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GET LOST: ON THE INTERSECTION OF ENVIRONMENTAL AND INTELLECTUAL HISTORY

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Aaron Sachs, *The Humboldt Current: Nineteenth-Century Exploration and the Roots of Modern Environmentalism* (New York: Viking, 2006)
Donald Worster, *A River Running West: The Life of John Wesley Powell* (New York: Oxford University Press, 2001)

I finished *The Humboldt Current* at noon on a glorious spring day in northern California. Sachs concludes with a call to follow the work of Alexander von Humboldt: get lost in nature, allow it to overtake you even in everyday life. So I set off from my in-laws' home in the hills of the East Bay, and made my way to the local park nestled at the top of a ridge. Just as I have for the last ten years, I passed a sign that read "No Trespassing"—a message reinforced with barbed wire. Emboldened by Sachs and the spirit of Humboldt, I defied the sign, slipped the fence, and followed a footpath to the most spectacular views of the Bay I have ever experienced. Each bend rewarded me with verdant hillsides, wildflowers, and canyons. How could I have gone so many years without taking this path?

Intellectual history generally does not have this effect on people, but this is an unusual book. Sachs's first goal is straightforward: documenting the influence of Humboldt over scientists, explorers, artists, and intellectuals in the nineteenth century. Oddly, Humboldt's fame did not persist beyond the turn of the century, an interesting problem in and of itself, and one which brings Sachs to his second goal of reintroducing Humboldt's natural ethic to a world perched on the brink of environmental disaster. A milder environmentalism also animates Donald Worster's superb intellectual biography of John Wesley Powell, which takes the inverse approach: while Sachs studies Humboldt's effect upon others, Worster dissects the life and education of Powell, and places him at the center of some of the most consequential decisions ever made about the American West. Together these books represent a vigorous effort to bring exploration and ecology under

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the scrutiny of intellectual history. This is not unprecedented: the meaning of the West and nature preoccupied some of the field's founding fathers, including Perry Miller and Henry Nash Smith. But these books frame nature less as a symbol than as a concrete set of problems, and demonstrate how ideas work in arenas—such as exploration—that are generally understood to be governed primarily by politics.

Sachs's analysis is concealed in a lively narrative, which paints a panoramic yet detailed picture of the culture of exploration in mid-nineteenth-century America. He takes ideas seriously to the point of treating nineteenth-century naturalists as relevant for our own environmental condition. He is also not afraid to insert himself in the story; throughout the book he pops up trekking to Mount Rainier or Kathmandu, sometimes miserably lost and cold and other times achieving a sublime state of serenity. Conditioned as we are to read and write with analytical detachment, some might find his effusiveness distracting, but it is honest; he is eager to explain Humboldt, and interprets him with gentle enthusiasm rather than knowing hindsight. Consider his justification for the project:

> Better than any modern writer I've come across, Humboldt captures the miraculousness and bafflement that have characterized my own wildlife sightings and my immersions in unfamiliar natural worlds. He understands how experience can undermine any classic understandings of natural beauty or peacefulness, how a landscape can be "at once wild and tranquil, gloomy and attractive." (62)

Sachs was a journalist before earning his doctorate, and his knack for telling a story survived graduate school wholly intact. At times I even had the feeling he was pacing around the room before me, earnestly trying to convey the elusive but crucial paradox "that nature demanded both hubris and humility, both an unrelenting commitment to understand and an acceptance of our inability to achieve understanding" (138).

Sachs dispenses with Humboldt's own life fairly quickly, for his primary concern is the effect Humboldt had on others. Among the biographical highlights: after receiving permission from the Spanish Crown in 1799, Humboldt spent five years traveling in South America, concluding with a six-week tour of the eastern United States. One of the major contributions of this expedition was to link the Amazon and Orinoco River basins. This discovery appeared on his 1809 map of New Spain, which for many decades was the most authoritative record of the region and which inaugurated his reputation as a cartographer. This reputation matured with his creation of a cross-section map of Mt Chimborazo in Ecuador (which correlated elevation with different plant species for the first time) as well as his invention of isothermal line maps (which connected areas of similar mean annual temperature, thereby facilitating the study of comparative climatology). Humboldt also published a steady stream of work on his expedition in the New

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World, capped by his *magnum opus*, *Cosmos* (1846), which reintroduced a term that had been out of use since the thirteenth century in order to articulate a spirit of interdependence and connection within the natural world. This compendium of scientific knowledge was read not just by scholars, but by the general public as well, and Sachs claims that it made Humboldt a household name in the United States.

