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COVER: Ten years before Lewis and Clark set off on their famed expedition to the Pacific, Alexander Mackenzie, a Scottish explorer and fur trader for the North West Company, had completed, with his voyageurs, a similar journey farther north. This documentary painting by contemporary artist Howard Sivertson depicts voyageurs making camp at a pleasant spot after a day on the move. (Courtesy of Howard Sivertson, Grand Marais, Minnesota)
HOSE OF US involved in the quarterly production of COLUMBIA Magazine like to think every issue is special, but this one truly is. We're honored to be able to feature the writing of the distinguished Barry Gough, author of "Rivers of the West: Alexander Mackenzie's Arctic Adventure," beginning on page 24. We are pleased to visually complement Barry's fine writing through the artistry of Howard Sivertson who is well-known in canoe and kayaking circles for his documentary pictorialization of a very colorful period of continental history.

In this era that will see so much attention paid to Lewis and Clark (and we hope to do our share here in COLUMBIA!), it is important to fully appreciate the historical context within which the famed American explorers worked. Professor Gough begins that process in the pages of COLUMBIA now, but will continue it later this spring when he appears as the Curtiss Hill lecturer at the Washington State Historical Society's annual meeting on May 15th. The connection between Mackenzie, Thomas Jefferson, and Lewis and Clark will be fully expanded and amplified upon at that event.

Which provides an appropriate segue to the introduction of Sharon Ghamari-Tabrizi's commentary on the history of Hanford, rendered by her at last year's annual meeting as the Curtiss Hill lecturer. Sharon is a young scholar of great promise who has written extensively on the history of science during the Cold War era.

I cannot conclude this introduction to COLUMBIA without also expressing our enthusiasm for having in our pages once again the dean of architectural historians in Washington, Norman Johnston. Norman's path and mine cross from time to time down in Olympia as he is a member of the design advisory committee that counsels the managers of the Capitol Campus. I can testify to the fact that Norman's scholarship is the most practical example of history informing current design policy that I know of.

Enjoy the work of these and all of the authors we are honored to present.

—David L. Nicandri, Executive Editor
New Light On the History of Hanford

By Sharon Ghamari-Tabrizi

EDITOR'S NOTE
This essay is based on an address delivered at the May 1998 annual meeting of the Washington State Historical Society as the second annual Curtiss Hill Lecture.

The following is a discussion of what I consider to be indispensable topics for an ideal public history of Hanford from the point of view of the history of Cold War science. I'd like to begin by addressing the problem of how outspoken public comment about events in recent history has become politically charged in the current climate.

One of the strangest phenomena since the end of the Cold War has been the double movement of opening archives and closing down public debate. On the one hand, we have seen the opening of the archives in Russia, the former Soviet republics and Warsaw Pact nations. Thousands of Atomic Energy Commission (AEC), Central Intelligence Agency, National Security Agency and other formerly top-secret documents have also been declassified and publicly released. At the same time as the scholarly world has been in a great ferment, with the current generation of graduate students combing through these newly available materials, we have seen a severe constriction in the public discussion of the events, personalities and contested meanings of the 50-year-long Cold War. In recent years we have experienced frequent lapses of civility in our public discourse. This has seriously degraded public debates about the Cold War and the enormous influence that scientific and technological developments have had on American society in the 20th century.

The series of disturbing events surrounding the cancellation of the Enola Gay exhibit at the National Air and Space Museum several years ago offers a case in point. Charges of "politically correct," "revisionist" curating dominated the angry and noisy dispute which resulted in the evisceration of the exhibit script, threatened retributions against the Smithsonian in the form of reduced funding, Congressional hearings, the forced resignation of museum director Martin Harwit, and the historical absurdity of displaying the restored front fuselage of the B-29 that dropped the atom bomb on Hiroshima with no accompanying photograph of ground zero.

There were other, less visible consequences of the Enola Gay debacle. Michael Heyman, the general secretary of the Smithsonian, issued what can only be called a "gag order," compelling curators not to speak to the press about the exhibit. Even more damagingly to the Smithsonian, Heyman authorized a new curatorial approach to future exhibits. For the indefinite future the National Air and Space Museum would exclusively focus on the material culture in its collection. Henceforth it would avoid so-called "interpretative" issues in its exhibit scripts under the mistaken historiographic principle that the facts could speak for themselves. Moreover, an exhibit on the Cold War that had been in preparation for a number of years lost its funding, and proposed exhibits on the Korean War and the Vietnam War were also canceled due to fear of provoking further public and congressional strife.

The public history of science has provoked the same charges of "political correctness" and the same attempts to silence critical discussion of America's scientific and technological legacy. There was another exhibit at the Smithsonian, following on the heels of the Enola Gay affair, that received far less press coverage but was almost as threatening to the autonomy of the National Museum of American History's curators. In the mid 1980s the American Chemical Society (ACS) decided to create a Chemistry Exhibit Center for its headquarters in Washington, D.C., in order to stimulate wider appreciation for the public benefits of chemistry. It was noted that a proposed exhibit, "Science in American Life," was currently being contemplated for the National Museum of American History. Recognizing the public relations value of attaching the prestige of the Smithsonian to the project, the ACS Board of Directors recommended that the chemical society underwrite the science exhibit. They committed $5.3 million of their exhibit fund to the museum, with the understanding that it would prominently feature chemistry in its displays and themes. However, the contract originally drawn up between the ACS and the Smithsonian specified that the final decisions regarding the overall content of the exhibit would remain subject to the curators' authority.

Given the ACS's later campaign to revise the exhibit in the spring and summer of 1995, it is important to note that in an interview timed with its opening in 1994, ACS president Ned Heindel endorsed the controversial features of the exhibit. He said, "The exhibit is consciously political, public and scientific.
It was also clear from the opinions of the exhibit's advisory board and the Smithsonian's own views that we weren't about to create a 'pep rally' for chemistry, but a picture of the effects of science in general in American society.

However, within a year of its opening, the ACS and the American Physical Society (APS) requested substantial modifications to the exhibit. Robert Park, public affairs director of the APS and professor of physics at the University of Maryland, attacked the exhibit for presenting "a century of correct, post-modern social constructivism." He took great exception to the tempering of the more flattering cavalcade of discovery, invention, and the salutary relief of human suffering with a social history perspective on the inequities, injustices and harms also resulting from high-tech science in the 20th century. The president of the APS sent a critical letter to the general secretary of the Smithsonian. He wrote, "We are concerned that the presentation is seriously misleading and will inhibit the American public's ability to make informed decisions on the future uses of science and technology." However, when many physicists prominent in their professional society actually visited the show, unlike the chemists, they didn't find much wrong with it.

So what did the historians of science have to say about the exhibit? As a counterbalance to the objections of the professional scientists, the executive secretary of the History of Science Society, University of Washington professor Keith Benson, wrote a letter to the Smithsonian's general secretary in support of the social historical approach to science in American life. He wrote, "Scientific practitioners operate within the cultural milieu of their times... the Smithsonian fulfills its mission to educate American citizens by critically examining science and technology issues which we as citizens enjoy, oversee and fund."

I would add that deliberate attention paid to the unintended consequences of scientific practices is wholly consistent with the exhibit's theme of presenting science in its historical context. Clearly, the dismaying public relations messages of the social history approach to scientific research were at the heart of the chemists' objections to the exhibit.

When all of us were growing up we learned that scientists were intrepid explorers who discovered pre-existing phenomena that had been concealed in the obscurity of nature's mysteries. Newly discovered facts, so the popular account went, passively awaited discernment by the clever experimentalist. It made for exciting narratives of discovery, exploration and triumphant recognition—and it makes for entertaining television even today. However, academic research in the philosophy, sociology and history of science and technology disputes the fundamental thesis of this account. In particular, since the 1930s at least, scholars have proposed that the very data that record the movements of natural phenomena do not necessitate a single indisputable explanation. Rather, observations, research agendas, the design of experimental apparatus and measuring instrumentation all implicitly shape what appear to be raw, unprocessed data. Thus the first premise of much history of science concerns the inescapably interpretive acts that resolve the uncertainty presented by natural phenomena into coherent accounts.

Formerly, the history of science approached the narrative of scientific discovery as a kind of intellectual history. This is now called "internalist history"—that is to say, the account of advances in knowledge would be explained entirely within the leading terms of a discipline. Larger political, religious and cultural currents would be relegated to the unimportant historical background of scientific discovery. They were meaningful only when reasons were needed to explain the apparently scientific character of what would later come to be understood as pseudo-science or errors. While this mode of historiography is still practiced in some quarters, in the past 20 years or more what had once been a fairly rigid demarcation between the internal, technical details of a scientific problem and the external, social world has been largely dissolved. Science is now understood by many historians to be a thoroughly social, ideologically-invested, inescapably political enterprise. Thus I would like to present some of the elements of what I think is an adequate, publicly responsible account of the history of Hanford from the point of view of these recent studies.

Let's begin with a sample of what I consider to be an equally revisionist but this time "patriotically correct" version of the Hanford story. In March 1997 I was a member of a curation strategy workshop convened in order to decide on the best way of persuading the Department of Energy (DOE) to allocate money for curating the material culture at Hanford during its process of decommissioning the buildings at the site. In a bid to appeal to the DOE's public relations interests, the first draft of the curation strategy document that was circulated to panel members for comment presented Hanford history in the following unqualified terms:

The panel believes that the DOE is uniquely positioned to capitalize on Hanford... to instill in our future generations an appreciation for the stunning scientific and technological achievements that are possible when the nation's intellectual resources and its industrial infrastructure are harnessed together to meet important objectives.

Since the draft had not mentioned environmental contamination that resulted from Hanford's productive activities, I could not consent to the document in its draft form. In my opinion, a one-dimensional account of Hanford as a "stunning technological achievement" comes perilously close to propaganda. However, I am pleased to say that the final form of the curation strategy document, which was issued in December 1997, omitted the triumphant rhetoric of Hanford's achievements and substituted this far more acceptable and publicly responsible sentence: "The Site offers extraordinary potential for insight into how the nation and the industry dealt with conflicting pressures of plutonium production, worker safety, and environmental protection during World War II and the Cold War."

A closer look at current approaches to the history of science can guide us in telling a socially and politically informed story. In my ideal public history of Hanford, I can think of a number of equally important topics that should be addressed. For example, we should scrutinize the trade-offs between the political imperatives to acquire and stockpile atomic weapons against the hosts.
of unknowns in the new field of plutonium production, keeping in mind the steep learning curve of the 1940s and 1950s associated with handling radioactive materials on an industrial scale. We should examine the development of worker health and safety procedures as production runs increased over time, not neglecting to include the social history of labor at Hanford—focusing, for example, on how these procedures were implemented or disregarded in the day-to-day habits of the workers at the site. We would want to look at the emergence of the new professions of nuclear engineering and health physics, enumerating the leading questions of the disciplines, the sequence of technical problems they encountered, mastered or ignored over time.

We want especially to elucidate the histories of risk assessment, risk management, and risk communication at Hanford, including public relations efforts over the years concerning the harmless nature of stack wastes and effluent in the normal course of plutonium production, as well as communications concerning occasional accidental releases of contaminants. We want to look at risk communication to Hanford workers at the site, as well as to the citizens in the Tri-Cities area. Finally, we cannot overlook the management of internal criticism by contractor scientists, including the suppression of Hanford whistleblowers over the years. All of these topics must be included in the public account. They are relevant to the expanded notion of the history of Cold War science.

Let’s start with the origins of Hanford. The organizational culture of Hanford arose from the odd mingling of academic, military and industrial communities during World War II. The mixture of these three radically different professional worlds was troubled by social awkwardness, personality conflicts, contradictory management styles and workplace conventions. One of the points that would be interesting to trace in my ideal Hanford history would be the collisions and compromises resulting from the intensely urgent collaboration of General Leslie Groves and the Army Corps of Engineers, the academic physicists, and the Du Pont chemical engineers and business administrators.

Many different kinds of stories can be told from this moment of origination. One need only consult S. L. Sanger’s rich oral history of the construction and operations of Hanford during World War II in order to find dramatic instances of the friction between these various social actors. Most famously, the Du Pont engineers and the Chicago scientists struggled for dominance in deciding key components of the reactor design and operations. For example, the ultimate decision for a water-cooling design lay with the Du Pont engineers, which Eugene Wigner and some other University of Chicago scientists deeply resented.

As in large-scale industrial construction everywhere, problems that had not been addressed during the design phase arose during fabrication of the original B-Reactor. During the first start-up of the reactor, an unanticipated by-product of the chain reaction—xenon-135—essentially shut down the reactor. However, the engineers’ design convention of building in margins of safety allowed the problem to be corrected by increasing the scale of the reaction. The organizational norms of Du Pont engineering design, which had prevailed over the academic physicists’ design, enabled the eventual reactor start-up. In this case showing the conflict between the University of Chicago’s metallurgical laboratory and Du Pont, it is illuminating to track the difficult transposition of an essentially experimental reactor into a university laboratory into an industrial-scale factory.

Another example of the institutional conflicts that had a lasting impact on Hanford was the origin of the government-owned/contractor-operated management structure of the laboratory. The wartime Office of Scientific Research and Development did not have the administrative expertise or the resources to transform Enrico Fermi’s experimental reactor into a factory-sized production reactor. It was particularly important to be able to attract and retain a stable population of technical personnel to operate the plutonium factory over the long term. Hence, Hanford was contracted out to a private-sector company that could offer higher pay scales to engineers and corporate executives than the civil service could supply. More importantly, the construction encampment that built the reactor gave way to one of the most curious developments in American urban history—the construction of Richland, a secret "atomic city" like Los Alamos, owned and administered for more than a decade not by county or local government but by the Atomic Energy Commission.

Flyer for the “atomic city” of Richland, owned and administered by the Atomic Energy Commission.

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ne element in the history of Hanford waste concerns the extreme reliability of the water-cooled graphite reactor technology of the facility. In the opinion of historians John Findlay and Bruce Hevly, Hanford’s graphite and water-moderated, water-cooled reactors “were recognized by the end of World War II as dead ends in terms of the development of nuclear reactor technology.” Within the constraints of the “dead-end” graphite reactor technology, through tinkering and progressive adjustments, Hanford engineers were able to increase substantially the amount of irradiated product in each batch. Thus, the very reliability of the “low-tech” graphite reactors enabled the AEC and the General Electric engineers “to accept greater risks in terms of siting the piles or operating them above their rated powers in order to speed production.”

Now we go from a stable production technology to the production of toxic and radioactive waste. The specific circumstances underlying the creation of these wastes at Hanford must be included in the public history of the reactor. This can be done by reviewing the events that impelled the breakneck production schedule for plutonium and the decisions regarding the risks implicit in speeding up and increasing the volume of irradiated product.

Some might find it surprising that Du Pont as a chemical company had a long tradition of concern for worker safety in handling toxics. From the beginning of operations at the Hanford Works, Du Pont engineers were consistently concerned with environmental safety and monitoring. Studies were conducted of radiation tolerance levels in drinking water, bathing in the river, and uptake by fish. Other studies examined the environmental and worker safety impacts of the varying reactor design problems such as shielding, water flow control, loading and unloading the piles, and cladding the uranium fuel. Similarly, Hanford workers were subject to what would have been for the period extremely rigorous radiological monitoring and workplace hazards procedures. At the same time, because of the specific character of the risk assessment ideas current at the time, the low-level release of radioactive effluent in the form of spills and incremental waste generated by the normal production process was considered to be well within the accepted tolerances for environmental exposure and was not regarded as hazardous to the surrounding area.

There were three successive phases of expansion at Hanford that were the result of such Cold War events as the eruption of the Korean War, the decision to develop the hydrogen bomb, and the desire on the part of the American military to increase and upgrade the nuclear weapons stockpile. The greater production runs resulted in a concomitant increase in the radioactive contamination of the air, the soil, and the waters of the Columbia River. Given the fact that the waste generated at the site was the consequence of decisions to shorten the cooling time of the irradiated slugs as well as to increase the amount of product in each batch, let us have a look at the risk assessment practiced by Hanford managers.

B-Reactor (right of center), the first full-scale nuclear reactor, went online at the Hanford site in 1944, the product of a collaborative effort among the academic, military and industrial communities.

Hanford was the biggest employer in southeastern Washington. In this regard, we can call upon “actor-network theory” in the social studies of science, which traces the organizational and monetary alliances between scientists, technologists, and their political advocates. Accordingly, we can align the Tri-Cities boosters—who fought to keep the reactors open and functioning in the 1960s as long as possible as a source of stable, high-paying jobs—with the expert scientific apologists for Hanford’s environmentally safe operations in the same period.

