication.

By this time Powell had hired a secretary, John C. Pilling, who served as an amanuensis. No doubt he composed The Exploration by dictating to Pilling. Years later after Powell’s death, Grove Karl Gilbert explained Powell’s method of composition. He said that the Major generally worked without notes and either paced as he dictated or sat swiveling in his chair, “raising his voice and gesturing with hand and body as though addressing an audience” (Open Court 289). Gilbert also contends that Powell always thought out
and organized his subject before he dictated. Thus, when he finally spoke to his amanuensis, Powell could pay close attention “to the selection of words and phrases and the framing of sentences” (Open Court 287). Unlike most writers who dictated long, effusive sentences, Gilbert maintains, Powell developed a concise, short-sentence style precisely because he thought out his subject in advance. After composition, Powell usually circulated his manuscript among colleagues to solicit criticism (Open Court 289). Gilbert’s comments on Powell’s style as terse and imagistic help explain what makes The Exploration such riveting reading. Powell’s concise, journalistic prose perfectly matched this action-filled, adventure story. Moreover, he summoned his refined visual sense many times to describe the canyon country.

In analyzing chapters one through nine of The Exploration we must acknowledge that Powell took historical liberties with some facts in order to shape his story. For example, he took numerous incidents from the 1871-72 or later expeditions, including names given, and placed them in the 1869 story. Glen Canyon, for instance, received its name after the 1871-72 expedition. It originally boasted two names—Mound Canyon, from the Dirty Devil to the San Juan; and Monument Canyon, from the San Juan to the Paria. Another transposition of events involves the first part of chapter nine. Powell recounts an 1872 exploration of Parunuweap Canyon in present-day Zion National Park as happening in 1870. Apparently he did so because this was one of the “original explorations” he refers to in his “Preface” (Exploration x) and because it fit sequentially and geographically with his Uinkaret Plateau trip to discover the fates of his three murdered crew members.

Some Colorado River historians like Stanton, Stone, and Marston criticized Powell for transposing facts. In some ways they made a good case against Powell. After all, The Exploration was conducted under the government’s auspices. Powell’s defense, if he had wanted to make it, could only be literary. Moreover, Powell stated that he would only write about “original explorations” (his reason
for not talking about the 1871-72 trip). So he faced two problems: how to include information like names given at a later date, and at the same time make his narrative hold together. Had he merely put events in sequential order, then the end product would have been much less readable and inclusive. As the next section will show, Powell opted for art over exact chronology, even though he never distorted any scientific fact.

This dilemma of science vs. art has received attention from the noted Western historian, William Goetzman, in his *The West of the Imagination*. Although he discusses the problem of the scientific artist in the West, Goetzman’s comments apply equally well to literary scientists like Powell, King, and Dutton. He says that while survey painters always tried for scientific objectivity and representation, the “artist’s feeling of awe or wonder at the moment of viewing inevitably allowed his emotions to give form and character to the pictures” (12). Likewise for writers. Not only did Powell and others bring with them the prevailing associations and impressions of Romanticism, but the landscape itself moved them to excess. Despite a desire to portray things with scientific accuracy and detachment, Powell sometimes could not help himself. As he said in the conclusion to *Canyons of the Colorado*, “the wonders of the Grand Canyon cannot be adequately represented in symbols of speech, nor by speech itself. The resources of the graphic art are taxed beyond their powers in attempting to portray its features. Language and illustration combined must fail” (394). While scientist Powell sought the facts over the myth, writer Powell of Victorian America was helping to create and perpetuate certain other myths about the American West.

In the opening chapter of *The Exploration* (which contains the subheading “Canyon Myth”) Powell recalls some of the wild and wonderful myths that “prevented the traveler from penetrating the country, so that, until the Colorado River Exploring Expedition was organized, it was unknown” (7). Myth said that the Colorado River sucked boats down into whirlpools never to be seen again,
that the river disappeared underground for long stretches, and that it possessed great waterfalls. In addition to these tall tales about the river, Powell also retells a Paiute myth on the origins of the Grand Canyon. The story’s moral says that one enters the canyon in defiance of the gods who created it. Powell proceeds to ignore the Indian myths as well as the others in order to make “some geological studies” (7).