It is not difficult to establish Humboldt's celebrity in nineteenth-century America. This in itself is a puzzle, for his expeditions in New Spain and New Granada covered areas that the Portuguese and Spanish had trod for centuries. In North America, Humboldt never made it past the Mississippi River (or western Pennsylvania, for that matter), yet in my own central Denver neighborhood Humboldt Street runs alongside those named for other mid-century heroes: Franklin, Lafayette, Grant, Sherman, and Lincoln. Nearly every American scientist working in the first half of the nineteenth century corresponded with Humboldt, and upon his death in 1859 dozens of intellectuals and leaders converged on New York to eulogize him, returning ten years later to erect a memorial in Central Park. Among these men was Francis Lieber—the nineteenth-century political theorist and fellow Prussian—who hoped the Rockies would be renamed the "Humboldt Andes." In fact, Sachs opens his book by describing a few of his (mostly frustrated) attempts to visit the many western places named for Humboldt. In part this was simply good luck on Humboldt's part, for his celebrity peaked with the zenith of western exploration.

But celebrity is not the same as influence, and this tension resurfaces throughout *The Humboldt Current*. This distinction also points to the central problems in Sachs's approach, which simultaneously gives Humboldt too much and too little credit. This is complicated. First is the problem of explaining *how* Humboldt was able to make such a unique contribution to the relationship between man and nature. In other words, if everything begins with Humboldt, we need to know more about his own origins, education, and intellectual context. Otherwise, he appears as a genius in a vacuum. Showing how Humboldt managed to break from his era in the late eighteenth and early nineteenth centuries would have strengthened the case for his unique contribution. Without a more sustained explanation of what *made* Humboldt, the "Humboldtian" ideal remains too diffuse to support the weight Sachs wants it to bear. Ironically, this is precisely the strength of Worster's study, which demonstrates the development of Powell's own ideas over time, so that his convictions, decisions, and actions—however contradictory—make sense.

Related to this is the relative absence of Humboldt's fellow naturalists. Sachs makes Humboldt a hero for twenty-first century environmentalism because the very concept of ecology was unthinkable without his mode of exploration. His experiences in the field taught him to fear as well as love nature, which gave him

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a sense of the limits of human power. He also sought patterns and relations and studied plants in their native habitat, and in this respect laid the foundations for modern ecology's premise of interdependence. But in this second respect Sachs misses—or at least fails to explore—many of Humboldt's rivals. Arnold Guyot, appointed at the College of New Jersey (later Princeton) in 1854, had by then begun to replace static descriptions of the earth's elements with a concept of geography grounded in observed interrelationships between land, oceans, atmosphere, and human life, all of which interacted harmoniously in a grand design. In doing this Guyot pushed geography from description to interpretation. George Perkins Marsh explored this same strain in *Man and Nature*, though both he and Guyot infused their work with theology, unlike Humboldt. In fact, Guyot's popularity at mid-century was eclipsed in part by Humboldt's *Cosmos*. I also expected to find a larger role for Thomas Jefferson, Humbold't fellow naturalist and the primary force behind the northwest expedition. How did Humboldt stack up against these others? What did he learn from or teach them?