Another long-standing feature of the origin of Hanford during the war was the prevailing military organization of the compound. The Hanford works was fenced in with armed guards stopping traffic and checking identification at the few entrances. There were rigid security restrictions, importantly involving the compartmentalization of knowledge and communication among the various sectors of the production complex. While the security apparatus of the Hanford Works makes sense as a national secret during World War II, the Korean War and perhaps the 1950s, the habits of secrecy made it institutionally difficult for Hanford managers to respond to citizens’ demands for environmental accountability during the period of détente in the 1970s. Because the history of Hanford must include the production of waste, the original military organization of Hanford should be addressed as a social fact that impeded open discussion of the hazards associated with normal plant operations.

While most of Washington’s citizens regard the production of radioactive and toxic waste as the legacy of contractor negligence, it is important to situate the production of these wastes within the historical context of the new post-war discipline of risk assessment in the emerging nuclear industry. This is surely the most contested topic in Hanford history.
The historical evaluation of the risk assessment undertaken by Hanford managers and health physicists illustrates another conflict among the significant actors at the Hanford site. General Electric (Hanford’s post-war contractor), the AEC, and health and safety officials pursued conflicting objectives, the consequences of which were production decisions that increased the possibility of a major catastrophe. In their book, Supplying the Nuclear Arsenal, Rodney Carlisle and Joan Zenzen document GE’s difficulties in satisfying the AEC’s production schedule with safety requirements. They note that in the early years of Hanford, “…there was no generally accepted means of estimating probabilities of reactor failure.” The AEC’s independent advisory committee responsible for reactor safety consistently criticized the commission’s production division for pushing an ever-greater production schedule without sufficient regard for the increased risk of a major accident. Carlisle and Zenzen wrote, “As a contractor, GE found itself in a difficult position. At times, company managers sought to limit production in order to meet a safety objective, only to receive reprimands from the Production Division.”

GE and the AEC advisory group regarded the risk of a major accident differently; consequently, they could not agree on how to evaluate reactor safety. The Reactor Safeguard Committee concerned itself with the overall increased magnitude of risk as a general threat to human and environmental health in relation to increased production. GE opposed this risk philosophy with the argument that, insofar as the operating procedures were adjusted to allow for greater yields, neither the probability nor the magnitude of a disaster would increase.

The reactor safeguard committees that established oversight of GE’s production division biased their risk assessment in favor of increased plutonium production over public safety in the following way. They conceptualized safety as designing the system to mitigate the hazards of a major accident or catastrophe. What is important about this concept is that it did not focus on the cumulative risks that would be incurred via contamination resulting from normal production releases. Moreover, since they had focused on the big risks, the major accidents, they did not consider smaller problems that could compound into a major catastrophe.

Carlisle and Zenzen tell the story of an incident that took place during the startup of a jumbo reactor. A leak in a process water tube seems to have occurred at the same time that one of the uranium slugs ruptured. There was at the same time another technical foul-up: the pressure gauge for measuring the water flow through the process tubes in the pile had been improperly calibrated. Neither of these problems had been detected during the setup procedures. What is important about this incident is that the shutdown stemmed from two unlikely events that compounded one another rather than from a catastrophe based on a structural flaw in the reactor design. After this incident Hanford managers began to address the fact that their risk assessment philosophy had a terrible blind spot regarding these compounding events.

If it was the case that the contractors employed the best industry standards for environmental safeguards and worker health and safety, then how can we understand the legacy of Hanford’s radiological, toxic and thermal pollution? Hanford managers and the AEC practiced a historically contingent risk assessment—balancing the pressures for increased production with shortened cooling times and greater wattage against what they regarded as unlikely hazards of a major catastrophic accident. Moreover, they performed these calculations in the steep learning curve of the 1940s and 1950s. They were dealing with new substances and on an industrial scale with which no contractor had any prior experience.

Du Pont, as a chemical engineering corporation, had long experience in handling toxic materials and could transpose many of its design, operating and safety conventions into the new field. We should recall, however, that a political decision was made to scale up into industrial capacity what had been a university-based experimental reactor. These were brand-new industrial materials. Thus, we should examine the intersection of politics, rudimentary environmental and biomedical science, and emergent industrial practices. Successive political decisions were made by presidents Truman and Eisenhower, spurred on by Congress and the armed forces, to develop a weapons technology with materials about which there were a great many unknown factors. Political decisions were
made to tolerate the many undecidables of radiation technology. Political and industrial decisions were made to allow risk assessments to go forward in the context of ongoing professional controversy about the proper balance between increased production and the proper standards for worker and environmental safety. Industrial and scientific decisions were made to allow the problems to remain unresolved, unattended and neglected for decades in the hope that the original estimates of the effects of contamination on the surrounding area and the local population would remain secure and defensible. Inevitably, there would be errors in reasoning and calculations, mistaken assumptions, blind spots and hosts of unknowns.

As a final example of what should be included in a public history of Hanford, consider the leakage of toxic sludges and salts from single-shelled tanks into the so-called "vadose zone" or soil directly above the water table in the Hanford Reach. Here is another case involving the combination of science, politics, and the local organizational culture of Hanford—all of which should be considered well within the domain of contemporary practices in the history of science. There are a number of interacting elements that make the waste tank leakage story a complex and troubling case for historical reconstruction. The vadose zone problem demonstrates the paradox of the kind of idealized extrapolations made in the laboratory that do not correspond to the specific constitution of the waste tank region's soil. Pacific Northwest National Laboratory (Hanford) director Bill Madia recently explained,

You can go into a laboratory in a rather stable environment and look at some of the major constituents... and draw conclusions... that you wouldn't see much [waste] migration. But... when you go into the real world and look into the geology below the tanks, laboratories or test tube studies really aren't extrapolatable to what's happening in the real world. And so, generic scientific information would lead you to believe that the material shouldn't go very far, but in actuality when you get into the ground where you've got preferred pathways and unusual things happening, you really have open questions...

In addition to the scientific problem of why the migration of tank wastes is occurring so much more rapidly than expected, we cannot externalize the emergence and reception of this issue. A case in point is that of Casey Ruud, a quality assurance inspector for nuclear facilities at Hanford who was fired in 1986 after testifying to a congressional committee about production problems in the Plutonium Finishing Plant and the PUREX facility at Hanford.* Last year the Department of Energy undertook a review of the Hanford facility's management. It concluded that management at Hanford was either dismissive or menacing in response to the concerns of the contractor scientists. Tom Carpenter, the director of the Government Accountability Project in Seattle, has remarked that if a scientist's "concern doesn't go along with the paradigm of the day, what management wants to do, then [he or she] is just simply flushed out of the system." As I understand it, since then-Secretary of Energy Federico Peña met with the Hanford whistleblowers in August 1997, the DOE has prepared a corrective action plan that will allow for the airing of professional concerns from staff scientists and engineers.

If we look at the history of Hanford's public relations, we can see that for longer than the past decade, robust citizen pressure has repeatedly played a part in cracking open the long-standing managerial ethos of secrecy at the PNNL. Responding to the pressure of the Hanford Education Action League (HEAL) and other concerned citizens in the Tri-Cities area, Hanford Manager Michael Lawrence authorized the release in February 1986 of thousands of pages of documents concerning the early years of the Hanford site. These pages disclosed a pattern of customary release of contaminants, the deliberate release of the "Green Run" experiment, and accidents. Mr. Lawrence should be commended for responding to public pressure for disclosure, and Hanford should be praised for its openness in conferring with various stakeholders and involved community groups and citizens in its current curation strategy as well as in the new environmental laboratory effort.

Whereas the recent history of public consultation should not eclipse decades of secrecy, and it is our job as historians to document the co-production of plutonium and toxic waste at the site, still in light of this recent practice of openness to criticism we should all feel encouraged—even emboldened—to insist that the history of Hanford cannot be told by the pronouncements of an official, triumphant, post-Cold War history. To make reference once again to the "Science in American Life" exhibit, the lesson for us is that public history must not degrade into propaganda, no matter what corporation, professional society, chamber of commerce, party in power, or public fund is paying for it.

In the context of incivility in the current political climate, in response to the charges of "political correctness" in the public history of the Cold War, it is equally patriotic to remember that to soberly and respectfully allow outspoken debate is a fundamental tenet of democracy. The history of science can contribute to the relatively independent public space for the crafting of the nationally significant story of Hanford by offering an account in which the facts assuredly do not speak for themselves.

* For more information on Ruud, see Michael D'Antonio, Atomic Harvest; Hanford and the Lethal Toll of America's Nuclear Arsenal (Crown Publishers: New York, 1993) and also the web page on Hanford whistleblowers (http://www.accessone.com/gap/www/Ruuddecpr.htm).

Sharon Ghamari-Tabrizi is a historian of Cold War science, specializing in the sciences and strategies for waging, surviving and reconstructing from atomic and thermnuclear war in the 1950s and 1960s. She is a research fellow at the Center for the Humanities at Wesleyan University, Middletown, Connecticut.

AUTHOR'S NOTE
While my name is affixed to this article, in terms of the substantive research about Hanford, the real authors are Rodney Carlisle and Joan Zenzen of Rutgers University and History Associates, Inc.; Bruce Hevey and John Findlay of the University of Washington, Seattle; and Joshua Silverman of Carnegie Mellon University. Their primary research in Hanford-related archives as well as their interpretations of this material serve as the basis for this article. All scholarly credit redounds to them; the political thrust of the piece is my own.
Pioneer Travel in Feminine Fashion

On SIDESADDLE to the COLUMBIA

From Today's Vantage point of nearly ceaseless mobility for everyone, it is difficult to imagine that travel in the 1800s for a woman—if one had the opportunity—meant riding horseback seated precariously on a sideaddle. When a woman wanted to go anywhere beyond the wagon ruts, rail lines, or waterways, she had to do it on horseback, and until past the turn of the century nearly all women in the West rode sidesaddle. It strains the modern-day imagination to figure out how they even sat on the strange-looking devices let alone attempted to control a feisty mount while wrapped in thick skirts, whalebone-ribbed corsets and a bustle, and relying on the use of only one stirrup. It is a wonder women traveled by horseback at all—but they certainly did, and many pioneered the West on their peculiar “lady’s” saddle.

Early birds to the Pacific Northwest, like Protestant missionaries Narcissa Whitman and Eliza Spalding, who trekked across the continent in 1836, had to come by sidesaddle. They brought supply wagons but had to abandon them along the way—the going was too difficult for wheeled vehicles. On horseback the women kept up (usually riding ahead to avoid the dust) with the fur trade caravan they accompanied to the Rocky Mountains. From Fort Laramie to Fort Walla Walla—nearly 2,000 miles—the women rode horseback. The sidesaddles they rode are an important part of western history because without them the women would have remained behind. Narcissa Whitman wrote:

Husband has got me an excellent sidesaddle, and a very easy horse. He made me a present of a mule to ride, the other day, so I do not know which I shall like best—I have not tried the latter.

By Laurie Winn Carlson

Surprisingly, the sidesaddle was actually a liberating piece of technology compared to the earlier riding equipment for women. It allowed a woman to ride alone on a horse rather than seated behind and clinging to a man. In the American colonies a woman had to "ride pilion," sitting sideways behind a male rider (her husband or manservant) with her feet on a little wooden swing that hung from one side of the pilion, which was no more than a hair-stuffed fabric cushion strapped to the man's saddle. Without a cinch around the horse's middle, a pilion could slide around when the horse was in motion, making it awkward, uncomfortable and definitely difficult. Nevertheless, many early frontierswomen made the trek into Kentucky and Ohio on pilions. Saddles for women, built of leather or heavy carpet over a wooden tree, with a stirrup instead of a wooden swing for the left foot, were gradually imported from England and Mexico. They allowed a woman to sit by herself, but she had no way to stay seated if the horse acted up—she...
could only shift her weight to retain her balance in the saddle.

In 1830 a French riding master came up with an innovation that changed feminine riding: a third horn. The addition of this extra horn, which curved downward, allowed a woman to keep her seat by pushing upward against the horn with her left or stirrup foot. Called the "leaping" or "jumping" horn, with it women could take their horses just about anywhere, even over fences and rock walls. Using the foot in the stirrup to press the left knee up against the leaping horn, and pressing downward against the leaping horn with the right thigh, a rider could effect a three-point balance. The grip was effective and safe, and women began adding jumping horns to their sidesaddles, despite the objections of naysayers who warned that the leaping horn could entrap a woman on the saddle, endangering the rider if the animal fell.

The innovative leaping horn came at just the right time for American women. The Erie Canal was finished in the mid 1830s, funneling travelers and immigrants into the Great Lakes district and beyond. The Indian Intercourse Act of 1834 forbade settlement in the Indian Country, the region beyond the Missouri River, subject to removal by the military if necessary. Settlers had to push on past or leapfrog farther west into the Oregon Country and California. At the same time, the fur trade was nearly over, the beavers having been trapped out of the drainages, weakening the British hold on the northwestern part of the continent through the Hudson’s Bay Company. The western lands were ripe for settlement, and seats on sidesaddles purchased from St. Louis or Santa Fe saddlers, women pioneered the way west alongside men.

The first two American women to make the cross-continental trek were the aforementioned Spalding and Whitman, young wives who accompanied their husbands westward to build Christian missions for the Indians. They probably had seldom, if ever, ridden horseback—especially Narcissa who had grown up in New England villages. Eliza had been reared on a farm but had spent years at school and teaching, seldom venturing out of the classroom.

No American women had ventured so far west before Eliza and Narcissa; how was a female to prepare for such an under-taking? Speculation about whether or not the women would even survive the trek did not make it any easier.

Narcissa’s “outfit” included “gentlemen’s boots,” which she had her brother-in-law make up for her. Both women took “life-preservers,” so that if they happened to “fall into the water” they would not drown. The life preservers were made of “India-rubber cloth, air-tight, and when filled with air and placed under the arm” prevented one from “sinking.” Each of them fastened a tin cup and knife in a scabbard on her leather belt, to be used at mealtime.

The women wore capes, also made of India-rubber cloth, to protect their clothing from rain. The two married couples slept in a ticking-cloth tent hand-stitched by the women, which had a curtain down the middle for privacy. There were also “plenty of Mackinaw blankets, which answer for our bed and bedding, and when we journey [we] place them over our saddles and ride on them,” Narcissa explained.

To the Indians of the Rocky Mountains and plateau, the sight of two white women at the 1836 rendezvous was astonishing for at least one reason: the white women rode “hung from the sides of their horses,” as the Indians put it. Certainly the sight of the strange women, with their odd clothing and camping gear, must have been intriguing, but their style of riding and their peculiar saddles were probably of the greatest interest to the Nez Perce and Cayuse, people entirely devoted to horse culture. The native women could not let them out of their sight—even fighting between tribes over who would get the missionary teachers to live with them.

Once they left the rendezvous, the missionaries still had to cross the mountains, the harsh Snake River country, and the rugged Blue Mountains before they reached the Columbia River. The going was far from easy: “Came fifteen miles today... the ride has been very mountainous—paths winding on the sides of steep mountains. In some places the path is so narrow as scarcely to afford room for the animal to place his foot. One after another we pass along with cautious step.”

Riding horseback was preferable to riding in the Dearborn wagon, though; by the time they were crossing southern Idaho’s rugged Snake River terrain, Narcissa wrote,

One of the axle-trees of the wagon broke to-day; was a little rejoiced, for we were in hopes they would leave it, and have no
more trouble with it. Our rejoicing was in vain for they are making a cart of the back wheels, this afternoon, and lashing the fore wheels to it—intending to take it through in some shape or other. They are so resolute and untiring in their efforts they will probably succeed.

She is referring to her husband Marcus, who had walked much of the way in order to bring the wagon along. The women had long-past abandoned riding in the rough, over-loaded contraption, but Marcus refused to give up. His herculean effort to take the wagon, even in pieces, was thwarted by their fur trade escort who finally convinced him to leave it at Fort Hall.

The journey was difficult for everyone. One of the missionary party, a young handyman named William Gray, collapsed along the trail and had to be propped behind an Indian on horseback in order to keep up the pace. Eliza and Narcissa endured, riding nearly eight hours that day, "without any nourishment."

Traveling before river ferries were established meant crossing waterways swollen with spring runoff from the winter snowpack in the Rocky Mountains. Wrote Narcissa: "We were so swarmed with mosquitoes as to be scarcely able to see—especially while crossing the Port Neuf, which we did, just before coming into camp. It is the widest river I have forded on horseback." No doubt they were wearing their life preservers.

By mid August the heat was nearly unbearable as they crossed the desert near American Falls on the Snake River. The caravan had been stopping only once a day to eat and feed the animals as they were passing through the country sometimes frequented by the formidable Blackfoot tribe. As soon as they were in safer territory again they stopped twice a day, once for "nooning" and again at night. "I expect this to be a great mercy to us weak females, for it was more than we could well endure to travel during the heat of the day without refreshment."