Thus, the man who later became the “High Priest of American Science,” replaced the Indian gods with the god of Science. And this heroic pursuit of Science, this unraveling of the unknown becomes the major theme and provides the basic structure of the story. Powell employs the archetypal hero/quest motif to frame his narrative. This is not to say that Powell consciously decided to use what John Cawelti calls the simplest and oldest in appeal of all story types (40). Rather, he hardly could have told his story any other way. After all, he was exploring the last blank spot on the U.S. map. And one senses from Powell’s narrative that this spot, the Colorado River country, remained blank for so long not only because of its difficulty to penetrate, but also because it contained some of the world’s deepest scientific secrets.

Many students of myth have talked about the hero quest, but none better than Joseph Campbell in *The Hero with a Thousand Faces*. Campbell’s definition of the hero quest perfectly describes the basic structure of Powell’s story: “A hero ventures forth from the world of common day into a region of supernatural wonder: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man” (30). Powell is the scientist/hero who enters the fabled canyon country to roll back the myths, to reveal the secrets of the rocks and thus unravel the mysteries of the earth’s origins. Although he achieves a victory, it comes at a high price—three men dead who ignored the calculations of the scientist/hero. Another feature of adventure stories, John Cawelti says, is that the hero figure usually displays excep-
tional strength, though he is sometimes marked by a flaw (40). Powell, the one-armed veteran of Shiloh, falls into this second category. Numerous times throughout the narrative, while he is climbing a cliff or being thrown into a churning rapid, his maimed arm nearly hastens his death.

Powell’s “call to adventure,” as Campbell puts it, revolves around the canyon country being the last unexplored spot in the United States. Near the end of the story at Separation Rapid, when Powell faces mutiny by three crew members, he almost decides to leave the river. But then he remembers what brought him down there, saying, “. . . for years I have been contemplating this trip. To leave the exploration unfinished, to say that there is a part of the canyon which I cannot explore, having almost accomplished it, is more than I am willing to acknowledge . . .” (Exploration 99). Clearly Powell felt destined to explore the canyon country, and that conviction helped him face the greatest trial of a very difficult trip.

Most quest stories contain guide figures, and so does this one. But the guide here differs from Lord Byron’s chamois hunter or James Fenimore Cooper’s Indian scout, Chingachgook. As befits his scientific quest, Powell is guided by his scientific instruments—his barometer, his sextant, and his thermometer. Throughout the trip he determines his location by using these instruments. Their significance becomes most apparent at the expedition’s first crisis, Disaster Falls. When Powell thinks they have lost the instruments, he decides to halt the expedition to replace them. Fortunately, his men recover them downstream. Later a certain jealousy attaches to those instruments. Numerous times the men complain about Powell’s stopping to geologize or map the country, especially when supplies dwindle in the Grand Canyon. These particular feelings bubble over when the party reaches Separation Rapid and Powell brings out the sextant to determine their location. Those who follow the guidance of the scientific instruments are saved while those who do not perish.
Campbell speaks of the hero being swallowed into the “belly of the whale” where he “may be said to have died to time and returned to the World Womb, the World Navel” (92). This element figures strongly in Powell’s narrative. Each canyon the crew enters is spoken of as a further penetration into the unknown. Many of the names they give the canyons—“Lodore” (from Robert Southey’s poem), “Desolation,” “Labyrinth,” and “Marble” suggest they are traveling through a mysterious, otherworldly landscape. And with each new canyon, they penetrate closer and closer to the “belly of the whale,” or the axis mundi. That, of course, is the Grand Canyon itself, from the Little Colorado to the Grand Wash Cliffs.