The second problem is Sachs's attempt to establish Humboldt as the paramount figure in nineteenth-century exploration and ecology. Consider the force Sachs grants to *Cosmos*, which "triggered a massive shift in cultural and intellectual currents" and spoke directly to the American interest in questions of "unity, social justice, scientific progress, and natural beauty" (89). But were those questions more acute than they had been in earlier or later years? That *Cosmos* resonated within American culture is entirely plausible, but insufficiently developed; this is understandable, for documenting the transfer of ideas is one of the most difficult tasks of intellectual history. But it is necessary, because Sachs claims that in light of Humboldt's high profile we should "think of almost all official American exploration, at the time of *Cosmos*'s publication, as essentially Humboldtian" (93). Here "Humboldtian" is not just a desire to know nature, but to subject oneself to it. Yet such a generalized definition speaks to a much older impulse. Nature can be threatening—somewhere one could get "lost"—only if there is something to get lost *from*. So the "Humboldt current" that Sachs speaks of may be less a departure from civilization than a product of it.[1] This brings us back to the initial questions: *what* was unique about Humboldt, and *how* was he able to develop ideas that set him apart from his contemporaries?

The heart of Sachs's project is a study of individual Americans who embodied this Humboldtian spirit (mostly explorers), including J. N. Reynolds, Clarence King, George W. Melville, and John Muir. These brilliant and commanding men experienced failure as well as success, and some died in desperate circumstances.

[1] Roderick Nash, *Wilderness and the American Mind* (New Haven, CT: Yale University Press, 1967). This idea has been treated in the extensive recent scholarship around American leisure and national parks.

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Each inhabited Humboldt's drive to experience nature, his willingness to be mastered by it, and his acknowledgment of its dark power as well as its sublime potential. By facing the harsh natural frontiers of the poles and the American interior, pushing themselves to the brink, each was alternately strengthened and humbled. Upon returning to "civilization," each felt increasingly marginal. This is a crucial link between these men, and Sachs uses it to remind us that recent scholars have caricatured explorers as two-dimensional agents of imperial power. Like these scholars, Sachs is sensitive to the conscious and unconscious motives these men had to explore distant reaches, especially as a way to escape demons that bedeviled them at home. For instance, many of these men were uncomfortable with their social position, sexually confused, and simply happier and more at ease when separated from nineteenth-century conventions. But Sachs is careful to insist that the initial motivations for exploration were only part of the tale, and in our scholarly rush to see them as agents of imperialism we have missed the larger story. Explorers were complex men to begin with, then dangerous and disorienting expeditions turned their lives upside down, and they returned without any coherent and confident vision of the world. Sachs is right, and his point is well taken: these men were fully human—perhaps educated with certain values and exposed to a particular ideology but fully capable of resisting those when they clashed with experience. Yet while he demonstrates that these men were complex, self-conscious, self-critical, even tormented, I am not sure these add up to a distinctly "Humboldtian" world view.

Why Sachs settles on these particular men (alongside a few others who shared their sensibility) is also not entirely clear, but the choices showcase Humboldt's connection to nineteenth-century exploration, nature writing, gothic fiction, and geographical science. Sachs connects these men in unexpected and original ways, which brings a few new players into intellectual history. J. N. Reynolds, for instance, was the nation's "foremost Humboldtian explorer" of the 1840s; what made him "Humboldtian" to Sachs was in part his failed explorations of the Antarctic. These humbling experiences complicated his view of the natural world, and turned him toward a darker style of nature writing that in turn shaped the "quest-driven" genre mastered by Edgar Allen Poe, Washington Irving, and Herman Melville. Reynolds's most famous work, *Voyage of the* Potomac,

> drifted along the border between empiricism and romanticism, fact and mystery, science and religion—not to mention the border between pride in the idea of American independence and shame over his country's actual reliance on the exploitation of blacks and Indians, between a blind belief in the superiority of white European civilization and an intense respect and sympathy for every culture and society in the world. (150)

This gets to the heart of the matter: Sachs likes Reynolds because his writing stresses a direct relationship with nature, thereby exhibiting a Humboldtian ethic.

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But some of these claims of influence are so broad as to be diffuse. Consider Clarence King, who "would follow Humboldt's lead, perhaps more devotedly than any other American, in subjecting himself to the cosmos. His goal in the wilderness was to 'expose myself, as one uncovers a sensitized photographic plate, to be influenced'" (187). Fair enough, but Sachs wants to go even further, to argue that as "a committed Humboldtian, King espoused the unity of races, [and] upheld the rights of blacks." Furthermore,

> What keeps me coming back to King's writing, though, and his life, is his commitment to challenge himself, to question the validity even of the masculine posturing that seems to have grounded his identity—and that of countless other white men in Victorian America—in the midst of his sexual confusion and isolation. (199)

This stretches the capacity of influence as an explanation, for if all contemporary exploration, not to mention an egalitarian mindset, can be attributed to Humboldt, we have asked too much of one man.