Driving across southern Idaho today, through the barren, rocky desert covered with sagebrush, the wind blowing continuously beneath summer's hot sun, one finds it incomprehensible that they could make such a trek. Narcissa wondered at her own endurance, "Was there ever a journey like this performed where the sustaining hand of God has been so manifest every morning." She wrote the day after that they had crossed a section of waterfalls where two horses had been swept over and rescued after nearly an hour and "much difficulty." What Narcissa does not mention in her writings is that she is in the early stages of pregnancy, certainly making travel much more arduous. At one point she commented:

Husband rode an Indian horse when he had never mounted before and found him a hard rider in every gait except a gallop, and slow in his movements, nor could he pace as mine did, so for the last six days we have galloped most of the way where the ground would admit of it.

When the party arrived at Fort Vancouver, the Hudson's Bay Company headquarters on the Columbia River, Eliza and Narcissa found the gentlemen of the HBC quite sophisticated and cultured. Their wives were mixed-bloods (Scottish-French-Indian) who enjoyed needlework, cribbage and horseback riding, just like their upper-class counterparts in Europe. The missionary women were included in the social activities of the fort during their visit; Narcissa noted that she and Eliza "are invited to ride as often as once a week for exercise, and we generally ride all the afternoon."

Madame McLoughlin, the chief factor's wife, rode with them. Narcissa wrote:

She keeps her fashion of riding gentleman fashion. This is the universal custom of Indian women, and they have saddles with high backs and fronts. We have been recommended to use these saddles, a more easy way of riding, but we have never seen the necessity of changing our fashion.

The gentlemen's wives and daughters wore the latest fashions imported from London, accessorized with beaded leggings beneath their silk skirts. Straddling two cultures, the women rode the same Indian-style saddles as their mothers, but were certainly intrigued by the first glimpse of how white women rode horseback. American women never did adopt the style of Indian saddles, but it was not long before many Indian women chose calico skirts and sidesaddles of their own, crossing the divide between the cultures.

Myra Bells, another missionary wife who made the overland journey to Oregon in 1838, wrote a letter to her sister.
back East, advising how a woman should prepare for making the crossing on horseback:

For the horseback journey, they ought to have good strong dark colored clothes, a gentleman should have home-made blue cloth for his clothes, a strong stout box coat, thick boots and shoes, a cap and a broad brimmed felt hat. A lady should have a good green merino or pongee dress, and a loose calico dress to wear when she does not need her cloak. Her underclothes as well as the gentleman’s should all be colored. They ought to have three changes to wear on the journey.

It was, after all, a three-month crossing!

Myra recommended that a woman wear “gentleman’s calf shoes” and be well-supplied with stockings. Another important accessory was a veil; at least two or three were necessary because, “When she journeys it is always in the sun. There are no trees here except a few in the Mts. and along the water courses.” Myra’s veil lasted until she got to Oregon, but was “all worn out.”

Myra continued in detail, “She should have an India rubber cover for her bonnet, and a cape made of the same. It is so windy that she cannot carry an umbrella, and besides they are likely to get broken, I believe mine is the only one that reached here.” (There were four missionary women in her party.) Lastly, a reminder to “take some raisins and figs,” for a woman’s “own comfort.”

Eight years later, Tabitha Brown, a 66-year-old widow, made the crossing to Oregon via the southern route, later called the Applegate Trail. She was part of a wagon train whose members decided to follow a shortcut, but disaster ensued and item after item had to be left along the way until Tabitha had only her horse to ride. They struggled through mud, rocks and water up to the horse’s sides, crossing a “twelve-mile mountain.” Once past it, she saw ahead of them another, the Calapooia, “besides many miles to travel through mud, snow, rain and hail. Winter had set in.”

By this time Tabitha had been left behind on the trail, in the company of an even older gentleman, Captain Brown. They attempted to ride on and overtake other travelers who might be going the same way. Captain Brown became dizzy and ill and fell off his horse on the second day. Tabitha, alone with the old gentleman, “was afraid to jump down from my horse to assist him as it was one that a woman had never ridden before.” Indeed, how would she ever get back on? The captain was too weak to stand up, but she led his horse into a little sunken spot a few steps from him, and “with much difficulty” and a long stick she helped him remount. The two continued on, Tabitha leading the man’s horse across “a wide, extensive, solitary place, and no wagons in sight!”

Nevertheless, when night came she unsaddled the horses, tied them, made a tent from the wagon sheet she had folded under her saddle, and “then helped up the bewildered old gentleman, and introduced him to his new lodgings upon the naked ground.” They had no food or fire, but when morning came Tabitha saddled the horses, the captain helped her mount up, and they managed to catch up with other emigrants and continue traveling with them.

In a letter she wrote to relatives back in the East detailing these “adventures of the Oregon Pioneer,” she mused that they might say: “I wonder if she is anything like what she used to be?”

In 1850 Margaret Frink and her husband went west seeking gold in California. They took a well-prepared team of five horses and two mules, and saddles for both husband and wife. It was a wet April on the prairie when they went off the “beaten path” and the horses’ legs sunk into the wet sod. Margaret stood and held the team for two hours in the drenching rain while her husband, with the help of some passersby, spaded out the wagon wheels. When the wagon was eventually pulled out of the mud, the two vowed never to
leave the beaten track again. Margaret concluded "after that, to ride my pony in preference to riding in the wagon."

After leaving Fort Laramie, the going became difficult. "We started at twelve o'clock to-day, traveled fifteen miles, and went into camp at five o'clock. The road was among and over the spurs of the Black Hills, and very rough. I rode horseback the most of the day. Many wagons were being abandoned. Every day we pass good wagons that have been left for anyone that might want them."

In the 1852 migration Francis Sawyer was suffering from a painful toothache by the time she reached the Sierra Nevadas. She stayed in the saddle, though, crossing the summit at 9000 feet elevation, "over snow six feet deep." She traveled until ten o'clock at night before they found a level place to pitch camp. Riding in the darkness had been difficult; especially because Francis "could not see the path in the dark, so I just gave my mule the rein and let it follow the others." They went 25 miles that day.

Twelve-year-old Sarah Pratt, crossing the same year, wrote, "After the usual ceremony attendant upon such occasions we left cherished homes and started for the 'far west,' that land of golden hopes and yellow fancies. Our hearts beat high with expectations. . . ."

By July her trip diary was more concise, and more eloquent—Tuesday, July 13: "Clear, very warm. hilly horses suffer with thirst walk most of the way, ride on the pony in the afternoon . . . a number of graves . . . feet blistered."

When they reached the Platte River they had to swim the horses across to reach ungrazed grass. Sarah wore an India rubber life preserver and rode astride, a fact so significant that she noted it in her travel diary along with her first sight of "buffalo on opposite side of the river. . . ."

An eleven-year-old girl, Harriet Scott, wrote to her cousin, "I rode on horse back most of the way but I got very tired of it there was some places on the road that is almost impossible to travel we reached Oregon city on the 30th making our journey six months long. . . ."

While many women roughed it on horseback across the continent, once they arrived in the crude villages of the West, getting around was not much easier. It is hard to imagine anyone riding a carriage in early-day Portland, Oregon. In 1851 Harriet Talcott described the town's conditions: "Gentlemen go about with big boots suitable for mud, as there are no sidewalks, and the Main Street is full of huge fir stumps and deep mud holes."

But there was excitement and opportunity all around, and it did not take long for women to adapt to the fast pace of western settlement. After two years in Oregon, Elizabeth Hutchinson wrote to relatives in Illinois about her 15-year-old niece: "Pauline has grown more since she left home than she had for several years before. She looks considerably like a woman and every hair on her head is full of ambition. She begins to talk of silks. Spanish sidesaddles Young Lawyers etc." Exactly the sort of upward mobility that characterized the Victorian era—even in far-off Oregon.

A lady's saddle was an expensive item in the 19th century; an 1847 Oregon Mission inventory placed a value of $18 on Narcissa's sidesaddle. At a time when women working in New England textile mills made two dollars a week—a wage higher than that of teachers or domestics (who earned 50 cents to a dollar a week)—a saddle represented months of work, something out of
reach for nearly all women except the upper class or those who had gambled everything on going to the frontier.

The mobility a horse and saddle offered was imperative for women with careers in the West; Dr. Bethenia Owens-Adair in Oregon, and Hilda Erickson, a Utah midwife, raced on sidesaddles to attend their patients. Even outlaws like Belle Starr brandished pistols while mounted on a sidesaddle.

The security of the leaping horn allowed women to enter show business in the earliest Wild West shows, where female riders in long skirts remained on sidesaddles during horseback races, trick maneuvers and wild bronco saddle busting. A few years later, riding astride in shortened skirts got a lot more attention, but even Annie Oakley rode sidesaddle in the ring and in parades, until she adopted the bicycle in her act.

Equestriennes had to be better riders than men. They had to develop perfect balance and coordination with their mounts because their weight was so oddly distributed, and their size and strength made it imperative for them to learn techniques for controlling large animals. Horseback riding has always held an element of danger and difficulty, but swathed in a dozen yards of fabric, corseted with whalebone stays (riding corsets were cut shorter in the hips to allow some movement), and mounted on ill-trained frontier horses, it was even more difficult for women.

There were accidents: Eliza Spalding was thrown and dragged, with her foot caught in the stirrup, through the Snake River barrens; Mary Walker, pregnant and in tears, collapsed on the ground at the end of a day's ride and had to be bled and "rubbed" thoroughly in order to mount again the next day during her trip across the Rockies. Arizona pioneer Sharlot Hall suffered back injuries after a spill from her sidesaddle but went on to ride painfully over most of northern Arizona as she chronicled the area's history. Most women stood up and got right back on the horse, just like today's riders. After all, medical attention in the 19th-century West usually meant a round of "bleeding" by someone brandishing a lancet to remedy injuries sustained in a fall.

Women could study do-it-yourself riding manuals, learn from a proper riding instructor or, like many rural girls, grow up on horseback. Most girls rode astride, just as boys did; when they became "young ladies" they changed their style. But there were many women who had never ridden astride and refused to try.

Contrary to some ideas about western women, they were not at all eager to become "mannish maidens." Women adamantly refused to give up sidesaddles; even ranch girls were reluctant to be seen riding like men or wearing trousers. It was upper class eastern female tourists to the West who introduced trousers, and the first women to ride astride in public did so in Boston and New York State. Western women were adamantly opposed to it for several reasons.

In the West women had often left everything behind—family, friends, home, possessions—in order to make the trek. Preserving their dignity and self-respect was important to them, as was keeping their femininity. No matter if a woman's mount was a rangy mustang, a half-broken mule or a miner's stubborn donkey. Riding like a proper lady, in the same style as European royalty, told everyone that she was feminine, dignified and respectable.

Even if she lived in a sod hut or an unchinked cabin miles from the "civilized" world, on a sidesaddle with her calico skirt fluffed around her she was as good as anyone anywhere. Even if she cobbled the sidesaddle out of a discarded men's saddle, removing a stirrup and sitting so the horn was hidden by her skirt—on a sidesaddle, she was a lady.

In the late 1890s riding astride began to slowly creep into acceptance, and women began to ride with divided skirts, culottes that could be buttoned up the front when walking. Newspapers and magazines carried pros and cons of the new style, but by 1915 only a few sidesaddles were still being sold, mostly in the deep South. During World War I women helped the war effort by participating in wild horse roundups and breaking horses for the cavalry; in England they rode remounts for the fighting. By the time the war ended, women in the West who rode horseback did it astride, in clothing just like men's. By then, though, most women had abandoned the horse for technology; the bicycle—and eventually the motorcar—usurped the saddle, even for queens.

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Centralia promoter and real estate developer George H. Ellsbury wrote and published this 14-page pamphlet in 1895, seeking support for the construction of a canal between the Atlantic and the Pacific oceans via the Nicaraguan route. Ellsbury saw the canal as "the future gateway for the commerce of the world. Whatever nation controls this waterway will . . . forever command the commerce of the Western world." Not only would the canal provide competition for the railroads, which forced shippers in the United States to pay high rates, Ellsbury also saw the construction work as a partial solution to widespread unemployment resulting from the Panic of 1893 and the ensuing depression. However, supporters of the Isthmus of Panama route carried the day, and the Panama Canal opened in 1914.
IDENTIFYING all the ingredients affecting the siting, planning, design, and construction during the early developmental phases of the Washington State Capitol Campus in Olympia has always been hampered by the disappearance of documents pertaining to that project from the records of its principal architects, the New York City firm of Wilder and White. Following the Depression-related dissolution of their partnership in 1930, shortly after the 1928 closure of initial capitol campus construction, there was a breakup of the firm's files, and those pertaining to the Olympia project were assigned to Wilder who had been the partners' principal representative on that work. The probability is that, after his retirement and later his suicide in 1934, these materials were simply discarded. Thus none of the office copies of the original contract drawings, job records, or correspondence is available to anyone interested in tracing the development, construction, and related human history associated with Washington's most ambitious effort to create monumental architecture, a project about which Henry Russell Hitchcock was moved to declare, "the American Renaissance in state capitol building reached its climax."

For the historian seeking information about the campus, the evidence is therefore especially elusive; we are dependent on local collections and materials relating to the project that have been retained by others. More recently, however, some important collateral support has been discovered in the Olmsted Brothers papers held by the Manuscript Division of the Library of Congress in Washington, D.C., particularly the records of John C. Olmsted. These materials provide much of the substance from which this article is drawn.

In 1911 Wilder and White had won Washington state's design contract competition, which required competitors to provide a long-range site plan for the Legislative Building. This building was to be the crown jewel in a group of buildings—an innovative and unprecedented approach to American state capitol design which had elsewhere on such occasions confined its focus to the capitol as a single building. The competition had also required that the Legislative Building be oriented to face due north. Recently, however, there have been posed certain critical questions that have remained largely unanswered regarding the partners' campus plan, which may be summarized as follows:

Why, unlike other contestants, did Wilder and White choose to confuse the Legislative Building's visual accessibility from and to views of Puget Sound with the transverse alignment of the Temple of Justice, particularly when at the same time the axis to the south was being architecturally emphasized but into an area—comprised mostly of privately-owned and substantial residences—that Wilder himself claimed had no distinctive visual amenities? Why were the plan relationships of the accessory buildings of the group not reversed, closing the south axis with the Temple of Justice and dramatizing the one to the north by framing its uninterrupted thrust between the pair of angled buildings?

A tracing of the circumstances that led up to the Wilder and White site plan forms an interesting chapter in the design history of the Washington State Capitol Campus.

Figure 1. Wilder and White's competition site plan, 1911. A—Legislative Building; B—Temple of Justice; C—administrative buildings; D—Governor's Mansion.
While the answers posed by this article are drawn from inferential evidence, they seem nevertheless to clarify in a reasonable way the thinking that led to what one finds today on the Olympia campus and perhaps even help justify its imperfections.

The grounds for the campus had been a donation of Olympia's founder, Edmund Sylvester, who in a characteristic 19th-century gesture to reinforce the attractiveness of his new town plat for potential investors, had included in it a 12-acre site for a future territorial capitol. The territorial legislature accepted the donation in 1855, the following year building on it a two-story wood frame building that was paid for with a $5,000 appropriation from Congress for that purpose. The structure was situated near the current location of the Insurance Building.

In 1889 Washington was granted statehood, but it was not until 1893 that the legislature felt sufficiently prepared to start the ambitious effort toward construction of a permanent state capitol, doing so by announcing a national design competition. The general instructions called for elevations, plans, a section, and a perspective drawing for a building sufficient in size to accommodate all branches of state government. There were 188 submissions from around the country, from which was selected for first prize the proposal of Ernest Flagg, at that time a promising young New York architect who would later earn a national reputation.

Flagg's capitol, like those of the few other competitors for whom the record of their submittals is still extant, reflected the influence of the national capitol, a domed affair of rather florid design typical of other state capitols built in the latter half of the 19th century. He sited his building somewhat west of the territorial capitol; his perspective drawing showed it on a modestly raised terrace facing south to an open plaza with a large central reflecting pool and formal planting beds and lawns. There is no evidence of what might have been planned for the balance of the site, nor do we know what he had in mind for the site's connection to the city as a whole.

But Flagg's plan was never realized, a combination of economics and politics being sufficient to halt construction after the basement and foundation walls were in place. Instead, the state in 1901 purchased the then-recently completed Thurston County Courthouse, constructed an addition, and in 1905 occupied it as a state capitol, which it remained for 22 years.

Nearly 20 years elapsed between the 1893 competition and the state's next effort to build a capitol—in 1911 the Washington State Capitol Commission announced another national design competition. There was, however, a significant difference in the program, for this time the commission was seeking proposals not for the design of a single building but for a group of buildings, the state having become convinced by its
ABOVE: Washington's original territorial capitol, paid for with a $5,000 appropriation from Congress.

BELOW: Figure 2. The Olmsted Brothers' site plan, 1912. A—Legislative Building; B—Temple of Justice; C—old Capitol Building; D—city park; E—railroad station.

recent experience with the former courthouse that the spatial demands of government could not reasonably be satisfied by any one structure.