In the famous 13 August passage about entering “the Great Unknown,” Powell’s language expresses at once both fear and audacity before the gods. He mentions the nearly exhausted food supplies and “the fretful river.” To emphasize the magnitude of this unknown he describes their location as being “three quarters of a mile in the depths of the earth” where “the great river shrinks into insignificance.” He calls the waves “angry” as they dash “against the walls and cliffs that rise to the world above.” He says his men are “but pygmies, running up and down the sands, or lost among the boulders” (80). The language implies that Powell, like Odysseus and Aeneas before him, has entered an underworld of sorts where he, Science, and his guiding instruments will be tested.

Telling this story after the event, Powell was also playing off the numerous reports about his death while on the river. From the beginning of the journey, charlatans and publicity-seekers like John Risdon claimed knowledge of the Powell party’s destruction. These rumors appeared in various newspapers from Utah to New York. Powell once mentions the public’s fascination with his imminent death. After he exits the Grand Canyon and meets with the Mormon bishop, Mr. Leithead, he says that “some weeks before, a messenger had been sent from Salt Lake City, with instructions for them to watch for any fragments or relics of our party that
might drift down the stream” (104). The Mormon hierarchy, and probably the rest of the nation, presumed that Powell and his crew had died somewhere in the canyons. This anecdote reinforces the theme of symbolic death-to-time that Powell may be said to have experienced.

Like most quest stories, this one involves a series of initiations in which the hero must submit to and merge with the opposite. The crisis at Disaster Falls and the near fall at Echo Park all test the hero’s mettle and teach him about the canyon’s power. But the ultimate test, as mentioned before, comes at Separation. Everything that had guided the hero up to then is on the line. In order to dissuade the mutineers, the scientist/hero reads the stars with his sextant. At Disaster Falls the Howlands had not followed Powell’s signals to pull over; now they are once again questioning the scientist’s authority. Along with William Dunn, they reject Science and walk to their deaths on the Shivwits Plateau. The other men, however, stand by the scientist/hero who leads them to safety, out of the belly of the whale.

The final section of the story, chapter nine, forms an epilogue to the Separation incident. The overland trip to the Uinkaret Plateau (east of the Shivwits) seeks to clear up the mystery of the three mutineers’ deaths, but first Powell persuades his Paiute guides to tell him a few of their stories. The one he recounts here loosely parallels Powell’s own reasons for traveling to meet the Shivwits. Their story relates how So’-Kus Wai-un-ats, or One-Two Boys, avenged his father’s death. Like One-Two Boys, Powell is seeking to learn of the death of loved ones. But in this case the roles are reversed. Powell, the father figure, seeks to unravel the mystery of his three prodigal sons’ deaths. Also in keeping with his original intention to use Science to undo the Indian myths of the canyons, Powell’s journey ends in peace rather than in the violence of the Paiute myth. One-Two Boys kills Stone Shirt, the man who killed his father and stole his mother. But Powell, the scientist, makes a pow-wow with the Shivwits, passes the peace pipe with them, and
listens as they tell how they mistook Powell's men for the murderers of a Hualapai woman from south of the river.

Powell gains the Shivwits' trust by speaking their language. He tells them, "I do not wish to trade, do not want their lands. ... I tell them I wish to learn about their canyons and mountains, and about themselves" (129). In going to meet the Shivwits, once again Powell is traveling into the unknown, this time an ethnographic one. The Shivwits Paiutes were some of the last North American Indians that whites contacted. Powell describes them as "more nearly in their primitive condition than any others on the continent. They have never received anything from the Government, and are too poor to tempt the trader, and their country is so nearly inaccessible that the white man never visits them" (126). There is a sense that the Paiutes will give the ethnographer a glimpse into how people lived at the dawn of creation.

With this trip's completion, the last blank spot on the map and the last "wild" tribe of Indians have been snatched from the misty regions of myth and placed on the shelf with the other great discoveries of Science. The hero has completed his task and come back to tell the nation of his feats. Campbell says that questing heroes "come to the knowledge of this unity in multiplicity" (40). That had been Powell's intent in stripping the blank spot of its myths and laying bare the scientific facts of the region's geology and ethnography. Powell's metaphors reinforce that idea, especially his use of the Nature-as-Book metaphor.