If Sachs gives Humboldt too much weight in the story of nineteenth-century exploration, he also acknowledges too little variation among Humboldt's disciples, for ideas can be interpreted in different ways. Henry Nash Smith treated this irony long ago in his discussion of William Gilpin, an ardent expansionist who—along with Senator Thomas Hart Benton, James Buchanan, James Polk, and John Fremont—amplified the rhetoric around Manifest Destiny in the 1840s (a strain in American culture perhaps as robust as the interests in "unity, social justice, scientific progress, and natural beauty" that Sachs identifies in that same decade). After serving as a volunteer in the Mexican War, Gilpin was appointed by Lincoln as the first governor of the Colorado Territory, and from there wrote prolifically about his vision for the West. To make his case Gilpin used Humboldt's ideas not as an admonition to protect and respect the earth, but as a call for Americans to conquer the West. Gilpin was particularly taken with Humboldt's isothermal zodiac, 35 degrees of latitude encompassing hospitable climates that—the latter posited—had historically conditioned the rise of civilization, from China, India, Persia, Greece, Rome, Spain, Britain, and imminently, Gilpin argued, the trans-Mississippi west. Humboldt's pursuit of physical geography led him to identify in the West a naturally self-enclosed basin of the Mississippi River. Gilpin extended this idea perhaps farther than Humboldt intended, toward a geographical determinism where American growth now depended on the nation's aggressive expansion westward, particularly through a Pacific railway. As Smith put it, while Humboldt had been formed by the optimism of the eighteenth century, the nineteenth-century "tendency to identify nature with the specific geographical setting of the North American continent gave to the term a

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much narrower reference."[2] That Gilpin could interpret Humboldt in ways that Sachs would find anathema to the Humboldtian spirit suggests real contingency in the history of ideas.

It also cautions against a single explanation for Humboldt's popularity. Smith argued that Humboldt stressed nature, rather than history, and this appealed to Americans by reaffirming their general hostility to Europe. In contrast, Michael Robinson argues that Americans connected with Humboldt not because of his connection with nature, but because he represented cultivation and historical depth, both of which were in short supply in the New World. Humboldt linked the continental West with Europe, and possessed the gravitas that Americans desperately sought in their own national history (but were just as often dismissing as a vestige of aristocracy).[3] Sachs offers yet another explanation for Humboldt's appeal, stressing the holistic approach to nature and the almost escapist lure of exploration. Contemporary writings about Humboldt also underscore his political commitments: abolitionists and religious reformers used his writings, while Simon Bolivar called him "the true discoverer of South America" for his political sympathies. Eulogies of Humboldt by Lieber, Arnold Guyot, and George Bancroft all stressed his integration of scientific values with an enduring love of liberty and progress, the embodiment of the liberal spirit.[4] Perhaps this variety is the point. Humboldt could be interpreted as a man of faith and science, a spokesman for the West and a representative of Europe, one who integrated nature and culture, history and geography, even expansionism and environmentalism. This is not necessarily a criticism of Sachs's work—after all, he is trying to identify a single strand in Humboldt—but it does undermine the notion of a single Humboldtian legacy.

This theme of contingency also underscores the unpredictable movement of ideas through culture. As Michael Robinson has shown, it was actually in the school geographies of Emma Willard and William Channing Woodbridge—rather than in scientific circles—that Humboldt's ideas about comparative geography first appeared in American culture.[5] Schoolchildren exposed to

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2 Henry Nash Smith, *Virgin Land: The American West as Symbol and Myth* (Cambridge, MA: Harvard University Press, 1950), 40–41 and *passim*.

3 Michael F. Robinson, "Why We Need a New History of Exploration," paper presented at the 2006 Meeting of the Organization of American Historians, Washington, DC. Robinson is currently working on a cultural history of exploration in the nineteenth century, and—like Sachs—considers Humboldt a foundational figure in this story.