There appeared to be considerably less interest in the new competition, if the number of entrants is an index: 188 in 1893 versus 30 in 1911, of which 18 were from Washington. The unanimous choice in the three-man architectural jury's advisory to the commission was the proposal from Wilder and White (Figure 1). Thus an essentially unknown architectural partnership began an association with the State of Washington that was to continue for the next 18 years.

Besides the competition program's group plan requirements, there was also the stipulation that the location of the Legislative Building required reuse of the still-existing Flagg foundations but with the new building facing north instead of south and having an approach from that direction as well. Presumably the commission had second thoughts about the earlier Flagg proposal that had turned its back to the drama of the northward vista toward the Olympia Mountains, opting now to celebrate it. If, indeed, this was their thinking, it is curious that the jury and commission both chose to accept the one group plan (of the seven submittals about which we still have information) that blocked the view from the Legislative Building. For, while the other six contestants grouped their buildings in a variety of configurations all opening without interruption to the north, Wilder and White closed that axis by locating their Temple of Justice (a subsidiary building following the Legislative Building as next in importance) directly across it. As a result, full appreciation of the northward panorama could only be gained by going around to the rear of the Temple of Justice. The plan submitted by Howells and Stokes, another New York firm, which placed second in the competition, was typical of the six also-rans, theirs presuming additional site acquisition to the south.

Even at the time that the award was made to Wilder and White, the commission asked for the architects' observations about the northward orientation. Wilder, in Olympia at the time to sign the contracts, expressed continuing support for the original program, though the emphasis of his analysis was on the question of approaches to the site rather than views from it; he made no reference at all to the presence of the Temple of Justice athwart the northward axis and the violence it did to the potentials of that splendid vista.

There were others, however, willing to question this decision, and it was here that the Olmsted Brothers now entered the scene. The brothers were no strangers to the Pacific Northwest, having done considerable work in the Puget Sound area, especially in Seattle, including their plans for Seattle parks (1903), the University of Washington campus (1904), and the Alaska-Yukon-Pacific Exposition of 1909. The commission now requested that there be some further study of the site plan and drew the Olmsteds directly into the matter. With regard to their responsibilities, however, one
can infer from the correspondence by the parties involved that the views of the Olmsteds on one hand and Wilder and White on the other were imperfectly matched.

From the first visit of John C. Olmsted (partner in charge) to the site on April 13, 1911, it was apparent that he took a dim view of much of what had already been suggested by Wilder and White for the site's future. His notes of that visit record his observations of the impingement of institutional and residential land development south and east of the site, the irregularity of its property lines, and the visual disorder of the railroad and "shabby commercial harbor," all factors that in his mind called for thorough site plan reconsideration.

Olmsted was particularly unimpressed with the prospects for an approach and vista development to the north, suggesting that money for a "vast stairway" and the handling of the "ugly middle distance" might better be spent "in improving the connection and approach with and from the central park in which is the capitol [the old courthouse] and with the business center of the city, the hotels, etc., and especially the connection with the R.R. station." Subsequently, Olmsted agreed to visit Olympia and provide "revised plans and grading plans and consulting services for one year."

The Olmsteds' progress, however, was not very satisfactory. Obviously their relationship with Wilder and White was not entirely clear, neither in the minds of the principals of the two firms nor in those of members of the commission. The 1911-12 correspondence of the several parties involved suggests that the prestigious Olmsteds showed no hesitancy in stealing the group plan ball and running with it, leaving the little-known fledgling architects rather on the sidelines in a game whose captaincy they thought had been awarded to them. In particular, the Olmsteds sought to amend the group plan by establishing revised connections of the site to Olympia's center city and relocating the Temple of Justice south rather than north of the Legislative Building (Figure 2). Wilder and White in turn maintained their allegiance to their group plan and especially the northerly location of the Temple of Justice. Both firms appeared to have had equal access to the commission, with each advancing its approach rather independently of the other. The brittleness of the arrangement can be easily understood.

Ultimately it was the commission that would decide, writing on January 11, 1912, to the Olmsteds:

*The Commission has felt compelled to decide and has decided to locate the Temple of Justice north of the old foundation.... We do not believe that you would have located the Temple of Justice with its rear immediately against the south line of the property had you not been misled in some way as to the purposes of the Commission in this regard (i.e., its refusal to consider acquisition of additional property along the site's south property line for added spaciousness).*

And further to disassociate the commission from the Olmsteds and their proposals, by telegram on January 25, 1912, the commission abruptly severed all relations between them.

Released at last (they thought) from the administrative confusions of the past months, Wilder and White moved quickly to reassert their position in the project with their own revised 1912 site plan along the essential lines of those established in 1911 but with extensions northward whose debt to the Olmsteds is clearly more than coincidental (Figure 3). On September 10, 1912, the commission unanimously accepted the plan and authorized the architects to proceed immediately with construction plans and specifications for the first building of the group plan to be built, the Temple of Justice.

Uncertainty over the group plan was an issue that refused to go away. Then, as now, the governor was also chairman of the commission, and in 1913 Governor Hay, a Republican, was succeeded by Democrat Ernest Lister (in an otherwise Republican-dominated officialdom). Seeing himself as an economy-minded and businesslike executive, it was inevitable that the new chairman's attention would soon be drawn to such a conspicuous project as the state capitol. He proved to be
unenthusiastic about the plan, disliked the north-south orientation, and in both the 1913 and 1915 sessions of the legislature opposed financial arrangements to continue with construction and in other ways impeded the project's progress. Thus in the 1915 session there appeared in the senate a bill with the following section, which would seem to set the stage for even further plan manipulation:

*The state capitol commission shall have the power to amend or modify any of the plans and specifications heretofore authorized or adopted, or to adopt new plans and specifications for the location, construction and completion of buildings on the state capitol site.*

Both the press and the architects of the state rose to defend the Wilder and White plan, opposing the bill with sufficient effectiveness to kill the section.

Nevertheless, Lister continued his opposition to the plan. In a letter to the chairman of the House Committee on State Capitol and Grounds he explained a new site plan that would shift the Legislative Building westward, reorienting it away from the north and eastward toward Main Street, the work of a Spokane architect (and a Democrat), Julius Zittel (Figure 4). The Flagg foundations would be reused for one of the subsidiary office buildings of the group and an entirely new location set for the Legislative Building.

Nothing came of the proposal that session, but in 1917 Lister again attacked the Wilder and White group plan, stating that the commission would need to examine further the matter of the proper location of each of the buildings. That year the legislature gave the commission that authority, and it moved quickly to exercise it, authorizing Zittel to prepare plans for the new office building on the Flagg foundations to be ready for occupancy on January 1, 1919.

There was a general hue and cry against this most serious challenge to the original group plan. By resolution of January 16, 1917, the Washington State Chapter of the American Institute of Architects attacked the Zittel plan for its "utilitarian and inartistic" narrowness and reaffirmed its "belief that the only way the State can hope to have worthy and coherent work on the Capitol Grounds and Buildings accomplished is to carry out the plans so excellently prepared, and already adopted and paid for by the State." The chapter urged all citizens to let state officials know of their concern over this potential loss, the press making sure to reveal Zittel's party affiliation in a state that was still predominantly Republican.

But what was probably the most decisive factor in the failure of Lister to achieve Zittel's group plan was not so much public and professional protest but the declaration of war by the United States against Germany in April 1917. Calling capitol construction "wanton waste" when the country was at war, the *Seattle Star* urged the governor to halt it. This the
commission did, declaring a postponement until the return of more promising construction conditions. By the time those conditions had reappeared, both Zittel and his building had been forgotten.

Nevertheless, the issue remained. With the war over and the deceased Governor Lister replaced in 1919 by Republican Lieutenant Governor Louis F. Hart, the commission decided that the controversy over the group plan must be permanently settled. To that end they turned to R. H. Thomson, Seattle's city engineer since 1892 and a well-known and enormously respected civil servant. He was asked to consider the background and circumstances of the group plan and to give his recommendations to the commission on its future.

Thomson's nine-page letter to the commission of May 31, 1919, reported at length on "his most trying labor" following an initial site inspection, ruminated in general about the site's condition and what he found there already in place, and reviewed the intentions of both the Wilder and White and Zittel plans. While the commission was pressing Thomson to move as expeditiously as possible to assist them in carrying out their mandate, he protested to the governor cannot make bricks without straw." But by August 1919 he could report to the commission and provide it with yet another group plan (Figure 5).

In it, the Flagg foundations were entirely abandoned, Thomson making much of the triangular arrangement of the three principal buildings that would give precedence to the capitol and its visibility. At its August 30th meeting the commission politely accepted his plan, authorized payment for his services, and then proceeded at its September 10th meeting to reconfirm its commitment to the Wilder and White group plan by unanimously passing a supportive resolution: "That the Commission is determined to erect a capitol building using the present [or Flagg] foundations and Messers. Wilder and White are directed to immediately prepare plans and specifications."

Thus concluded the enduring presence of proposed site plan revisions for the capitol group in the records of the commission. Thereafter, the subject of site would be reduced to landscaping of the grounds whose basic orientation and juxtapositions had finally been permanently set.

As for the landscaping, given the history of the Olmsted Brothers' experience with the project, it is rather unexpected to find them in a further association with it. Yet, even more unexpectedly, their involvement proved to be a vehicle by which the architects themselves raised once again a group plan specter—the location of the Temple of Justice, a return initiated by Wilder and White in their letter of July 7, 1927, to the Olmsteds welcoming them back to the project:

\begin{quote}
It may be as well at this time to outline our conception of the Group; so you may understand the purposes of certain features. As you know, this Group is made up of a series of small units . . . which in the more usual conditions are combined to
\end{quote}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{thomson-site-plan}
\caption{Thomson site plan, 1919. A—Legislative Building; B—Temple of Justice; C—administrative buildings; D—Governor's Mansion; E—Flagg foundations.}
\end{figure}
make a single unit of sufficient magnitude to have great dignity on that score alone. Our early studies in the original competition in 1911, convinced us that only by so arranging the subordinate buildings as to screen the substructure of the Legislative Building, could a broad enough base be provided for a dome of proper size, and this not only accounts for the location of the Temple of Justice directly in front of the Legislative Building, but also prevents the full value of the Group being obtained until the three additional subordinate buildings are erected to the south and west of the Legislative Building.

Here there has been introduced a new note in the partners' rationalization for locating the Temple of Justice as they did and when they did it. It is indeed true that they gave major consideration in 1911 to the relationship of the dome to the group as a whole, though this was never mentioned in extant records as a consideration during the drawn-out confrontations of 1911-12. But employing that sensitivity as explanation in 1927 for the site planning of 1911 seems more than a little after-the-fact.

The Olmsteds resurrected their earlier displeasure with the group plan's northward axial staircase between the campus site and the city beyond. Their 1912 plan had reflected this displeasure with its abandonment of that axis in favor of one slicing diagonally across the city's grid to connect with Olympia's downtown park and adjoining old state capitol. Since then the state had acquired additional property eastward from the original Water Street alignment to Main Street (renamed Capitol Way) to form a much larger campus for which to plan. Although in the architects' July letter to the Olmsteds they too had abandoned the northerly staircase, their alternative was a west-east approach on 13th Street, a reflection of their revised plan of 1912. The Olmsteds, however, saw otherwise, suggesting modified diagonal approaches from Capitol Way, the northerly one on axis with the Legislative Building's dome. Though the architects expressed some uneasiness about this, in due course and after the Olmsteds' persistent support for their alternative landscape plan of 1928, which included double diagonals, Wilder and White gave their blessing, calling it, in their somewhat subdued judgment, "a very satisfactory solution."

The Olmsted plan was substantially in place by 1930 (Figure 6). What one finds on the campus today is essentially what Wilder and White in 1911 and the Olmsteds in 1928 had established for it, with the exception that the Governor's Mansion remains in its original location and the western flanking administration building was never built. This comprises the group's west campus, the present-day campus east of Capitol Way being entirely a post-World War II development.*

Figure 6. The Olmsted Brothers' landscape plan, 1928.

* Plans are presently afoot for Heritage Park, an ambitious scheme for entirely redeveloping Capitol Lake, a 1950s manifestation of the Wilder and White 1912 plan in which the axis of that plan with its extensive shoreline fill and realignment is being replaced by the same axis, one depending far more on a visual rather than physical realization.
Reviewing the history of the plan for Washington's state capitol group reveals the roles Wilder and White, the Olmsted Brothers and others played over the years in its shaping, the several decisions affecting the relationships of the group to its site and within the plan itself, and various grounds cited for understanding what one finds there today. Nevertheless, the fact remains that the visual and circulation approaches to the capitol group remain awkward and the Temple of Justice does violence to the perceptual potentials of its principal architectural element, the Legislative Building and its dome. As we have seen, however, there were several circumstances that tended to dictate how and why the Wilder and White group plan was established and has since persisted:

- The programmatic requirement to reuse the Flagg foundations with their relative closeness to the site's 15th Street property line, thereby denying the architects the spatial generosity there for a building of major importance in the group.

- Conditions dictated by legal constraints on the commission and its disinclination to make further land acquisitions below the site's southern property line, reinforced by that area's existing development quality, ownership clout, and the commission's political timidity.

- The competition program and the site's potential that required the Legislative Building's design axis to be northward, though incorporating an area with forbidding topographical challenges.

- The architects' preoccupation with the Legislative Building and a pleasing proportional relationship between its dome and the ensemble of buildings it was intended to crown.

- The prestige of the Temple of Justice as the second most important building of the group that required a locational identity and treatment commensurate with that status.

Given these considerations, one can perhaps reluctantly conclude that Wilder and White and the commission made a sensible design decision in remaining loyal to the essence of the 1911 group plan. But good sense does not necessarily satisfy the heart. Nowhere, looking from the steps of the Legislative Building, can one see the distant panorama of nature as the competition program had anticipated. And from the shores of Capitol Lake looking south toward the group's acropolis, the dome is in full view but the rest of the Legislative Building's grand principal entrance façade is tucked in behind the subdued design of the Temple of Justice's backside.

The plan's fatal flaw lies in a single competition program demand which, had the architects aggressively initiated efforts to eliminate it, might have resolved the dilemma before it was allowed to develop: the requirement that the Flagg foundations be reused. Had the architects in 1912 insisted that the location of those walls was an unreasonable distortion of the site's design potential, they could then have developed their group plan with the versatility the program had been denying them (Figure 7). The splendid design axis, framed on either side by group subsidiary buildings, could have swept dramatically and uninterruptedly northward toward Puget Sound and the distant Olympics. Seen from the north, the Legislative Building's great dome and north portico would have been monumental partners powerfully closing that vista. And the Temple of Justice could have realized a dignified and supportive role in its relationship to the Legislative Building and to the residential area to the south.

The irony of all this is that in due course Wilder and White did successfully insist (but much later) on the abandonment of the Flagg foundations—but for Legislative Building design rather than site design reasons—and that the ensemble of forms and spaces shown in the “what might have been” plan has in large part actually been realized—but in the wrong direction, seen only if you view the group from the south and before the State Library was built.

And so, speculation regarding the circumstances that brought about today's Washington State Capitol Campus notwithstanding, and appreciating the environmental design achievement that the campus so clearly is, one could still wish for a happier union of the works of nature and the designer, a less ambiguous triumph of architecture, landscape architecture and site design. The student of architectural history is left with a lingering twinge of regret for what might have been. But such are the perils of peripatetic planning.

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Visions of promoting a Canadian "adventure to China" gathered momentum in the 1760s, shortly after Canada fell under British control by the Peace of Paris (1763). Projections of opening up a great commerce with Asia were still current in Alexander Mackenzie's era, a third of a century later. As exploration advanced, however, schemes became narrower in scope and more defined in purpose.

In 1768 the governor of Quebec, Sir Guy Carleton (later Lord Dorchester), advised Lord Shelburne, the senior statesman in London in charge of trade policy, that British traders from Montreal should proceed across the continent to the Pacific Coast. There, Carleton reckoned, they would "find out a good port, take its latitude, longitude, and describe it so accurately as to enable our ships from the East Indies to find it out with ease, and then return the year following." Carleton had in mind a government-authorized expedition in which the traders would go up the Western Lakes, as was customary, and then winter in one of their distant posts before setting out again early in the spring for the Pacific Ocean. Here was a concrete proposal, perhaps the first, for transpacific trade based on the St. Lawrence.