This metaphor had become a cliché by the time Powell had gone West to unravel the mysteries of the Grand Canyon. The metaphor's use in American scientific writing derived from the work of the esteemed Harvard scientist, Louis Agassiz. An effective figure of speech, it implied first an author, an ordering hand who wrote the book. This would appeal to a monotheistic, Christian culture. Second, this metaphor suggests a very readable order that anyone schooled in the language can decipher. Finally, it speaks of natural history as a very neat progression. That cer-
tainly would attract a classifying mind like Powell’s. It would have particularly appealed to someone viewing the neatly stacked layers of sedimentary formations that one finds in the canyon country. As Powell says shortly after entering the Grand Canyon, “All about me are interesting geological records. The book is open, and I can read as I run” (89). He uses the metaphor numerous other times, and obviously he was thinking of the canyons in those terms from at least 1869 on. A joking reference to the metaphor appears in Jack Sumner’s journal early in the trip near Kingfisher Canyon (Marston 177). Moreover, when Powell wrote the first account of his trip for W. A. Bell’s New Tracks in America, he gave the metaphor some moral weight by saying that “the canyons of this region would be a book of revelations in the rock-leaved Bible of geology” (Darrah, “Explorations” 21). This trope suggests that at one point Powell thought of his expedition in near messianic terms. If the canyon country is the Bible of geology, and many would agree, Powell would stand as the high priest of that sacred text. When he wrote The Exploration he dropped the Biblical aspect of the metaphor. Perhaps his editors thought it sacrilegious. If so, that is not the only problem with the metaphor.

To speak of nature as a book says that the natural order is fixed—sitting there like so many pages in a book, bound and set for all time. To anti-evolutionists like Agassiz this metaphor perfectly described nature. But for Darwinists like Powell it should have created problems. He saw the canyon country as the creation of powerful geological forces. These forces of erosion, wind, and uplift, moreover, were still forming the canyon, he said. If this is true—and subsequent study has done everything to confirm Powell’s initial theory—then the book that he read in 1869 would not be the same one if read later. John Muir solved this problem by abandoning the book metaphor for the palimpsest metaphor. A palimpsest is a document that has been rewritten numerous times. This metaphor better suggests an evolving, changing landscape, though for some reason Powell ignored this clearer metaphor. He
probably used the former because nineteenth-century readers found it so accessible. And this part of Powell's account was written largely for the middle-class readers of *Scribner's* as well as for congressmen.

Like the book metaphor, Powell's other dominant metaphors derive from familiar nineteenth-century stock. Wallace Stegner says that every Western report from Lewis and Clark onward used architectural terms to describe the rock outcroppings they found in the West. Powell was no exception. Stegner goes on to say that the parallel "was no mere suggestion, but a 'vivid resemblance'... revealed not occasionally but everywhere" (*Beyond 170-71*). Paul Shepard in *Man in the Landscape* goes a few steps further than Stegner and offers a provocative explanation for this phenomenon. He theorizes that "Rocks of certain angular shapes may always mean 'man-made structure' to European-Americans because of an indelible association of form with human works perceived at a crucial moment in mental development" (245). He likens this cultural phenomenon to "the biological syndrome associated with 'imprinting'" (245). If so, then Powell could hardly have helped himself in using this metaphor. At one point, however, he recognizes the metaphor's limitations. When he enters Marble Canyon and begins to describe the great limestone alcoves there, he says, a "great number of caves are hollowed out, and carvings seen, which suggest architectural forms, though on a scale so grand that architectural terms belittle them" (*Exploration 76*). Still, he seems not to know what to use instead.