4 Proceedings: Alexander von Humboldt Commemoration; Joseph Thompson, Francis Lieber, Guyot, Bancroft, etc. *Journal of the American Geographical and Statistical Society*, 1/8, Humboldt Commemoration (Oct. 1859), 225–46.

5 I suspect that part of Humboldt's appeal had to do with his ability to graphically represent complex information. The cross-sectional and isothermal maps mentioned above are just

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Humboldt came of age in the 1850s, and brought these ideas with them into adulthood. Furthermore, middle-class audiences were familiar with Humboldt's writings long before he was confirmed as an innovative and global thinker among intellectuals, which challenges the idea that *Cosmos* was the defining work of Humboldt's career. It also confounds the typical formulation for intellectual history—where ideas are disseminated through elites, then absorbed into the culture. Americans rarely hear of Humboldt today, yet we cannot get away from Lewis and Clark, who only became major historical figures on the centennial of the expedition.

So why did Humboldt's reputation evaporate? Sachs argues that modernization, alongside scientific specialization after the Civil War, marginalized generalists like Humboldt. This is important because Sachs wants to establish not just Humboldt's influence, but his relevance. The argument is that without an ethic of exploration we cannot truly appreciate the wildness, the irreducibility, the awesome power of nature. Thus, he writes, the twentieth-century environmental movement might have stalled precisely because Americans forgot to fear nature in the way their earlier counterparts did (indeed, nineteenth-century Americans had little choice in the matter). In other words, exploration sparked an ecological vision, leavened with respect for the power of the natural world. This is intriguing, though difficult to demonstrate. Sachs tackles it in part through a look at John Muir, who stands as the link between Humboldt and our own environmental concerns.

Muir is commonly understood to be the father of modern environmentalism for his acknowledgment of "environmental restrictions" upon civilization. Sachs tells a slightly less predictable story by focusing on Muir's work in the far North rather than the West. His encounters with natives in Alaska and Siberia led him to connect social injustice and the domination of nature—a thoroughly Humboldtian conclusion in Sachs's eyes. Even more important was the way Muir's exposure to this extreme environment cultivated his respect for ecological limitations and a corresponding sensitivity to American hubris. Yet the relationship between Humboldt's ideas and Muir's legacy is complex, and Sachs handles it with nuance. For Humboldt, exploration carried with it wanderlust, which in turn sparked his sense of cosmopolitanism, kinship, and especially a recognition of man's adapatability to his environment. (Whether these sentiments add up to anything coherent or sustainable is another matter,

two examples of the images he created that schoolbook authors reproduced widely for their visual appeal. Humboldt himself was intrigued by the graphic visualization of knowledge, which could "speak to the senses without fatiguing the mind." Daniel Headrick, *When Information Came of Age: Technologies of Knowledge in the Age of Reason and Revolution, 1700–1850* (New York: Oxford University Press, 2000), 129.

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addressed below.) But as he aged, Muir became more conservative, ultimately fighting for the preservation of places rather than maintaining a more integrated sense of wilderness and civilization, the quality Sachs so admires in Humboldt. Sachs argues that Muir is closer to our own ethic of preservation, and he would like to see us gravitate back to Humboldt's more pluralistic, democratic, vision (328).

This ecological, preservationist vision of Muir is somewhat the reverse of John Wesley Powell, his contemporary, who repeatedly explored the interior West before settling into prominent scientific and government positions in Washington, DC. For Sachs, Powell's "compellingly complex view of the cosmos" qualifies Powell as Humboldtian in spirit, but in practice he fails, for his respect for ecological fragility was often at odds with his pragmatic approach to resources, not to mention his increasing optimism about altering the natural landscape (Sachs, 190). Sachs's view is shared by Worster, whose biography of Powell was praised by western and environmental historians. It ought to have been strongly received among intellectual historians as well, for Worster places Powell in a rich context of ideas that establish him as a man of science as well as exploration. Worster also revels in Powell's self-contradictions, inconsistencies, and limits, revising the somewhat reverential treatments of his role in western history. While Sachs's work is primarily a survey of Humboldt's role in American environmental thought, Worster's is a formal intellectual biography. He begins with Powell's family, English immigrants to the United States who moved through western New York, Ohio, Wisconsin, and Illinois in the 1840s and 1850s, and ends with his death in 1902.