Similar schemes involving a search for a northwest passage by sea and land, as well as the founding of a base of operations near the mouth of the Strait or Straits of Anian, were then being trumpeted by people such as American soldier and frontiersman Robert Rogers, American soldier and explorer Jonathan Carver, and Nor'Wester Alexander Henry the Elder. Rogers sought British government funds for finding his river of the West, the "Oregan," which he claimed flowed from near Mississippi headwaters to the western ocean. Carver, hired by Rogers, journeyed into Minnesota and made a great circuit trip...
"The Narrows." The explorers must always be on their guard. Around each bend could lie placid waters or dangerous rapids and falls.
that yielded no favorable result. Still, he held that a British settlement on the northwest coast of North America would encourage trade, discovery and communication with China and English trading settlements in the East Indies. Carver was something of a visionary, and he had gone so far as to say that there was a river of the West that rose "in about the center of this great continent" and flowed into the Pacific Ocean. This insight derived from information gleaned from natives. The river of the West appeared on a French map prepared by the explorer Baron Lahontan in 1709. A mer de l'Ouest (western ocean) likewise decorated charts of the continent. These seemingly wild imaginings needed proof, which Alexander Henry intended to provide.

Henry set about to become the true architect and planner of a transcontinental expedition of science and trade that would be the best of its day. Linked as he was to Sir Joseph Banks, the British scientist and "fixer" of exploration, Henry hoped to unlock the secrets of the North American interior. However, it fell to others to complete the task. While Henry launched a scheme of discovery, fur-trade pathfinders such as Peter Pond, Alexander Mackenzie, David Thompson, and others less well-known pushed back the bounds of empirical knowledge. Such bold, even wild ideas of geography and equally spacious visions of empire and wealth had to be tested—by tedious hours at canoe paddles and by long, back-breaking days on foot. These men did not wait patiently for government authorization and funding (like Cook, Vancouver, or Lewis and Clark)—they pressed on independently, actively seeking what armchair geographers and desk-bound strategists mused about in snug surroundings.

The geographical riddle that Pond and his associates sought to solve had been suggested by Captain James Cook of the Royal Navy. In 1784-85 Pond read or learned of narratives of Cook’s voyage to the North Pacific, possibly William Ellis’s presumably authentic (though unauthorized) preview of Cook’s reconnaissance, published in 1782. Cook had named Cook’s River (now Cook Inlet near present-day Anchorage, Alaska) as a body of westward-flowing water. Pond speculated, quite incorrectly though understandably, that this was a conduit linking the Pacific with a great lake or river of Athabasca or lands to the north. Pond opened what Mackenzie and others called the “new El Dorado” of the North West Company.

The new fortunes of Mackenzie and the Montrealers revolved around the discoveries of the La Loche Portage and of the Athabasca River and Lake Athabasca—both attributed to Pond. Pond’s handling of logistics was exemplary; in particular, his careful use of supplies, including pemmican, and his good organization were keys to success. He set a feverish pace of travel and established an enviable record of voyaging along routes of the continental interior. Pond was the first to outline the general features of the upper Mackenzie River system, and his findings had important consequences for Mackenzie. A ready learner, Mackenzie profited from Pond’s pioneering enterprises and geographical suggestions and went on to build a career and reputation on business activities and commercial expansion suggested by Pond. Pond’s findings fired the young Scot with the possibilities of discovery in the Mackenzie River watershed and led to Mackenzie’s decision to follow the course of the great river to the sea in 1789.

At the time of Pond’s greatest notoriety and success in the pays d’en haut, Mackenzie was first being noticed by the wider world. A person of scientific inquiry in Montreal, Judge Isaac Ogden, mentioned Mackenzie in a letter to his father, David Ogden, in London on November 7, 1789. Judge Ogden began by telling his father that he had met Pond, “a Gentleman of observation and Science,” who, rather than just speculating on the distances between important places, had actually traversed many of the interior territories. Pond’s map, which found its way into the prestigious pages of the 1790 Gentleman’s Quarterly, revealed to the wider public the trade route from the upper end of Lake Superior to the waters communicating with the northwestern interior. A chain of lakes brought British traders both north of the Mississippi and south of Hudson’s Bay Company interests. Ultimately the waters of this northwestern course led to a great lake called Slave Lake, “the last water before you come to the Great Northern Ocean . . . where the water ebbs & flows, of which the Gentleman gave me indubitable proofs.”

The Montrealer pressed upon the Londoner the importance of the following details:

The Lakes that empty into the Great Slave Lake, at least the largest of them are named the Arabaska [Athabasca] (which has a large River running into Slave Lake of three or four hundred miles at least in length, its course North West). . . . The River that carries all these Waters into the Slave Lake is called Slave River and is very large, it runs North West several hundred miles in Length.

Now Judge Ogden warmed to the geographic possibilities of discovery. “From out of the Great Slave Lake runs a very large River, which runs almost South West, and has the largest Falls on it in the known World.”
A Ready Learner, Mackenzie profited from Pond's pioneering enterprises and geographical suggestions.

This was a fable, and so was the statement that followed: “The great chain of Mountains that extend from Mexico along the Western or Pacific Ocean, and the Northern Pacific Ocean, terminates in Lat. 62 1/2 & Longitude 136, so that the Slave River runs to the Westward of them and empties into the Ocean by its course in about Lat. 59.” If that had been true, which it was not, a waterway would have led to the Pacific at about the latitude of present-day Anchorage, Alaska, which was then placed on nautical charts under the title “Cook’s River.” The judge urged his father to look at his maps: “When you have proceeded thus far, & you have looked over your map,” he instructed with uncompromising certainty, “you will readily conjecture what River the above Slave Lake River is known by, when it empties into the Ocean. To save you much Trouble I will tell you it is Cook’s River.”

Judge Ogden in Montreal had no doubts of the veracity of Peter Pond’s arguments, and he was clearly impressed by the details Pond had given him in conversation. For instance, he noted that Cook had found a great deal of driftwood on the northwest coast, that only on the banks of the river that emptied into Slave Lake could wood be found, and that the river in question was the only one leading to the Pacific. Besides, Pond had met two natives who came up that river all the way to Slave Lake:

They brought him in 1787 a Blanket which they received from Vessels which were at the Mouth of the River; they say that the River he was in is large to the place of Discharge and Navigable, so that if we take the Latitude and Longitude of the two Rivers, the Courses, and all the other circumstances into consideration, little doubt remains that they are the same.

To the north the traders met “Esquimaux Indians,” or Inuit, whom they found as far north as was known. Ogden speculated that if Captain Cook had ventured into these waters from the Pacific in the right season he might have returned to Europe by a passage along the northern coast of America.

Ogden drew several conclusions from Pond’s claimed discoveries and prospects, and the most telling for Mackenzie’s future scheme ran as follows:

That an easy communication with, and an advantageous commerce may be carried on by Posts established on Lakes Slave, Arabaska, Pelican, &c, and to deliver the Fruits of their commerce at the Mouth of Cook’s River, to be then carried to China &c., and that as Cook’s River and the Lands on Slave Lake, Arabaska &c. are very fine, some advantageous settlements may be made there which may be beneficial to Government.

Ogden also noted a further, strategic value: “Perhaps another use might be made in time of War by this Route, which would be to convey Intelligence to the East Indies by that Route.”

In these musings Ogden spelled out the hoped-for particulars of the Canadian dream: a navigable northwest passage of value to commerce, settlement and the military. He was playing on the grand and venerable theme, promoted in its new form by Peter Pond, to bring British dominion and trade to Pacific shores and China by way of northwestern America. This letter, which closes with an important reference to Alexander Mackenzie, contains the first outside, or nontrading, mention of the future explorer: “Another man [.] by the name of McKenzie[,] was left by Pond at Slave Lake with orders to go down the River, and from thence to Unalaska, and so to Kamchatka, and thence to England through Russia &c. If he meets with no accident you may have him with you [in London] next year.”

Judge Ogden’s fascinating report from Montreal soon
Curtiss Hill Lecture

Barry Gough, author of the adjoining piece, will be the featured speaker at the noon luncheon during the May 15, 1999, annual meeting of the Washington State Historical Society. His talk, the third annual Curtiss Hill Lecture, is entitled, "Visions of Western Destiny: Alexander Mackenzie, Thomas Jefferson, and Lewis & Clark." For more information, contact Marie DeLong at 253/798-5910.

came to the attention of the government, and with it news that Mackenzie might be destined for Russia. David Ogden presented his son's account of Pond's explorations of the interior parts of North America to none other than the Right Honorable W. W. Grenville, a senior member of the British cabinet and a strong promoter of trade and empire. Grenville held successively in these years a number of key posts. This statesman and his associates in London were then pondering the possibilities of such a northwest passage, for Captain Cook's northwest coast explorations, though valuable in themselves, had left yawning gaps in the chart of the shoreline. Besides, several private coastal traders, including James Hanna, James Strange, John Meares and Charles Duncan, were by their commercial pursuits yielding more geographical information of a reliable kind than Cook had reported in his cursory reconnaissance.

Alexander Dalrymple, hydrographer of the East India Company and preeminent in his knowledge of Pacific cartography, pressed upon the government the urgent necessity of a government-sponsored expedition to get to the "backside of America," as the Elizabethans had put it, and learn the truth of these speculations. Stressed Dalrymple:

*The present object of Discovery is De Foucas's Strait in 48° Lat., and if they can find a convenient harbour on that Coast to winter in, much progress may be made by land during the winter towards effecting a communication; and if they choose they can proceed to the Sandwich Islands & return at the early part of Spring.*

He urged an exploratory expedition via Hudson Bay in preference to one around Cape Horn. The work of Captain Cook was now being called to account, and Dalrymple put it delicately but forcefully: "The ancient idea of a N.W. Passage was by the Hyperborean Sea on the N. of America, altho' I am very far from meaning any imputation on Capt. Cook's memory or abilities, I cannot admit of a Pope in Geography or Navigation."

Dalrymple maintained that a northwest passage existed. He did so on several grounds: linguistic affinities of natives at both the eastern and western extremities of the northern coast of the continent, the absence of timber in high latitudes, and the overlapping evidence of documentary accounts and maps. All these pointed to the existence of a sea route. This famous geographer, who had a friend in George Wegg, governor of the Hudson's Bay Company, dismissed Pond's discoveries as inaccurate and untrustworthy. Dal-
By early summer, with his affairs attended to as much as possible, Mackenzie packed for his voyage.

Over this celebrated division between waters emptying into Hudson Bay and those flowing into the Arctic. During that winter of 1787-88 Pond undoubtedly gave Mackenzie all the necessary information and inspired him with the possibilities of discovery. Mackenzie's journey became the fulfillment of Pond's plans. By January 1788 Mackenzie had become convinced that an expedition would be profitable. To his cousin Roderick he confided, "I already mentioned to you some of my distant intentions. I beg you will not reveal them to any person as it might be prejudicial to me, though I may never have it in my power to put them in execution."

About this same time Roderick observed that Alexander "became extremely anxious and uncertain whether he would leave or remain in the country." Then it dawned upon Roderick that his cousin was fretting about the problems of exploration. Roderick put it this way in his Reminiscences:

"North by West." The voyageurs traveled to the Northwest via a myriad of lakes and connecting rivers, accompanied by native inhabitants who served as both interpreters and hunters.

He then informed me, in confidence, that he had determined on undertaking a voyage of discovery the ensuing Spring by the water communications reported to lead from Slave Lake to the Northern Ocean, adding, that if I could not return and take charge of his department in his absence, he must abandon his intentions. Considering his regret at my refusal, and the great importance of the object he had in view, I, without any hesitation, yielded to his wishes, immediately set to work and accompanied him into Athabasca.

Alexander Mackenzie now enjoyed trusty support to manage the fur trading affairs of Athabasca in his absence, full authority to complete a rapid reorganization of the posts of the area, and complete freedom to undertake his mission into unknown parts. Free of the pressing executive obligations that had pinned him down for a decade, he was released to pursue the northwest passage.

For the moment, pressing business matters demanded attention. Fort Athabasca, or "Mr. Pond's Old Establishment," remained for awhile the base of operations and explorations for the Mackenzie cousins. Alexander's design called for a reordering and expansion of posts. Inexorably, the mechanisms of the fur business drew the traders ever northwestward.

Roderick selected a site for the new depot on Lake Athabasca. He chose a "conspicuous projection," now Old Fort Point, on the southern side of the lake, some eight miles from the discharge of the Elk River. They named the post Chipewyan, because it was intended particularly for trade with the Chipewyan Indians. Later, in 1804, traders abandoned this location in favor of the north shore at the western end of Lake Athabasca, where fish were plentiful. Nor'Westers soon called the place "the Athens of the North," not only because of its strategic location but also because of its library, collected by Roderick and others, which boasted among other works the great picaresque novel of the age, Tristram Shandy, some classics, and manuals on navigation.

By early summer, with his affairs attended to as much as possible, Mackenzie packed for his voyage to the Pacific. Unalaska or Kodiak must have seemed a long way away to him and to those he convinced to accompany him. Who knew if any of them would return? But such thoughts are not for the adventurous, and Mackenzie set them aside to pursue a route across the continent and the discovery of a northwest passage.

Deh-Cho, "the River Big," is what the Dene call the huge stream that drains their homeland Denendeh. The Mackenzie River, what the early explorers called the Great River of the North, courses through northwestern Canada for 2,635 miles. It rises in the Rocky Mountains, flows south, east, and north via the Peace and its tributaries. Then, gathering together the waters of the immense Athabasca, Great Slave, and Great Bear Lakes, it drains into the Arctic Ocean and Beaufort Sea. The
Mackenzie's journey from Fort Chipewyan to the Arctic Ocean. Adapted from the 1801 edition of Mackenzie's Voyages from Montreal, with original place-name spellings.

Finlay and Parsnip join to form the Peace River, and the Slave River flows to Great Slave Lake. Altogether they form a vast upper river watershed leading to Great Slave Lake. And it is from Great Slave Lake that the Mackenzie River becomes the proper flume leading northward, 1,120 miles to saltwater at Mackenzie Bay.

This upper maze was known to Alexander Mackenzie and fellow traders only by Indian report. What was not known was the course of this immense river. Mackenzie discovered a river nowhere less than half a mile wide, and often three or four miles in width along its lower reaches. Its course lay through virgin wilderness, wooded along its banks all the way to the ocean. The Great River of the North, we now know, cuts through lands rich in minerals, petroleum, and natural gas.

At nine in the morning on Wednesday, June 3, 1789, Mackenzie and his party embarked at Fort Chipewyan destined for parts unknown. There was likely still plenty of ice on Great Slave Lake, but they had left as early as the breakup of ice would allow. Their expected goal was the Pacific Ocean. Mackenzie was in one canoe, Mr. Laurent Leroux, a company clerk, in another. The two men represented a powerful combination.

Leroux, a dynamic figure in Athabascan commercial expansion, was bound first for Great Slave Lake. The self-centered Mackenzie gives scant mention of his fellow trader. We learn from other sources that three years earlier, in 1786, Leroux and his men had constructed a small post for the concern on Great Slave Lake. Four years older than Mackenzie, Leroux also came from a military family; his father had been in the Canadian service of the king of France. Quebec-born Leroux, like Mackenzie, had become a bookkeeper before entering Gregory, McLeod and Company. In 1786 he had been sent to Great Slave Lake to counter the opposition being raised from the North West Company under Cuthbert Grant. The competition grew cutthroat and violent, and Gregory, McLeod and Company amalgamated with the Nor'Westers in the summer of 1786 to end the struggle.

That summer of 1789 saw the Nor'Westers consolidating and making a profit in the waterways and lands near Fort Chipewyan. Leroux's plan for 1789 called for him to expand that trade and then retrace his route to a prearranged rendezvous with Mackenzie. The plan was successfully completed, and both men pursued complementary missions of discovery and trade that season. Their lives show interesting parallels. Not only were they both important explorers—Leroux was the first European to explore Great Slave Lake—but also both retired as prosperous merchant traders and became members of the same Lower Canada legislative assembly.

Mackenzie's "crew" consisted of four Canadian men, two of whom were accompanied by their wives. There was also a German, John Steinbruck, whose appearance in Athabasca remains a mystery. The four Canadians were Joseph Landry and Charles Ducette (destined to go a few years later on the renewed Pacific quest), François Barrieau and Pierre de Lorme. Two small canoes completed the flotilla. One contained the native who had acquired the title of the English Chief, or Nestabeck as Mackenzie also called him, with his two wives and two younger Indian men. The other canoe contained his followers. "These men were engaged to serve us in the twofold capacity of interpreters and hunters," Mackenzie wrote in his journal for that first day. As for the English Chief, follower of the equally famed Matonabbee, Samuel Hearne's guide in his expedition to the Coppermine River, Mackenzie described him as "a principal leader of his countrymen who were in the habit of carrying furs to [the Hudson's Bay Company's] Churchill Factory... and till of late very much attached to the interest of that company. These circumstances procured for him the appellation of the English Chief." Yet another canoe carried articles of trade and was under the charge of Leroux. "In this," explained Mackenzie in his Voyages,

I was obliged to ship part of our provision; which, with the clothing necessary for us on the voyage, a proper assortment of the articles of merchandise as presents, to ensure us a friendly reception among the Indians, and the ammunition and arms requisite for defence, as well as a supply for our hunters, were more than our own canoe could carry, but by the time we
should part company, there was every reason to suppose that
our expenditure would make sufficient room for the whole.