Powell's other figures of speech come largely from the pool called nineteenth-century Romanticism. Numerous times he refers to clouds as children playing in the canyons. Romanticism began the cult of the child as a symbol of pure innocence. Also many of the names Powell stuck on canyon features come right out of the Romantic school of the sublime. "Music Temple," "Cliff of the Harp," "Marble Canyon," and "Hell's Half Mile" exemplify a few of the names reflecting Romanticism's penchant for emotion and the
exotic. Although the details and the methodology of *The Exploration* reflect the literary movement called Realism, the ideas, themes, and images of this book clearly harken back to Romanticism. This is not surprising since Powell's life bridged the two periods.

In that respect, little changed when *Canyons of the Colorado* appeared after Powell retired in 1894 from the U. S. G. S. The book apparently was published to meet a growing public demand for reissuance of the long-out-of-print *Exploration*. This final version of Powell's river trip and overland explorations proved to be a popular summation of his entire career as explorer, physiographer, ethnographer, and geologist.

The text for the 1869 river trip and the overland trip to the Shivwits Plateau in *Canyons of the Colorado* is virtually identical to that of *The Exploration*, that is, chapters 1-9. The only differences involve eliminating some punctuation, joining some sentences, and changing a few words. But Powell added considerable written and illustrated material to *Canyons*. And even though he included the 1876 Scribner's article, "The Ancient Province of Tusayan," it bears only a broad resemblance to the magazine article. The Chautauqua Press version supplies considerably more ethnographic information on the Hopis, reflecting nearly two decades of serious ethnographic work by Powell and his Bureau of Ethnology.

Also in this popular book, Powell dropped the geological treatise that formed *Part Two of The Exploration*. Instead he opened the book with a ninety-page overview of Colorado Basin physiography and ethnology. Written for the layman, this still constitutes one of the most comprehensive and illuminating descriptions of Colorado Plateau environmental history. Although much read today by the general reader, this overview has somehow escaped the notice of current environmental historians. Considering the attention these historians give Powell's work and ideas, one can only wonder why. *Canyons of the Colorado* also greatly expanded the number of il-
Illustrations. Powell used over 250 of them from virtually every Powell Survey, U. S. G. S., and Bureau of Ethnology publication pertaining to the Colorado Plateau. Although these illustrations surpass those of The Exploration in quality, sometimes they bear no relation to the text. No doubt this glut of illustrations proved popular with turn-of-the-century audiences, just as it does today.

Finally, Powell added a ten-page conclusion to Canyons of the Colorado, entitled, “The Grand Canyon.” Appropriately placed since the Grand Canyon is the geologic and aesthetic crescendo of the Colorado Plateau, this piece describes how emotions wash over the canyon watcher—a perfect way to end this popular edition of his work. And it is as concise a statement of Powell’s feelings for landscape as any critic will ever find.

All in all, Canyons of the Colorado is a distinctly different book from The Exploration. Although some have admonished Powell for publishing for profit, this book actually added much new material and presented in a very accessible way more than twenty years of scientific work on the Colorado Plateau. The book’s organization holds together quite well. Moreover, compared with The Exploration, Canyons of the Colorado paints a more complete picture of the Colorado Plateau and the Major’s work there. It is to another aspect of Powell’s work—land policy and reclamation—that we now turn our attention.

While Powell’s interest in agriculture stemmed from his own farming experiences, his concern for Western agriculture and irrigation began on his first visits to Colorado in 1867 and 1868. But it is difficult to say exactly when Powell first thought of writing something like Report on the Lands of the Arid Region. Powell biographer William Culp Darrah states that Powell began composing it in 1874, simultaneously with The Exploration and Geology of the Eastern Unita Mountains. After these works were published in 1875 and 1876, respectively, Powell quickly pulled together the Arid Lands Report manuscript and on 1 April 1878 submitted it to
Land Office Chief, J. A. Williamson. As we saw, he wanted it included in the legislation consolidating the four surveys.

Powell wrote most of the sections of this report, although his colleagues, Grove Karl Gilbert, Clarence E. Dutton, and A. H. Thompson, assisted with chapters of their own. Their sections, however, reflect their chief’s ideas, so one can say unequivocally that this is Powell’s book.

