



The Wild West and the New
Frontier: The Kennedy
Administration, Vietnam, and
Operation Ranch Hand

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**The Wild West and the New Frontier: The Kennedy Administration,
Vietnam, and Operation Ranch Hand¹**

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Although historians have written extensively, and persuasively, about race and the Vietnam war, they have paid much less attention to the Vietnamese environment. This paper, rather than echoing the work of Richard Drinnon, Seth Jacobs, and others, will examine images of the land, and not the people, of Vietnam. Members of the Kennedy administration had vivid ideas about the Vietnamese landscape, and these, like their views of the Vietnamese, helped shape the conduct of the war.

The idea of the “new frontier” helped to define the Kennedy years. There was little new in the idea itself; its conception owed a great deal to enduring beliefs about the settlement of the United States. These beliefs included the image of an empty land; the importance of the grid in controlling that land; and the responsibility to tame it. Although these ideas may have been useful in conquering the continent, they proved much less helpful in South Vietnam. The administration’s decision to use chemicals, influenced by these assumptions about frontiers, served only to demonstrate that the Vietnamese landscape would prove much harder to subdue.

Kennedy famously made the “new frontier” a central metaphor of his 1960 presidential campaign.² In his Los Angeles acceptance address to the 1960 Democratic Convention, Kennedy invoked

what was once the last frontier. From the lands that stretch 3,000 miles behind me, the pioneers of old gave up their safety, their comfort, and sometimes their lives....

¹ [H-Diplo Note]: A copy of commentator Andrew Rotter’s remarks may be found on the H-Diplo website, at <http://www.h-net.org/~diplo/reports/#SHAFR2007> .

² Patricia Nelson Limerick, *The Legacy of Conquest: The Unbroken Past of the American West* (New York: W. W. Norton & Company, 1987), 323-4.

Today some would say that those struggles are all over - that all the battles have been won- that there is no longer an American frontier. But I trust that no one in this vast assemblage will agree with those sentiments... We stand today on the edge of a New Frontier.³

Furthermore, the frontier was not only a metaphor; the natural world itself was ripe for discovery. Kennedy promised at his inauguration to “explore the stars, conquer the deserts...tap the ocean depths.”⁴

The westward expansion that Kennedy so eloquently described rested on three suppositions. The first was that the new lands were empty. As Roderick Nash argues, western settlers noted “‘nameless’ valleys and ‘unknown’ country” that were in fact replete with plants, animals, and people who had named the valleys and knew the country. The designation of areas like Yellowstone National Park was predicated on their being empty of people. Even environmental leaders ignored much of the vibrancy of the lands they loved. John Muir’s adoration of “trackless” stretches only obscured the richness and activity already present.⁵

From the 17th century, immigrants to what would become America sought to organize their strange new environment. One of the ways they did so was through the principle of a grid. A “patchwork” of field, forest, and marsh gave way before “the human tendency...to systematize the patchwork and impose a more regular pattern on

³ John F. Kennedy, “The Democratic National Convention Acceptance Address”, *Vital Speeches of the Day*, August 1, 1960, 611.

⁴ John F. Kennedy, Inaugural Address, January 20, 1961 as found at <http://www.yale.edu/lawweb/avalon/presiden/inaug/kennedy.htm>

⁵ Karl Jacoby, *Crimes Against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation* (Berkeley, CA: University of California Press, 2001), 85; Nash, 277, 280-1.

it.”⁶ Early United States governments invented a system of grids in an effort to control the continent’s vast landscapes. From Thomas Jefferson’s proposal of the United States Rectangular Land Survey in 1785, Americans had tried to standardize and manage an area that seemed forbidding and incomprehensible.⁷ Historians have discussed at length the psychological importance of the grid as well as its practical effects.⁸ Western historian Patricia Nelson Limerick calls it “the social fiction that lines on a map...legitimately divide the earth.”⁹

The west may have been organized by the grid system, but it was not yet tamed by it. Virgin land, that is, land untouched by Europeans, required attention and improvement; this was a third motif in the settlement of the American frontier. Pioneers sought “to get the land subdued and the wilde nature out of it.”¹⁰ More cosmopolitan authors like John Greenleaf Whittier also recognized the wisdom of making the land productive. “When the rail-cars came thundering through his lake country, Wordsworth attempted to exorcise them by a sonnet...Rocks and trees, rapids, cascades, and other water-works are doubtless all very well; but on the whole considering our seven months of frost, are not cotton shirts and woolen coats still better?” This control over the land

⁶ William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York: Hill and Wang, 1983, 2003), 33.

⁷ Ted Steinberg, *Down to Earth: Nature’s Role in American History* (New York: Oxford University Press, 2002), 59-60.

⁸ David E. Nye, *America as Second Creation: Technology and Narratives of New Beginnings* (Cambridge, MA: The MIT Press, 2004); Steinberg; Cronon.

⁹ Limerick, 56.