The expedition had an auspicious start in fine weather. By
seven in the evening, when they rested their paddles and
made camp on the banks of Slave River, 38 miles of lake and
river route lay behind them. Here the hunters began their
work, killing a goose and a pair of ducks. As elsewhere on
occasion, the men took the canoe out of the water to regum
its seams. The party was once more afloat on their river
journey at four in the morning, soon shooting the first rapids.
Later, at Dog River, near Fitzgerald (formerly Smith's Land-
ing), they camped for the second night, close to the rapids
that would present them with early-morning labor at sunrise.

On the third day, June 5, the backbreaking toil began early
and continued late: the portages, both numerous and long,
were made more difficult by ice, driftwood, steep landing
places and violent currents. The party lost an Indian canoe
down the falls with its "menage," though the Indian women
fortunately jumped to shore in safety. The evening meal and
bed must have come none too early. Mackenzie, who had a
reputation for driving his party, records nothing of how he
himself felt, stating only, "Men and Indians much fatigued."

The next morning brought speedy travel on the river and
comparatively easy going. Then a cold wind set in strongly,
right against their course. A storm brought on a downpour.
The canoe had to be unloaded to prevent the contents from
gaining its seams. The party was once more afloat on their river
journey at four in the morning, soon shooting the first rapids.

A t this stage, in late June, Mackenzie writes in his
journal of being lost in a maze of bays on Great Slave Lake, ice, rocks and trees. The voyageurs
picked their way through a field of broken ice. The
route proved elusive. When the clouds dispersed
Mackenzie could get a better indication of his actual position,
or astronomical location, by navigational instruments. He
could fix his latitude on his map by observing the sun at high
noon, and by using his tables, or nautical almanac, he could
obtain his approximate longitude. Determining his location
was easier than finding his way. He had to fall back on native
knowledge, and often this was incomplete or even faulty.
Mackenzie consulted with local people on several occasions.
He pressed them to reveal geographical secrets but drew a
blank. "They know nothing even of the [Mackenzie] River
but [only] the Entry," he complained. He paid a young man to
ercort the expedition in order to avoid "circumnavigating
bays." For the short term, such advice could speed up the
expedition, and that was Mackenzie's immediate aim.

They pressed on, entering a markedly different terrain. It
was, the explorer noted, one continuous view of mountains,
islands and solid rock. They completed the traverse of the lake
at last. They chanced upon an abandoned Slave camp, a former
fishery where the Slaves had kept a rendezvous until the Cree
attacked and drove them away, more than ten years before,
according to Mackenzie's reckoning by dating some cut trees.

Mackenzie and his party were not out of trouble and often
seemed lost. If not tormented by mosquitoes, they were
shrouded in fog or surrounded by fields of broken ice. "Our
guides [are] quite at a loss," wrote Mackenzie in his journal.
"They do not know what course to take." Eight years had
passed since his guide had been in that spot, and one great bay
seemed lost. If not tormented by mosquitoes, they were
shrouded in fog or surrounded by fields of broken ice. "Our
guides [are] quite at a loss," wrote Mackenzie in his journal.
"They do not know what course to take." Eight years had
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seemed lost. If not tormented by mosquitoes, they were
shrouded in fog or surrounded by fields of broken ice. "Our
guides [are] quite at a loss," wrote Mackenzie in his journal.
...
too, but he intervened on the grounds that certain signs indicated they were “close by the River.”

Indeed they were, for rounding a point early the next day, June 29, they happened upon the passage they had been seeking. They entered on a broad but shallow river, highly banked and reed. It was known anciently to the Cree as Kis-Ca-Che-Wan, “Swiftly Flowing Waters.” Here Mackenzie’s real discoveries began. The men raised sail or paddled as required and soon were beyond where any of the Redknife had ever traveled. They made camp somewhere downstream from where Fort Providence is now situated. Gradually the river, wide and full of islands for a short stretch of 10 or 15 miles, turned more toward the north, and for a time it narrowed. Mackenzie sounded for the river bottom wherever he could. The party drifted and paddled on, were deluged by a passing rainstorm, and landed and cached two bags of pemmican for future use.

Various rivers joined the Mackenzie, including the muddy waters of what Mackenzie called the River of the Mountain, now the Liard (where the Nor’Westers put up a post at “The Forks” in 1803). He knew that a great river had joined the main stream, for instead of being limpid and clear, the water had become dark and muddy. But Mackenzie and his party never saw the tributary, for the morning landscape was shrouded in fog.

On July 2 at mid morning they saw high hills or mountains stretching as far to the south as the eye could see. At noon they came abreast of the mountains, whose summits looked barren and rocky. The natives pointed out the bright white stones on the top of one of them, which they said were spirit stones, Manatee aseniah. Mackenzie at first thought it might be talc, then concluded it was patches of snow. Soon all the members of the party imagined they heard the roar of approaching rapids, but, Mackenzie said, the sound “only subsisted in our imaginations.” The next evening, hoping to get a better view, Mackenzie climbed a hill, later dubbed by travelers La Roche Qui Trempe à l’Eau, “the Rock by the Riverside.” The results were disappointing, for the countryside was surrounded by hills. To his surprise, however, Mackenzie found a campment on top of the hill—a place where his native friends and their allies could, when necessary, take refuge against the dreaded Cree. Back on the river after a wearisome, time-consuming climb, Mackenzie and his party surged forth on what now seemed to be a hissing, boiling stream. The weather turned cold, and ice formed at night on the still waters at the edges of the great flume.

And so the days passed. Ever northward the exploring party worked, as current and ice would allow. On July 5 the
The men raised sail or paddled...and soon were beyond where any of the Redknife had ever traveled.

River widened and the current slackened a little. Their course was now northwesterly, but, alarmingly, a ridge of high, snowy mountains rose ahead of them. Mackenzie said nothing of his fears at that moment. But where did the river wind? It could not traverse those snowclad heights. He was hungry for information. What did the natives know, and where were they? All lay silent along the wilderness waterway.

In the evening Mackenzie’s party spied several smoky fires, and the canoe men paddled toward them as fast as they could. They had chanced on a cluster of Slave and Dogrib families in their camp. These people were Northern Athabaskans, hunters and fishers, and at this time they were living unarmed in isolation and fear. They were surprised and frightened when Mackenzie’s canoes came into view, and took to their canoes or to the woods. Not all were swift enough to make the escape, and the fleet-footed native hunters in the explorer’s party were able to track some of them down. The hunters spoke to the Slave and Dogrib in the Chipewyan language, which at first they seemed not to comprehend—only using signs to warn off the intruders. Meanwhile, Mackenzie and his party made camp, pitched tents, and unloaded their goods and gifts. The English Chief and his young men became artful diplomats at this stage, reconciling these Slave and Dogrib to the arrival of the exploring party. Recorded Mackenzie:

When their Flurry was over and they saw we intended them no hurt, it was found that some of the Men understood our Indians very well, who persuaded them to come down to where we were which they consented to with great Reluctance, and not without evident signs of Fear, but the Reception they met with partly removed their Terror, and they recalled the rest of their People from their hiding Places.

It was a meeting of strangers, and precautions were necessarily taken. The traders had kept their distance, at the demand of those whose seclusion had been violated. Once the English Chief and his young men had convinced the Slave and Dogrib that Mackenzie and party meant no one any harm, the traders doled out tokens of friendship: ironware, trinkets, rum and tobacco. Soon the Indians became too familiar, and it was difficult for the traders to keep them out of their tents. But they did not steal or try to steal, as far as the cautious Mackenzie could observe. They had a ready knowledge of the manufactured items and other trade goods, but tobacco and alcoholic beverages were new to them. “We made them smoke,” recounted Mackenzie, “tho’ it was evident they did not know the use of Tobacco. We likewise gave them some grog to drink, but I believe they accepted those Civilities more through Fear than Inclination.”

Mackenzie traded for beaver and marten, but his mind soon turned to the river’s course. He interrogated the Slave and Dogrib, hoping for some scrap of information that would lead him to his hoped-for destination, but he was disappointed. He recorded in his journal:

The Information they gave us respecting the River, seems to me so very fabulous that I will be particular in inserting it in my account. Suffice it to say that they would wish to make us believe that we would be several Winters getting to the Sea, and that we all should be old men by the time we would return. That we would have to encounter many Monsters (which can only exist in their own Imaginations). Besides that there are 2 impracticable Falls or Rapids in the River, the first 30 Days March from us.

Mackenzie put no faith in these accounts, but the English Chief and his young men, already tired from their exertions, had quite a different reaction. They concluded, and demanded, that the explorer should quit, and that they all should return immediately to Fort Chipewyan. They feared starvation in a land where few animals were thought to exist. The farther they went, they argued, the hungrier they would become. Again Mackenzie’s diplomacy, even bribery, was effective. “I with much ado dissuaded them out of their Reasonings,” he recounted of his palaver with the English Chief and his men, “and made them to ask one of the Natives to accompany us, which they soon did.” The new recruit, as Mackenzie called him, had no great desire to undertake the mission and had to be forced to embark.

After taking note of the features and dancing of the Slave and Dogrib—important ethnographic data in its own right—Mackenzie returned to his canoe and to the challenge. He left behind acquaintances willing to await his return from his voyage. Before nightfall they were beyond the entrance to Great Bear River, which carries clear green water from that largest of northern lakes, Great Bear Lake. Along the way “our new conductor,” also called “our stranger,” gave information of a land populous in bear and small white buffalo in the mountains (that is, mountain goats and sheep). The ridge of snowy mountains always stood in sight toward the setting sun. Mackenzie yearned for a view from a hilltop—but even then, when a high rocky hill presented itself, his design was thwarted by swarms of mosquitoes.

On July 7 Mackenzie took the cautious route as advised by the Redknife. The party was now at the Sans Sault Rapids, the most difficult, dangerous stretch of the river to canoe. Following the recommendation of the guide, they portaged. Then they found that the stream would have been quite navigable. With a heavy dose of sarcasm Mackenzie wrote, “This proved to be one of the dangerous Rapids we had to pass & convinced me in my Opinion respecting the falsity of the Natives Information.” At this juncture some of the natives ran away, leaving only Mackenzie’s Redknife guide, whom Mackenzie styled “Our Conductor,” and an old man
and old woman. The English Chief and his entourage remained with Mackenzie. Apparently those natives who had run away could be brought back at the whim of the old man, who called for presents. Mackenzie brought forth the requisite articles—knives, beads, awls and the like—and soon the natives were pacified and pleased.

The conductor wanted to quit the enterprise. Mackenzie, by means not stated, forced him to embark and to continue. Four canoes followed Mackenzie's, altogether forming a small flotilla. Mackenzie, alert to dangers of the stream, posted one of his traders or voyageurs in each of the native canoes to make sure that the portage around the next, promised rapids would be found. "They, like the other people, told us many discouraging stories," he recounted of his recent informants. These natives, it seems, had underestimated the abilities and the daring of the Canadian voyageurs. In the end, however, the canoes passed safely down the narrow channel.

Late that evening Mackenzie received his first warning of the Eskimo or, as they call themselves in Canada, the Inuit, "the people." Nowadays they are styled the Mackenzie Inuit, or Inuvialuit, the western Arctic Inuit of the Mackenzie River. In Mackenzie's time they lived in numerous local groups, always changing, that fringed Arctic waters from Greenland to Siberia. Migratory hunters, they roamed the lower Mackenzie River area and were few in number. They traded with the Dene and other natives, bringing iron for making knives. They had a reputation for violence. One of Mackenzie's hunters described them not only as "very wicked" but also as very likely to murder Mackenzie's men. Two summers before, it seems, a great party of Inuit had come far up the river and killed some of the informant's relatives. Mackenzie learned of violent struggles between Dene and Inuit.

Now another crisis came upon them, for the conductor again wished to abandon the enterprise. "Our Conductor," recorded Mackenzie on July 9, "like the others, wanted to leave us here. He was afraid that we should not come back this way, & besides that the Eskmeaux would perhaps kill us & take their Women from my Men & Indians, & that he was afraid of them too." The natives with Mackenzie brazenly told the conductor that they were not afraid and that he ought not to be either. Certainly they would all return by this way. The conductor embarked, and the canoe pushed off. Mackenzie pondered this new information: "Those Indians told me that from where I met the first of their People this Morning it was not far to go to the Sea over Land on the East Side & from where I found them it was but a short way to go to it to the Westwd, that the land on both sides the River was like a Point." Mackenzie noted these particulars dutifully in his journal but did not comment. In an unknown country—even lost—Mackenzie had no geographical basis to challenge his informants.

The party had now traveled down and through the Ramparts—that grand scenic wonder of the river where the majestic, mile-wide waterway rushes through a gorge 300 to 400 feet wide. Beyond the Lower Ramparts, on July 10, Mackenzie observed differences in the environment. The snowy mountains, the Rockies, lay ten miles away to the west. The river had widened and now ran in many channels among countless islands. There were larger trees than any they had seen in the past ten days. Ice lay on the banks above the river, left there by the rapidly falling stream.

Mackenzie took an observation at noon (67°47' north latitude) and added laconically to his journal that this was "further North than I expected, according to the course I kept, but the difference is partly owing to the variation of the Compass which is more Easterly than that I thought." And, indeed, the farther north he traveled, the greater the magnetic variation became. He was in a land of endless day, and nights became full daylight hours. Mackenzie could sit up and watch the curious passage of the sun in those latitudes.

But where was he? Mackenzie was at a loss as to his location and admitted as much in his journal. He was certain that going farther north on the main river channel "will not answer the Purpose of which the Voyage was intended, as it is evident these waters must empty themselves into the Northern Ocean." The conductor groaned at having to go on, claiming that he had never seen the Benahulla Toe, "White Man's Lake." Mackenzie believed he could not get back to Fort Chipewyan by the end of the traveling season and decided to go "to the discharge of those waters." His hunters, he wrote, were "quite disquieted with my voyage." Mackenzie told them that he would go on for seven days more and that, if he did not reach the sea in that time, he would begin the return journey. The party continued on, past remnants of Inuit camps, piles of whale bones, and a house for drying fish. The weather grew raw and disagreeable, and the hunters continued to complain. A new realization dawned: that they were near the shores of the Arctic Sea.

On July 12 they paddled to an island, Richard, from which they could see water covered with ice for six miles. This was the limit of their travels. Mackenzie and the English Chief mounted the summit of a hill for a better view. As far as the eye could see, all around lay water and, to the southwest, distant mountains. They pondered this maze of water and land, this complex and baffling delta. Was this the sea? Mackenzie did not think so, or perhaps did not choose to think so. He called it in his journal "the entrance of the lake." Apparently he clung to the thought that it could not be saltwater. In his journal he expressed the disappointment they all felt:

My men express much sorrow that they are obliged to return without seeing the Sea, in which I believe them sincere for we marched exceeding hard coming down the River, and I never heard them grumble; but on the contrary in good Spirits, and in
hope every day that the next would bring them to the Mer d'Ouest, and declare themselves now and at any time ready to go with me whenever I choose to lead them.

They had not reached the western sea. The rising tide that awakened them and the sight of beluga whales sporting in the bay beyond their camp island led Mackenzie to the incontestable conclusion that this was the Arctic Sea. Still, he continued his research and tried to find some Inuit who could give him more information about the shoreline. The conductor advised that the Inuit had gone on their annual whaling and caribou-hunting expeditions. Besides, the water had become very deep. Mackenzie decided that the party should return to the river, where they found shelter from the winds but were much tormented by mosquitoes in consequence.

If Mackenzie was disappointed he did not record this in the pages of his journal. From the search for a western lake he turned his attention to the habitat. He recorded particulars of that place in that time, which are now invaluable for the environmental historian. He made notes on berries, plants, and herbs; on wildlife, especially birds; and on rock, sand, and clay, particularly red earth “which the Natives bedaub themselves with.” Aware that many contemporary European intellectuals were curious about the botany and zoology of the globe, Mackenzie took pains to portray a new and uncharted world for science, one now known to be a fragile ecosystem. Of permafrost, he wrote: “I had my Hanger in my Hand & tried frequently in any part of the ground how’d but could never make it enter above 6 or 8 inches.”

On July 14, 1789—precisely the same day when an angry Paris mob was storming that ancient prison-fortress the Bastille and ushering in the French Revolution—Mackenzie was making a testament to his northernmost thrust. That morning he fixed a post on Whale Island, “on which I engraved the latitude of the place, my own name, the number of persons I had with me, and the time we had been here.” Whale Island’s location has been a subject of controversy, but Garry Island resembles Mackenzie’s bivouac in size and shape. No record exists that the post, planted close by Mackenzie’s camp, has ever been found by Europeans.