An early sign of Worster's respect for ideas appears in his lengthy and serious treatment of Powell's religious upbringing (he was named for the father of Methodism), which highlights the fundamental shift necessitated by his secularization. Given the timing of Powell's incomplete education, and his obsession with the natural world, it is likely that he encountered Humboldt's writings. In light of Worster's respect for ideas, the absence of Humboldt in Powell's life is curious, and even more striking given the parallels between them. Both were born into religious families but secularized by their study of the natural world. By age twenty-six (1860), Powell identified himself as a "naturalist," which for him had distinctly unreligious connotations. For this reason Worster gives careful attention to Powell's education—both formal and experiential—and the scientific and intellectual currents swirling around him. On his expeditions down the Colorado River, Powell reflected on geology, time, interdependence, and what would later be termed ecology. According to Worster, Powell was ultimately arguing for a widened conception of nature and of the West, "an integrative vision" (334) that led him through hydrology, geology, geography, anthropology, surveying, and mapping. This is just the kind of explorer's education that Sachs identifies as a key to Humboldt's legacy.

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The timing of Powell's life meant that he witnessed—even directed—the shift from exploration to surveying to development. After working as an explorer and surveyor, Powell established himself among the bureaucratic, intellectual, and scientific elites of Washington, DC. There he moved in precisely those circles that occupy the heart of Sachs's history. Powell founded the Cosmos Club in 1878 (perhaps named for Humboldt's work), which hosted many of the newly founded scientific organizations that eventually coalesced into the Washington Academy of Sciences. In this respect the club catalyzed the transition to professionalized, university-based science. It also encouraged tremendous cross-pollination between emerging fields, and the unique mixture of intellectuals, scientists, and bureaucrats it attracted gave Powell the chance to shape trends in thought as well as policy. He was informally mentored by Lewis Henry Morgan, the amateur ethnographer who pioneered comparative studies of kinship structures and social organization. In turn, Powell nurtured the career of Lester Frank Ward, a geologist and paleontologist in the United States Geological Survey (USGS) who argued against the deterministic scheme of evolution popularized by Herbert Spencer. Powell helped launch the birth of ethnography as well as anthropology, and later watched it shift from Morgan's interest in discovering laws toward Franz Boas's commitment to understanding the uniqueness of cultures. Through these relationships Worster definitively and exhaustively places Powell at the center of late nineteenth-century intellectual life, which is an important corrective, for most histories of the period characterize his work in Washington as primarily bureaucratic. Powell knew almost everyone, and was involved in crucial decisions about the future of science in the federal government and emergent universities.

What interests Worster most is Powell's vision for the West, so alien to those of his time and so obviously appropriate to us today. Unlike Gilpin, he was never inclined to soaring, nationalistic meditations on the unlimited and untapped potential of the American West. Instead, his vision grew from the sober conclusions he reached in his work for the federal government. What concerned him most was the rapid disposal of marginally arable land. The Homestead Act, as well as its successors, contained two crucial flaws. First, the General Land Office failed in practice to put a substantial amount of land into the hands of small farmers, and instead placed the West on a reckless path of land speculation and moneyed interests bent on profiteering. Just as problematic to Powell was the logic behind homesteading. His *Report on the Lands of the Arid Regions* (1878) argued that limited rainfall in the plains and interior West demanded a fundamental break with Jefferson's agrarian vision. The township and range system, so nicely matched to the Ohio Valley's relatively level and well-watered landscape, was at odds with the wild range of terrain west of the hundredth meridian. On the plains and the Colorado Plateau the environment was better suited to grazing, which

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in turn demanded homesteads far larger than anticipated. For Powell, the effect of these well-meaning federal land policies threatened both democracy and the environment itself.