Taking up the question of the public lands in the arid region—those east of the Sierra Nevada ranges and west of the hundredth meridian—the Arid Lands Report offers as radical a critique of the laws, institutions, and myths about Western lands as nineteenth-century America ever saw. It questioned the Homestead Act, a well-meaning land law that proved essentially useless in the West. It questioned the capitalistic practices of land and water speculation and urged a more socialist system of apportionment. It questioned the applicability of Anglo-Saxon riparian water law in an arid region. It questioned various pseudo-scientific theories like the rain-follows-the-plow theory. It questioned the myth of the West as a garden, a myth that had been propounded by the railroads, speculators, and Western congressmen. And finally, it questioned our national myths of rugged individualism and self-reliance, as well as the belief that it is an American birthright to acquire enormous wealth. In short, Powell wanted to remake America in the West.

As one can imagine, when Powell’s report appeared as H. R. Executive Document 73, many congressmen and Western newspapers decried it as socialistic, or worse. Most probably did not even read it. As with many controversial books like *Origin of the Species* or even the recent *Satanic Verses*, most people learned about Powell’s book by hearsay. Those who suspected their pocket-books might suffer or fundamental beliefs be overturned by reason and facts just rose up, thumped their chests in self-righteous indignation, and said “no.”

If most congressmen and farmers had read this report, they
would have found this: while the Homestead Act gave 160 acres to anyone who could “prove up” on the land by building a house and living there, in practice the Act led to widespread land fraud. Only a tiny fraction of Western land actually had enough water on it to support a family farm. Many families lost their claims and returned east. Others who held onto their claims often did so by deceit, in the process sometimes acquiring numerous sections. Powell proposed that only eighty acres of irrigated land be given to any individual. But he also wanted lands suitable for irrigation to become part of an irrigation district. Such districts would be established by no fewer than nine persons who would write their own laws regarding the water. District members would also provide the labor and capital for the irrigation works. Powell believed that the “association of a number of people prevents single individuals from having undue control of natural privileges” (Arid Lands Report 29). He called this the “colony system” and based it on the thirty-year Mormon experiment in Utah. Powell believed in the little man and knew that, especially in the arid region, little men acquired strength in numbers and through cooperation.

Like Powell’s farmer, his rancher would also participate in a colony system of shared pastures. But Powell saw that those lands deemed suitable for grazing rather than farming must substantially exceed the 160-acre limit of the Homestead Act. Scant vegetation dictated that no less than 2,560 acres would support a ranching family. And even then, that family would need some irrigation water for gardens and the like. Again, in his plans for ranchers Powell would not grant tracts to individuals, but to groups of nine persons forming a grazing district. This district would share an open range of common pastures. Thus a group of nine persons would work 23,040 acres.

An essential principle underlying Powell’s irrigation and grazing districts was this: the lay of the land should dictate land use and land distribution. In the humid East an imposed rectangular grid plan had proved a fairly reasonable and equitable way of parceling
land. In the West, Powell knew that aridity dictated a different set of conditions by which land planners ought to abide. In other words, Powell was saying that a thousand years or so of European, wetlands agricultural ideas and parceling systems could not work in the arid region. He wanted the nation to change its agricultural paradigm and, accordingly, its laws and institutions. This was a tall order for a young country bent on rapid expansion.

But Powell, never timid, did not stop there with his radical recommendations. He wanted to change the centuries-old system of water appropriation. Under English Common Law, England and then America developed a system of water law where water was nearly as common as air. This “riparian rights” system gave anyone owning a bank on a stream the right to use that water, provided he returned it to the stream. For example, in Middlesex or Kentucky one might use water to run a mill, but one would never need to irrigate in those places. In the arid region, irrigation proves very necessary, but returning that water to the stream afterwards is nearly impossible. So downstream users, like Mexico today at the tail end of the Colorado Basin, often see nothing but a dry riverbed. Powell wanted to tie water rights to the land and determine just how much water each parcel would need and could obtain. That way no one would buy land without water.