Mackenzie now began the upriver journey, against a very strong current. The passage was tedious and the work laborious. The Redknife guide took his leave, totally unannounced. Apparently frightened that Mackenzie intended to make him a slave and perhaps kill him, he vanished, leaving behind a shirt that Mackenzie had given him, so that he would not be in debt to the explorer.

By July 27 they were well on their way upriver, and from Dene people Mackenzie learned that the natives knew of no river of the West except by hearsay. They claimed that none of them had gone beyond the western mountains. There was talk, however, of a river that led toward the midday sun. From one Dene he learned of a European-style fort and concluded: “this I take to be Unalaschka Fort & of course the River to the west to be Cooks River & this to fall into or join with Nosta [Norton] Sound not as a River but a body of dead water.” Mackenzie could not get a guide to go westward with him. Presents and bribes would not work. The natives told fascinating and fabulous accounts of the people beyond the mountains—“that the People at the Entry of the River kill men with their Eyes”—and Mackenzie found himself at a loss as to how to get accurate information. Yet he was not resigned to his circumstances, even though he had apparently exhausted the patience of his guides. He wrote:

It is very certain that those People know more about the Country than they choose to tell me at least than what comes to my Ears. I am obliged to depend upon my Interpreter for all News, his being now & long since tired of the Voyage may occasion him to conceal from me part of what the Natives tell him for fear he should be obliged to undergo more fatigue— tho’ he has always declared to me that he would not abandon me wherever I went.

Mackenzie made one last, desperate attempt to get at the truth; he needed guides, and offered iron and beads for their pains. Despite his feigned appearance of anger, he got nowhere. Exploration westward would have to await another season. They passed by “oil seeps,” where oil was discovered nearly a century and a half later, in 1925, and they saw a seam of burning lignite, still burning in our own time.

By August 22 they had reached the entrance of Great Slave Lake, where they made sail as much as heavy winds would allow. On the next day:

We paddled a long way into a deep Bay to take the wind, when we came to hoist sail, we found we had forgotten our Mast at our Campment, landed and cut another, hoisted sail which drove us on at a great rate, at 12 the wind and swell augmented much, our underyard broke, but luckily our Mast Top resisted till we had time to fasten down the Yard with a Pole without lowering sail, took in much water, and had our Mast given way in all probability we should have filled and sunk.

These freshwater argonauts sailed heavy seas, and they went on in great danger along a nasty lee shore. Two men bailed frantically as water came in on every side, until at last the canoe doubled a point that provided a screen from the wind and swell. There the party camped, gummed the canoe, set their nets, and waited out the storm.

The next day, August 24, Mackenzie and his men were reunited with Leroux’s advance guard, returning from their enterprise. The trade had not met expectations, for the natives were afraid of the Europeans and needed material inducements to trade. Leroux at last arrived, but the English Chief defected for a time. Mackenzie now ordered Leroux to stay behind and carry on the winter trade. Mackenzie also ordered the English Chief to trade in the land of the Beaver Indians and to bring their beaver and marten to Leroux and...
to Athabasca next March. These arrangements complete, on September 1 in fine calm weather Mackenzie was again in his canoe, passing the Isle la Cache where several months earlier provisions had been secreted for Leroux. Overhead, numerous flocks of wildfowl headed southward. It rained in streams; the canoe broke during a portage, forcing a delay for repairs; the men were much fatigued.

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riday, September 11, was the next to last day of this adventure. The men were up early, at four, and trod the frozen ground. There was an appearance of snow, they took to the water, and they made an early camp. The next day, with a wind from the northeast, they entered Lake Athabasca, not far from their return destination. "The Wind veered to the Westward, and as strong as we could bear it with high Sail, which wafted us to Fort Chipewyan."

Upon his return to Fort Chipewyan, 102 days after setting out, Mackenzie had completed a round trip of nearly 3,000 miles. His cousin Roderick observed that the perilous undertaking had been experienced without any material accident. This was a remarkable feat, and the fact that the various natives knew of these waters, or segments of them, should not deny the significance of the wayfarer coursing through what was to the wider world unknown territory.

Had Mackenzie not kept a journal of this voyage, in which he recorded the events of the journey for posterity, modern understanding of the opening of the Northwest would have been lessened. In an era that disparages heroes, Mackenzie's northern achievement remains a mighty contribution to the empirical comprehension of the vast landscape. This success can never be taken away from him. In fact, these on-the-ground gatherings of data are little more than Mackenzie claimed for himself. He never pretended to have found a northwest passage, or to have gone beyond Samuel Hearne's achievements of being the first European to stand on the Arctic shores of America, or to have proved the nonexistence of a water throughway across the continent. The exploration and discovery of the Mackenzie River formed a distinct step in the exploration of the Canadian North, especially the subarctic. It opened to fur traders an access to present-day Mackenzie District and Yukon Territory.

The map of the far Northwest—including the northern interior of British Columbia, the western Northwest Territories, the Yukon, and eastern Alaska—was expanded by Mackenzie's energies. For a century and more, successors of Mackenzie and Leroux pushed their trade into every creek and valley. They continued the exploration of this vast quarter of the continent and opened the Yukon before the discovery of gold. Erecting posts on lakes and rivers, they set up a network of trade with the natives long before missionaries arrived to plant the cross or government agents came to raise the flag. Mackenzie's exploration, we now know, served an additional purpose, that of giving explorers an important access to the Arctic. The Mackenzie River was used thus by John Franklin in 1820, and in later years this British naval officer explored much of the northern coast of mainland North America from the delta of the Mackenzie River.

Thirty-five years after Mackenzie stood at the Arctic shoreline, Franklin, who possessed vastly superior instruments, confirmed the accuracy of his predecessor's observations. "The survey of the Mackenzie made on this Expedition differs very little in its outline from that of its discoverer, whose general correctness we had often occasion to admire." The compliment was handsome, and it came from an explorer who had made good use of advice from Mackenzie. Admittedly, differences existed on several points of latitude. Franklin attributed these errors to the fact that Mackenzie had laid down latitudes by compass bearings and to his lack of means of detecting changes in magnetic variation, which are wild in that region. Mackenzie's northern legacy was assured: The mouth of the Mackenzie River had been fixed correctly on the chart and the general course of the river delineated. Franklin's testimonial speaks volumes.

Mackenzie may have named the great waterway, as he called it on one occasion, the "River Disappointment." Certainly it was that to him. He also referred to it as the Grand River, a name that is nearly identical to the Dene appellation Deh-Chö, "the River Big." Mackenzie and Leroux pushed the fur trade throughout its headwaters in subsequent seasons. They commenced the development of the river as a highway of opportunity. Within a century paddle-wheel steamers plied the lakes and rivers of the Mackenzie River system, and a series of communities became linked by steam and telegraph.

Those who have studied voyage literature and have noted discrepancies in the reading of longitude specifically will realize that even the most highly trained and practiced users of instruments did not always reach the hoped-for precision of measurement. Reading the narratives and charts of Captains James Cook, George Vancouver, and F. W. Beechey shows that accuracy was approximate, not absolute. As regards latitude, Mackenzie's observations made on the Mackenzie River on June 24, 1789, were about seven miles off. Mackenzie himself realized he needed more accurate methods, and admitted as much. He recalled later that "in this voyage [to the Arctic], I was not only without the necessary books and instruments, but also felt myself deficient in the sciences of astronomy and navigation. I did not hesitate therefore to undertake a winter's voyage in order to procure the one and acquire the other."

At least one other reason compelled Mackenzie toward spending some time in London. "My Expedition was hardly spoken of, but that is what I expected," wrote Mackenzie acidly to Roderick from Grand Portage on July 16, 1790. He felt isolated and dejected. He received little news of family
This rock bears witness to Mackenzie’s arrival on the British Columbia coast in 1793, four years after his first exploration party wound up at the Arctic Ocean instead of the Pacific.
DECEPTION PASS, situated on the eastern side of Puget Sound between Fidalgo and Whidbey Islands, is one of the most famous and spectacular landmarks in Washington. It earned its name from a disappointed British cartographer who thought he had found the western entrance to the legendary Northwest Passage. Since that time, Deception Pass has fooled many a sailor seeking to study the beautiful and strategic Puget Sound. One such seaman was Lieutenant Commander Wilfrid von Löwenfeld (1879-1946), an officer in the Imperial German Navy, who studied Puget Sound from his desk at the Marineakademie (Naval War College) in Kiel, Germany, in 1910.
Serving as Washington's highway to the world, Puget Sound was a thriving economic region at the turn of the 20th century. Produce and products from the state's farms, forests, waters and mines flowed through the sound to the world. Puget Sound also possessed strategic value. With the acquisition of Hawaii, Guam and the Philippines in the late 1890s, the United States had become a major force in the Pacific. The sound, particularly with the establishment of a naval shipyard at Bremerton, provided support for the projection of American sea power throughout the broad expanse of the world's greatest ocean.

These factors had come to the attention of Lieutenant Commander Löwenfeld while a student at the Imperial German Navy's postgraduate Naval War College. He had chosen to study the economic and strategic value of Puget Sound as part of a Winterarbeit, a major research project undertaken during the long winter months of the academic year. Although these projects were largely scholastic exercises, the Kaiser's navy often incorporated Winterarbeiten into strategic and operational planning.

Löwenfeld completed his study in May 1910 under the title, "Which harbor on the American West Coast is best suited as a naval base due to its location and resources?" He noted that the United States Navy had divided its technical and logistical facilities among Puget Sound, San Francisco and San Diego rather than concentrate them more efficiently at a single major naval center on the West Coast. According to Löwenfeld, this division of resources had hindered American naval operations during a diplomatic crisis with Japan in 1907. An ensuing decision by the navy to station more warships in Pacific waters further proved the efficacy of a central base on the West Coast. "The primary purpose of this study," Löwenfeld therefore wrote, "is to identify the one site that is most suitable as a naval base for the United States Navy."

There was a second, operational, purpose for Löwenfeld's research. His study might well become the basis for German contingency planning in case of war with the United States. Admittedly, German naval forces in the Pacific were relatively weak in 1910, consisting of the cruiser squadron, stationed at Tsingtao, China, and an occasional ship assigned to protect German colonies in the western and central Pacific. Although Germany had no battleships in the Pacific, heavy cruisers Scharnhorst and Gneisenau, the core of the cruiser squadron, could do significant damage to the commerce and communities of Puget Sound with their 21-centimeter guns.

Löwenfeld used a variety of public and confidential sources for his research. Outdated British charts provided sailing directions and navigational details, including misleading information on Deception Pass, for Puget Sound and Washington's coastal waters. Secret documents from the files of the Admiralty staff in Berlin produced material on American naval strategy and warships. Details on Puget Sound's existing naval facilities and coastal artillery posts came from Marine Rundschau, the German Navy's official naval review, and various American naval journals.

From his research Löwenfeld concluded that the United States Navy needed to establish a large naval station (Marinestation) with complete technical, logistical, shipbuilding and repair facilities. (A Marinestation differed from a smaller "war harbor" (Kriegshafen) whose only function was to provide coal and ammunition.) He therefore used five criteria to establish the value of a site: 1) geographical proximity to the fleet's primary operational areas, 2) a spacious and protected anchorage, 3) the existence of technical and logistical facilities, 4) defensive capabilities against land and sea attacks, and 5) transportation links to interior sources of supply. His study sought to match these criteria to existing or potential sites in Washington, Oregon and California, focusing particularly on Puget Sound.

LÖWENFELD EXAMINED a variety of sites in Washington. He quickly discounted the small bays on the Pacific coast, noting that they lacked development potential. These sites, including Gray's Harbor, had little value except as shelter for smaller warships such as torpedo boats. He also found limited worth in the northern Olympic Peninsula that bordered on the Strait of Juan de Fuca. He noted that Port Angeles lacked an adequate anchorage, defensive potential, and a rail link to the interior.
He concluded that Port Angeles made an excellent contribution to the American fishing industry but had little potential for the navy.

Puget Sound offered greater promise. Löwenfeld described the sound as a vibrant and vital region, noting that "trade and shipping flourish there and several cities profit from these circumstances."

The first city to profit, and thus earn his interest, was Port Townsend. He described Port Townsend as the primary fishing site (Hauptfischereiplatz) on the sound and noted that it fulfilled several of his preferred characteristics. For example, its spacious bay possessed a good anchorage and natural protection against wind and sea. Although Port Townsend’s existing maritime resources were inadequate to support a naval fleet, Löwenfeld believed that minimal improvements would upgrade its facilities to a point where they could support submarines and torpedo boats. Port Townsend failed the final test because its rail link to the interior was unable to provide adequate logistical support for a naval base.

Although Port Townsend may not have possessed the appropriate characteristics for an American naval base, nearby Fort Worden provided the first barrier to a German attack. Löwenfeld wrote, "The location of adjacent forts makes Port Townsend the first focus of an attacking fleet." He noted that Fort Worden lay at the apex of the renowned "Devil's Triangle," an interlocking series of fortifications whose artillery commanded access to Admiralty Inlet. He continued, "Analysis shows that every part of the Puget Sound is secure from attack so long as the forts along Admiralty Inlet are not forced or destroyed." Löwenfeld counted approximately 20 heavy guns, including 12-inch guns in disappearing turrets, and 16 smaller cannons at Fort Worden and Fort Flager on the western side of the inlet. The 10-inch guns of Whidbey Island’s Fort Casey completed the triangular defenses. Admiralty Inlet also possessed what Löwenfeld called "natural" defenses: a narrow channel, strong tidal race and dense fogs. Port Townsend, he believed, was even immune to overland attack because the large garrison at Fort Worden had sufficient strength to repel an amphibious attack. "These circumstances," Löwenfeld concluded, "completely favor the defender."

Because these defenses blocked access to the southern part of Puget Sound, Löwenfeld proposed an alternate course for an invading German fleet that would avoid the deadly waters of Admiralty Inlet. His obsolete English charts, examined at his desk in distant Kiel, revealed the existence of a narrow channel—Deception Pass—between Fidalgo “Peninsula” and Whidbey Island. He therefore proposed that the German assault force pass through this channel and steam down the eastern side of Whidbey Island to attack targets in the southern part of the sound. To anyone familiar with the area, the image of a 15,000-ton battleship attempting to transit Deception Pass evokes great mirth. Löwenfeld, however, noted the following major drawback to this route: "Although this passage avoids the large fortifications on Cape Wilson, it could be easily blocked and thus rendered impassable in time of war."

Löwenfeld’s brief look at Deception Pass and the eastern side of Puget Sound led him to examine the potential of Everett. But Everett, situated on Possession Sound, also failed to fulfill his criteria for a base site. The existing port lacked a real harbor, had only a limited anchorage, and offered few facilities except for a small dock with a 1,500-ton load capacity. Löwenfeld therefore believed that Everett had
no value for capital ships but could provide support for torpedo boats and submarines. (Modern technology later proved Löwenfeld wrong. Everett became home port for the 96,000-ton aircraft carrier USS Abraham Lincoln (CVN-72) in January 1997.)

Although Everett lacked maritime facilities, it did have significant economic potential. Löwenfeld noted its role as a major trading port (Hauptausfuhrhafen) that could draw on the interior for provisions, coal and fresh water in large quantities. It also had excellent rail links east to Spokane and south to Seattle and Portland.

Seattle, of all the Puget Sound ports, best fulfilled Löwenfeld's criteria as a naval station. He called Seattle the primary trading port (Haupthandelsstadt) of the entire sound and noted that it was the second largest city, after San Francisco, on the West Coast. He cited its position as a major railroad terminus and emphasized its important role in Pacific commerce. The city supplied Alaska and East Asia with agricultural produce, the region's primary export (Hauptexportartikel) from the farms of the American West.

Seattle also possessed the best maritime facilities in the northwestern United States. He noted, "Its excellent docks, shipyards, and logistical resources support every kind of warship used by the United States Navy." Elliott Bay—his outdated charts referred to Duwamish Bay—provided an anchorage roomy enough for an entire fleet. Ships could also anchor directly off Seattle's piers or moor to its docks.

Shipbuilding was already one of the city's most important industries. He noted that Moran Brothers, Seattle's largest shipyard, had recently constructed the 15,000-ton battleship Nebraska (BB-14). He also wrote, "The shipyards and works in Seattle can provide all appropriate facilities for ship repair." He cited the large dry dock belonging to the Seattle Dry Dock and Shipbuilding Company and a substantial number of machine and boiler manufacturers, including the Queen City Center Boiler Works, Seattle Boiler Works, Washington Iron Works and the Vulcan Iron Works. Seattle, he believed, could establish additional facilities with a minimal investment. Löwenfeld concluded, "These facilities fulfill all necessary elements of a first-class naval base." Seattle's single drawback, he noted, was that the heavy commercial traffic in Elliott Bay would impede naval movements in the southern part of the sound.