From his positions within the Interior Department and the USGS, Powell prioritized what we would call sustainability: the creation of small homestead or rangeland communities that grew only as large as the immediate water supply would allow, with extensive intervention to capture and irrigate the land in each discrete watershed. But Powell's "hydraulic civilization" was no match for western senators, whose optimistic vision of the West as a garden, combined with economic interests, led them to believe that technology could overcome aridity. Powell eventually shared their enthusiasm for dams—indeed he seems to have been vilified by preservationists as well as proponents of development—but never abandoned his more limited ideals of western settlement, which essentially asked that humans adjust to the environment rather than vice versa. A recognition of the awesome power of nature, and the limits of the western landscape, infused his agenda. His proposals were met with silence, and his own relative inability to stand up to structures of power made it unlikely that politicians would radically change their approach to the West. It could not have helped his case that the group he held up as a model of irrigation and pasturage districts were among the least respected in American life—the Mormons of Utah. He spent much of his tenure in Washington arguing—with little success—for the government's increased role in surveying western lands and modifying western settlement. Powell lacked the political skills to bring his vision to fruition, though one wonders if such a feat were even possible. As Henry Nash Smith argued, the abiding faith in Manifest Destiny and progress at century's end might have made any alternative vision of western development simply unthinkable. Perhaps this explains both Powell's failure and Humboldt's simultaneous decline.

Yet Worster is keen to recognize that Powell's own vision contained inextricable contraditions:

> While he echoed the idea of conquest, he tried to preach adaptation to place. He called for the liberation of humanity from the constraints imposed by nature but then turned around to advocate a sense of natural limits, a skepticism toward industrial progress, and a populist program of agrarian democracy. It was confusing and ambiguous. For all his brilliance, his message contained fatal flaws. (507)

Here Worster touches on a deeper irony that goes beyond Powell alone. The very drive to know nature led to scientific advancements that would, in turn, give men the confidence both to disassociate themselves from nature and to believe they could harness its potential. Such a recognition reminds us that progress and hubris are inextricably linked. Similarly, there is a fine line between Powell's democratic approach to land use—which ought to appeal to Sachs—and the

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policies that grow out of such an approach, which necessitate a *use* of western resources. Perhaps Muir's elitism was less avoidable than we like to think, and perhaps Humboldt's ethic contains some internal contradictions of its own.

Sachs and Worster—and most western historians—consider Powell's *Report* politically brave, if unsuccessful. For Sachs, it even qualifies as "radically Humboldtian" for its willingness to adapt human settlement to the natural environment rather than vice versa. His report dismissed the myth that rain follows the plow, and demanded that the government adjust land policy according to these limitations. Powell could not have imagined our current state: not only does rain *not* follow the plow, but as the Intergovernmental Panel on Climate Change report of April argues, the arid regions are now destined to become even drier.[6] Yet for Sachs Powell fails as a full-fledged Humboldtian because of his increasing willingness to alter ecosystems through irrigation projects. By contrast, someone like Clarence King retained "a deep Humboldtian conviction" about the laws of the natural world, and the necessity of human submission to the same. Powell's "partial" Humboldtianism points out the main problem of Sachs's organizing framework. If Humboldt's legacy can be found in such a range of men, who argued for such diverse outcomes, the concept might need to be tightened.

Despite this, Sachs's book is tremendously satisfying for its ambitious scope, prodigious scholarship, good humor, and sheer humanity. Though he admits the provisional nature of his conclusions, the book will shape the way americanists think about exploration and the environment. His ambitious approach allows him to investigate the legacy of ideas, while Worster's meticulously researched and wide-ranging biography ends with Powell's death, leaving us to wonder how the West might look different if Powell's more restrained approach to the West had won out over his rivals'. Worster gestures in this direction, but more could be said about the implications of Powell's ideas, however contradictory. Yet Worster's is a model of intellectual biography: it carefully traces the "making" of Powell's mind, and also fully recognizes the contradictions within that mind. Sachs and Worster are superb storytellers who return drama to the history of exploration without losing their analytical edge. And both tell a story of thwarted ideas and alternate routes, which ultimately suggests the contingency of ideas. For all these reasons they are welcome additions to intellectual history.

[6] The text of the report, entitled *Climate Change 2007: Impacts, Adaptation, and Vulnerability*, can be found in brief form at http://www.ipcc.ch/SPM6avr07.pdf.

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