Although flawed in some respects by today’s standards, the Arid Lands Report saw far ahead of its time. And as such it proved too spicy a dish for Congress, even though the National Academy of Sciences wholeheartedly supported it. Powell was poking too many sacred cows and exploding too many popular myths. He was calling for restraint and limited settlement in a country that perceived itself as superior and its continent’s resources as unlimited. He was also questioning certain aspects of our economic system. While he never actually called capitalism an evil, exploitive system, he railed against its excesses: monopolies and land and water speculation. Moreover, Powell was asking our country’s land planners to abandon their geometric thinking and conceive of land
units based on natural systems like water basins.

While Powell pointed up many of the shortcomings of American cultural paradigms, hindsight shows that his plans for a communally settled, arid land paradise contained flaws. For example, even though Powell and Gilbert noted surface water increase in Utah since settlement, they did not connect that increase to watershed degradation. In fact, altering the vegetation in the arid region led to drastic consequences for water conservation and wildlife habitat. A second flaw in this report centers on Powell’s plan to remove Indians, and hence fire, he thought, from the forests. Although a decade later Powell was beginning to understand fire’s role in forest ecology, in 1878 he merely saw fire as something that destroyed lumber resources. In addition, for someone who called himself an ethnologist, he somehow ignored the importance of forest hunting to certain tribes. But then Powell also expected Indians to join in his agrarian commonwealth; the pursuit of game, Indian fashion, did not appear in that picture. A third flaw that some critics have discussed is the practical feasibility of Powell’s colony system. As we have noted, historian Thomas Alexander has criticized Powell’s plan as anachronistic and unrealistic (155). Finally, perhaps the greatest flaw of the report, from an ecological point of view, was that the Major’s purpose was strictly utilitarian. His goal was maximum efficiency, the greatest good for the greatest number of people. While Powell certainly looked further ahead than most of his contemporaries, he did not look as far as a Henry Thoreau or a John Muir when it came to national ecologic health.

Whatever one might say about Powell’s vision or blindness in the Arid Lands Report, that document remains a singularly important contribution to American land policy. Many of its ideas ultimately found form in the various laws and government agencies established to protect grazing (the Bureau of Land Management), water (the Bureau of Reclamation), and timber (the U. S. Forest Service). It also laid the foundation for Theodore Roosevelt and Gifford
Pinchot's sweeping Progressive conservation reforms in the early 1900s. Finally, it inspired the New Deal's Soil and Water Conservation Districts. For better or worse, it has been called the first environmental impact statement. It certainly speaks to our own age, even if it could not make itself heard above the roar of its own times.

The founding of the Bureau of Ethnology in 1879 and Powell's subsequent direction of that Bureau until his death in 1902 was, as Wallace Stegner puts it, "one of the two great works of his life" (Beyond 258). Powell's genius for organization and delegation expressed itself most clearly in anthropology. When Powell began practicing anthropology it was a nascent science, full of amateurs and wild theories. When he left it, his Bureau had stamped the seal of "serious science" on the discipline. While many of Powell's own anthropological theories have been discarded, the Bureau he founded, like the U. S. G. S., became one of the foremost scientific organizations in the world. It remains so today.

As we noted, Powell's interest in Native Americans grew out of his childhood digs with George Crookham and his teenage encounters with Winnebago Indians camped on the family farm in Wisconsin. His professional work began in 1868 at Meeker Bottoms, Colorado. The discipline of anthropology that Powell began practicing that winter may have lacked a long professional tradition, but it did not lack a strong conceptual background. Powell understood his intellectual legacy: namely, the Enlightenment and the contemporaneous work of Charles Darwin, Thomas Malthus, Herbert Spencer, and Lewis Henry Morgan.