Tacoma was a distant second choice as the site of a naval base. Situated on Commencement Bay, 23 nautical miles south of Seattle, Tacoma had the potential of becoming the most significant forest products port (Holzhandelsplatz) in the world. Although the bay's great depths prevented anchorage except in the innermost part of the harbor, ships of all drafts could anchor near or at its two-mile-long quay. Löwenfeld also noted the availability of coal, water and provisions in sufficient quantities. The port already possessed adequate technical facilities. For example, the Puget Sound Dry Dock Company on Quartermaster Bay could hold warships up to cruiser size. Repair facilities included the Puget Sound Iron Works, Olympic Iron Works and the American Foundry Company. There was also an army depot, linked to nearby Camp Lewis, that provided transit facilities for troop transport to Alaska and Manila. Tacoma's only drawback was its location. Although Tacoma had substantial value as a base, Löwenfeld believed that it lay too distant from the Strait of Juan de Fuca to provide rapid exit from Puget Sound.

Olympia, south of Tacoma at the extreme end of the sound, was briefly examined but quickly rejected because only small warships, the ubiquitous torpedo boats and submarines, could transit its shallow channel and use its limited technical and logistical facilities. Löwenfeld nonetheless praised Olympia's inhabitants for working to develop the city's maritime potential. "It is a city," he wrote, "that has tried to provide through hard work what nature has withheld." To become a useful port, Olympia would require the dredging of a full shipping channel and the development of more facilities. He doubted, however, that the navy was willing to commit to such an extensive financial investment when better sites existed elsewhere.

Löwenfeld closed his study of Puget Sound with an analysis of the navy's current base at Bremerton. Established in 1891 on Sinclair Inlet on the western side of the sound, the Puget Sound Naval Shipyard had recently completed a refit of the battleship Wisconsin (BB-9). The base had also provided lo-

Löwenfeld noted that modern forts and batteries would hinder the approach of an attacking force through Rich Passage.
gistical and technical support for Teddy Roosevelt's "Great White Fleet," the American naval demonstration between 1907 and 1909 that asserted a global role for the United States Navy and provided a subtle warning to Japan. Löwenfeld had particular praise for the base's coaling dock, which contained 23,000 tons of coal, and modern coaling facilities.

Bremerton's only drawback, Löwenfeld asserted, was its relative isolation. It lacked, for example, adequate rail access both to the interior and to the populous eastern side of the Sound. Nonetheless, a substantial investment would expand the base to a point where it could more fully serve the navy's global needs. Bremerton resembled Port Townsend in the difficulty it presented to attack. Löwenfeld noted that modern forts and batteries would hinder the approach of an attacking force through Rich Passage and concluded that a strong local current probably precluded the establishment of a minefield.

The remainder of Löwenfeld's Winterarbeit dealt with sites in Oregon and California. He briefly examined Astoria and Portland on the Columbia River, but concluded that both possessed only mediocre anchorages and limited facilities. He noted, "This is in stark contrast to the natural harbors of the Puget Sound." He studied San Francisco and San Diego in detail while providing only brief evaluations of the bays of Monterey, San Luis Obispo, Santa Monica and San Pedro. He concluded that San Francisco Bay, with its spacious anchorage and existing naval facilities, was the best California site.

Löwenfeld introduced a new factor as he drew his final conclusions. He expected that any American decision to create a single major base on the West Coast first depended on an analysis of potential enemies. He wrote, "A fleet should always prepare itself for a war against its most dangerous foes. The location and allocation of the fleet should conform to this principle." His analysis of potential conflicts, Germany excluded, produced two possible enemies: Japan and Great Britain. He quickly discounted Britain, even with the history of Anglo-American tensions in the Northwest, and concluded that the United States faced the primary possibility of war against Japan.

He also reversed himself on the important criteria for base selection. Because of the sheer immensity of an operational area comprising the entire North Pacific, he now decided that location was the most important factor: "One should conclude that geographical considerations, rather than technical facilities, should play a greater role in a final decision."

He noted that the naval base should be so situated as to permit the fleet to respond in the shortest possible time to a threat at either end of the coast. The site should lie at the geometric center of the operational area. He therefore rejected Puget Sound, arguing that its location in the Northwest moved it away from the center of operations, in favor of San Francisco. The Golden Gate, he noted, lay "practically in the center" of the Navy's operational area, 650 nautical miles from Canada and 450 nautical miles from Mexico. He concluded, "Because this site thus fulfills the geographical requirement, it would appear to be the obvious choice. Under all appropriate circumstances, San Francisco Bay is the most favorable site as a naval base for the United States Navy."

THE NAVY, HOWEVER, failed to align itself with Löwenfeld's opinions. Instead of establishing a single Marinestation, the Americans continued to divide technical facilities among the three major West Coast ports. Also, San Diego—not San Francisco—eventually became the center for naval operations, at least until the Pacific Fleet moved west to Pearl Harbor in 1940.

Likewise, the German cruiser squadron never steamed through Deception Pass to bombard Everett. Well before the United States entered World War I (in April 1917), the German ships had fled the Pacific and met destruction at the hands of a British fleet in the Battle of the Falkland Islands.

Although the coastal fortifications in the Devil's Triangle have long been dismantled and converted to state parks, the navy still recognizes the strategic value of Puget Sound. Even with reductions in post-Cold War budgets, current naval facilities include the Bremerton navy yard, the ballistic missile submarine base at Bangor, the Whidbey Island Naval Air Station, and the new facilities at Everett.

And, ever living up to its name, Deception Pass continues to confuse the uninformed.

Terrell D. Gottschall is a professor of history at Walla Walla College. He found the document that forms the basis for this article while researching at the German naval archives in Freiburg, Germany.
Uncover the Northwest's Diversity.

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New Light on the History of Hanford


On Sidesaddle to the Columbia


The Washington State Capitol Campus


Rivers of the West


The Kaiser’s Navy Surveys Puget Sound


Seeking the Northwest Passage and the fabled link to Russia, Japan, and Cathay, Alexander Mackenzie drove himself and his men relentlessly, by canoe and portage, across the uncharted rivers, valleys, and mountains of North America. Mackenzie’s 1789 journey to the Arctic Ocean and his arduous journey to the Pacific in 1793 predate the Lewis and Clark expedition. By the age of thirty-one, Alexander Mackenzie had become the first man to cross North America from the northwestern hub of the interior trade, Lake Athabasca, to the Pacific Ocean. He had opened the continent to trade and exploration.

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First Across the Continent
SIR ALEXANDER MACKENZIE

Volume 14 in The Oklahoma Western Biographies.

Barry Gough, Professor of History, Wilfrid Laurier University, Waterloo, Ontario, is the author of a dozen books and many articles on American British, and Canadian frontiers and exploration, including The Northwest Coast: British Navigation, Trade and Discoveries to 1812.

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 Legends of Our Time  
Native Cowboy Life  
Edited by Morgan Baillargeon and Leslie Tepper.  
Reviewed by Michael Allen.

The Indian cowboy—on the ranch and in the rodeo arena—makes a fine focus for a discussion of assimilation vs. preservation among North American Indians. Does the fact that so many Indians have, in this century, chosen the “cowboy way” demonstrate the degree to which they have adapted to non-Indian culture? Or does it instead show the strength of native traditions? Perhaps the answer lies somewhere in between? In Legends of Our Times, Morgan Baillargeon and Leslie Tepper take the middle road, “honouring the men and women who have lived in harmony with their Native heritage while adapting to a cowboy way of life.”

This handsomely illustrated book is an offspring of the Canadian Museum of Civilization’s namesake exhibit, follows its general organization, and recycles artifacts, text, reminiscences, poetry, photography and art used in the exhibit. Despite its generalized title, this is a Northwest history book—or Southwest, if you are Canadian. It deals solely with Plains and Plateau Indians of the American Northwest and the Canadian Southwest. It is organized around three sections. The first, “Sacred Beings,” addresses ancient Indian animal lore and animal-related traditions which, the authors argue, figure importantly in contemporary Indian cowboy culture. The second section, “Ranching Life,” covers working Indian cowboys; the third section, “Rodeo and Other Entertainment,” traces the story of Indian cowboys in Wild West shows and rodeos, past and present.

None of these sections, or the chapters within them, comprise true narrative histories—rather, they contain a smorgasbord of loosely connected material. Transcriptions of oral tales and historic photographs of material culture (saddles, halters, horse blankets and other tack) accompany firsthand reminiscences and some interesting contemporary photographs. The editors (and a few other scholars) have written some formal essays and an introduction and conclusion.

Peter Iverson’s When Indians Became Cowboys (1994) is the definitive study of North American Indian ranch and rodeo cowboys. This book is more of a scrapbook than a comprehensive, documented treatment of its subject. Yet Legends of Our Time provides an important Northwest regional focus for its subject and, as its editors note, a starting point and source material for those who someday may pursue a more thorough study of these true Western buckaroos, the Northwest Indian cowboys.

Michael Allen teaches at University of Washington Tacoma and is president of the Ellensburg Rodeo Hall of Fame. His most recent books are Rodeo Cowboys in the North American Imagination (University of Nevada Press) and, with Mary L. Hanneman, Frontiers of Western History (Simon and Schuster).

First Across the Continent  
Sir Alexander Mackenzie  
Reviewed by J. Richard Nokes.

With the bicentennial of the expedition led by Meriwether Lewis and William Clark to the Oregon Country only a few years away, Americans need to realize that those intrepid adventurers were not the first white men to cross the North American continent. Barry Gough, history professor at Wilfrid Laurier University in Waterloo, Ontario, has written a well-timed reminder that a Scot, Alexander Mackenzie, led a party of Canadians to the Pacific shore of British Columbia in 1793, more than a decade before Lewis and Clark arrived at the mouth of the Columbia River.

Gough provides an admiring but concise account of the adventures of this determined fur trader-explorer. There is no denigration of the importance of the Lewis and Clark expedition, but Gough does hold up Mackenzie as the true transcontinental hero. His trek, of course, was north of the ultimate Canada-United States border, while the route of Lewis and Clark ran south. Each party had to fight through wilderness, canoe on turbulent streams, climb difficult mountains, hunt and fish for food, and contend with sometimes threatening but more often helpful natives.

Mackenzie, Gough notes, was a native of Scotland who came to North America as a boy of 12. Early on he engaged in the fur trade and after a time was posted to Canada’s frontier. He joined others in a partnership that became the North West Company, based in Montreal. The legend of a northwest passage between the Atlantic and Pacific had not been entirely exploded in the late 18th century, and Mackenzie, like others, determined to find some kind of water route through the continent. His first attempt to find the “River of the West” landed him, instead, on the Arctic shore as his party followed a north-flowing river named in his honor.

Undeterred, he mounted a second expedition, leaving his base at Fort Chipewyan on Lake Athabasca on October 10, 1792. After tremendous difficulties, Mackenzie’s party reached an inlet of the Pacific Ocean at a Bella Coola native village on the coast of British Columbia, north of Vancouver Island, on July 20, 1793.

Mackenzie, after he had amassed a considerable fortune in the fur business, returned to his native Scotland where he died in 1820. Gough sums up Mackenzie’s career thus: “By canoe and portage he sought the northwest passage and the fabled link to Russia, Japan, and China. He found something far greater: the wealth of a slumbering half-continent.” It might be added that Mackenzie’s journey to the Pacific shore was a foundation stone for the British claim to the northern part of the Northwest Coast, today’s British Columbia.

Gough’s account of Mackenzie relies heavily on the fur trader’s own journal. But Gough also has plumbed many other sources. One could wish that the book provided footnotes, but there is an extensive list of reference material. While the book is not designed as the complete work on Mackenzie, it will satisfy most readers.

J. Richard Nokes is retired editor of The Oregonian and author of Columbia’s River: The Voyages of Robert Gray, 1767-1793.
Terra Pacifica
People and Place in the Northwest States and Western Canada
Reviewed by Adam M. Sowards.

The ten fine essays in this book originated as part of Washington State University’s Sherman and Mabel Smith Pettyjohn Distinguished Lecture Series. Under the deft editorial direction of history department member Paul Hirt, some of today’s most prominent historians of the Western United States and Canada provide varied perspectives concerning Pacific Northwest history.

Two sections comprise the book. The first, “Regions, Nations, and Global Relations,” places the Pacific Northwest in its diplomatic, intellectual, national and global history. David J. Weber describes the much-neglected topic of Spanish presence in the Northwest and Canada; Richard W. Etulain details the shifting pattern of regional literature; Patricia Nelson Limerick illustrates where the Hanford Nuclear Reservation fits into national trends; Donald Worster compares American and Canadian myths of development; and Gerald Friesen uncovers overlapping themes between Western Canada and the American Northwest. Best epitomizing the integrative approach is Kenneth S. Coates’s essay about the mountain frontier. He argues that local and global history are not antithetical but mutually supportive. To illustrate, Coates carefully unravels global trends and influences in the region and how local reactions and developments have affected the world economy and culture. He underscores world events such as global resettlement and resource exploitation in addition to local movements such as the origin of Greenpeace and the growth of Microsoft. It is an impressive interpretation.

In the second section, “Natives and Newcomers,” four scholars offer studies of diverse individuals or groups. Julie Roy Jeffrey places missionary Narcissa Whitman within the context of white, middle-class women who cultivated a life distinct from their male counterparts; John B. Wunder reveals the depressing story of how courts have eroded much of Indian sovereignty; and Susan H. Armitage tells of Annie Pike Greenwood and her family’s attempt to make a southern Idaho homestead profitable while battling a persistent lack of capital, trying environmental conditions, and misleading boosterism. Quintard Taylor ends this section with an important exposition of African-American migration during the 1940s. Taylor demonstrates the trials and achievements black American migrants confronted during World War II and the following postwar economic boom. The underlying point is that the urban Northwest remains both a battleground for extending rights and a site of increasing opportunity for all citizens.

Terra Pacifica nicely supplements regional history and will encourage readers to understand the Pacific Northwest from multiple vantage points. The authors have written compelling essays and have succeeded admirably in widening our historical perspectives.

Adam M. Sowards is completing a history of the Cascade Mountains of the Pacific Northwest.

Current & Noteworthy
By Robert C. Carriker, Book Review Editor

The writing of local history, which got an upward boost during the state centennial of 1989, lost some of its momentum during the early years of this decade. Happily, that trend is reversing itself. Mazama—the Past 100 Years, by Doug Devin (Seattle: Peanut Butter Publishing, 1997; 155 pp; $19.95) brings together the history and photographs of the Upper Methow Valley. Among its ten chapters are two that deal with Early Winters, the 1980s ski resort development that had everything going for it, including extensive local business support, but suddenly vanished from the map for unknown reasons. In the 1990s the concept reappeared, this time as Arrowleaf Resort. Curious? Get a copy of the book at the Okanogan Historical Society or the Shafer Museum in Winthrop.

Day Island: A Glimpse of the Past, by Marcia Willoughby Tucker (Tacoma: Rhododendron Press, 1997; 98 pp; $10.95) is a spiffily history of the sandspit just beyond the Tacoma Narrows. Begun as a term paper in a Tacoma Community College history course taught by Murray Morgan and fact-checked by redoubtable local historian Gary Fuller Reese, Tucker’s research is accurate and her writing delightful. Would that every island in Puget Sound had as talented a historian to make sense of its past.

Author and publisher Fred Perry continues to produce attractive books with his latest, Brinnon: A Scrapbook of History by Vern and Ida Bailey (Bremerton: Perry Publishing, 1997; 211 pp; $30). In chronicling the events of note in Brinnon, a tiny community squeezed between the Olympic Mountains and Hood Canal, the Baileys weave quotes from newspapers, correspondence and civil documents through their informative narrative. Almost every family who made Brinnon more than merely a name on the map of Jefferson County is accounted for, so genealogists should take note.

Genealogists should also include in their bibliography Marriage Records of Klickitat County, Washington, 1867-1917, by Homer J. E. Townsend and Patricia A. Scarola (Rochester, Washington: Gorham Printing, 1997; 282 pp; $21.95). Every single one of the 1,871 marriage certificates issued in Goldendale, Washington, during a 50-year period is recorded by names, date of ceremony, witnesses, and even the location of the wedding. Contrary to what one might think about a book of lists, the typeface is large and readable.

Carolyn Hage Nunemaker’s book, Downtown Spokane Images, 1930-1949 (Spokane: National Color Graphics, 1997; 148 pp; $19.95) is an intensely personal memoir. Just now undergoing a revival after a decade-long malaise, downtown Spokane reached its apex of vitality during the 1930s and 1940s. Nunemaker’s “images” are more verbal than photographic, though the volume does contain dozens of pictures. Part of what makes this book fun is that Nunemaker follows through with her historical commentary and tells readers what became of buildings, bridges and institutions she introduces during the Depression decade and the era of World War II. A chapter on restaurants and another on radio studios upgrades the book from the usual streetcars-and-shops kind of history that is typical of the genre.

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