The eighteenth-century Enlightenment had introduced two very important ideas that nineteenth-century anthropologists took to heart. For one, Locke, Montesquieu, and others had preached tolerance and the importance of "comparative anthropology." This term should not be mistaken for what we today call "cultural relativism," rather, "comparative anthropology" said that each culture had to be studied in its own context. But the second idea the
Enlightenment bequeathed to anthropology—progress—put those cultural contexts into a “correct sequence” for civilized Europeans. In other words, belief in progress encouraged the notion of racial superiority, even among the greatest social thinkers of the day. As Marvin Harris says, by the 1860s “anthropology and racial determinism had become synonymous. The only issue was whether inferior races could improve” (100-01). While racism is certainly as old as humanity, Harris says, in the nineteenth century nations were for the first time rewarding their wise men for proving “that the supremacy of one people over another was the inevitable outcome of the biological laws of the universe” (81). Darwin, Malthus, Spencer, and Morgan, each in his own way, attempted to prove this racial doctrine. John Wesley Powell, a step behind these first-rate thinkers, did the same in his own anthropological studies. He was especially influenced by Morgan, one of the founding fathers of anthropology.

Morgan’s classic study, Ancient Society (1877), established a theory of cultural evolution which Powell adopted for his own work. Based on his studies of Iroquois Indians, Morgan proposed an elaborate theory of human social evolution from what he called “savagery” through “barbarism” to “civilization.” Each stage, divided into lower, middle, and upper, was marked by certain modes of food production and technological and cultural development. But in addition to noting and describing stages, Morgan’s theory preached the superiority of white Europeans and the inferiority of the so-called savage. While anthropologists today reject Morgan’s racial theories, they accept his categories with some modifications. Although Powell rejected his other contemporary, Herbert Spencer and his notion of “survival of the fittest,” he bought Morgan’s ideas hook, line, and sinker. That may have skewed his interpretations, but following Morgan certainly helped his fieldwork. In that respect Powell made some lasting contributions.

Some critics claim that Powell was not a good fieldworker. That misconception was dispelled in 1971. In that year Don and
Catherine Fowler published a compilation of Powell’s work on the Numic people in *Anthropology of the Numa: John Wesley Powell’s Manuscripts on the Numic Peoples of Western North America, 1868-1890*. This collection of myths, customs, songs, vocabularies, place names, and other data comprises a substantial contribution to our understanding of the Numic peoples—the Utes, Paiutes, Shoshones, and Bannock Indians of the Intermountain West. Powell’s collection of myths and songs adds to and authenticates much of the material gathered by later anthropologists. Moreover, his collection of material culture on the Numa (now deposited in the National Museum of Natural History) is one of the largest and most varied of its kind. But Powell’s major contribution to Indian studies came in linguistics. The Fowlers tell us that “He collected a large corpus of linguistic data from several Numic groups” (19), and out of those investigations grew a major study classifying Indian languages, his *An Introduction to the Study of Indian Languages* (1877; 2nd ed. 1880).

The larger work of the Bureau produced some landmark publications in Native American Studies. Besides Powell’s Indian Language classification, we have C. C. Royce’s monumental checklist of treaties made with Indians from 1606 to 1885. Most significantly, perhaps, Powell initiated *The Handbook of American Indians* (1907). What began as a dictionary of names grew, over many years of work by various noted anthropologists, into what is still one of the most indispensable reference works on the Native American.

When one walks into the Smithsonian’s Anthropological Archives today one sees a series of life-sized pictures of great moments and men in American anthropology. The first panel shows Major Powell standing with a Paiute chief, Tau-gu, pointing at something in the distance. Even if Franz Boas, the father of modern anthropology and cultural relativism, left Powell behind, Powell clearly led and legitimized the field in America, pointing the way for Boas and his followers. I like to think that is what this picture says.
The West that Powell had sought to settle in a rational manner based on the conditions of the environment had, in the Turnerian terms which Powell endorsed, officially closed shortly before his death. His vision, however, did not fully guide that settlement. Much suffering and failure attended whites’ settling of the West, in good part because of the myths that Powell had fought against. Nevertheless, Powell bequeathed to the nation a legacy of fearless exploration, brilliant science, and dedicated public service. And with his account of his 1869 voyage down the Colorado, we can say he left us one of the great adventure stories in American literature.
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