¹⁰ Walter Crockett, as quoted in Richard White, *Land Use, Environment, and Social Change: The Shaping of Island County, Washington* (Seattle: University of Washington Press, 1980), 35; Limerick, 43.

was ostensibly not for the purposes of exploitation but to increase efficiency and eliminate waste.¹¹

These three ideas – the land’s emptiness, the imposition of a grid, and the land’s need for improvement - would echo into the 1960s. The Kennedy Administration began spraying chemical defoliants into South Vietnam in late 1961. The initial objective was to deny cover to insurgent forces. In 1962, the administration expanded the program to include chemical crop destruction of the insurgents’ food supplies. The chemicals, named Agents Pink and Purple after the colors on the storage barrels, included the compounds 2,4-D, and 2,4,5-T.¹²

The United States Army had developed these defoliant and herbicide compounds during World War II as part of a broader biological and chemical weapons program.¹³ Planners thought the Pacific theater particularly well suited to the use of chemical defoliants, given the thick vegetation impeding United States troops. By 1944, the army was testing over 1,000 compounds for possible use.¹⁴

Although they were not used in World War II, the same chemicals that composed Agents Purple and Pink became widely available for domestic eradication, and their popularity grew steadily. In 1962 alone, farmers and ranchers sprayed almost 70 million acres with defoliants. Manufacturers widely advertised competing products. Hercules

¹¹ John Greenleaf Whittier, as quoted in Nye, 9; Nye, 40; Nash, 31.

¹² Jeanne Mager Stellman et al., “The extent and patterns of usage of Agent Orange and other herbicides in Vietnam,” *Nature* 422 (April 17, 2003): 682.

¹³ William A. Buckingham, Jr., *Operation Ranch Hand: The Air Force and Herbicides in Southeast Asia, 1961-1971*, (Washington DC: Office of Air Force History, Department of the Air Force, 1982), 3-5; James Phinney Baxter 3rd, *Scientists Against Time* (Cambridge, MA: The M.I.T. Press, 1946, 1968), 257-292.

¹⁴ *A Technology Assessment of the Vietnam Defoliant Matter: A Case History*, Report to the Subcommittee on Science, Research, and Development of the House Committee on Science and Astronautics, 91st Congress, 1st Session, 1969, 3.

Powder Company, Thompson-Hayward Chemical Company and Diamond Chemicals, to name a few, marketed the products under brand names such as “Ded-Weed”, “Weed-Rhap”, and “Vacate”¹⁵

The usefulness of these chemicals did not escape the notice of the United States Army, which struggled with plant control problems of its own. In 1959, the sugar maples at Camp Drum, NY were obscuring views of the firing range. Hand spraying was out of the question because of the unexploded ordnance on the site. To defoliate the maples, the army aerially sprayed 2,4-D and 2,4,5-T.¹⁶

What worked for the Army at Camp Drum and for farmers in the western states might well work in South Vietnam. Despite being almost 70 years removed from Frederick Jackson Turner’s “The Significance of the Frontier in American History”, which lamented the end of the frontier, the Kennedy administration held onto the ideas of empty land, the importance of the grid, and the duty to improve the land. The Air Force code name for the defoliation and herbicide program, Operation Ranch Hand, hinted at another effort by Americans to subdue an alien landscape.

Planning for Ranch Hand assumed that the areas to be sprayed in Vietnam were uninhabited. Officials in Saigon spoke openly of Vietnam as simply “a piece of real estate.”¹⁷ Assurances that the targeted land would be empty helped make the use of defoliants and herbicides palatable. A report from Gen. Maxwell Taylor advocated

¹⁵ House Committee, *Technology Assessment*, 4; Hercules Powder Company, advertisement, *Agricultural Chemicals*, March 1962, 62; Thompson-Hayward Chemical Company, advertisement, *Agricultural Chemicals*, June 1962, 110; Diamond Chemicals, advertisement, *Agricultural Chemicals*, June 1962, 58.

¹⁶ Buckingham, 6.

¹⁷ As quoted in Maxwell D. Taylor, *The Uncertain Trumpet* (New York: Harper, 1960), 245.

“spraying appropriate crop killing agents. Presence of crops to be determined by photographic coverage throughout areas known to be occupied only by Viet Cong.”¹⁸

Officials recognized the presence of enemy forces, but both those in and outside of the administration did not consider them to be human. Insurgents in South Vietnam appeared to be wild animals, part of the wilderness themselves. Guerrillas were “prowling...slithering...they dive like otters....Once he’s flushed from cover, [Americans and South Vietnamese] must keep hounding him.”¹⁹ Theodore Heavner, the Deputy Director of the Vietnam Working Group, summed up the distinction. “The basic aim is, of course, to separate the people from the VC.”²⁰

The convenience of the grid as a means of control did not escape planners in Washington or Saigon. The most notable example was the border drawn at the 17th parallel, a border that had little basis in history or physical geography. However, the idea spread beyond the Geneva conference. The United States Air Force designated Ranch Hand targets as R-4, R-5, and R-6, names that were almost poetic compared with embassy labels such as “Target zone area BQ750650”.²¹ Briefings to the media used some of the same conventions. According to journalist Michael Herr, “In point of geographical fact, for example, the delta of Vietnam comprehends the Plain of Reeds and

¹⁸ Taylor Report, Tab II, Walter Rostow Working Copy, September 1962, National Security Files, Box 203, Document 7g, John F. Kennedy Presidential Library.

¹⁹ Harold H. Martin, “Fighting an Unseen Enemy”, *The Saturday Evening Post*, November 24, 1962, 14-16.

²⁰ Report by the Deputy Director of the Vietnam Working Group, December 11, 1962, Visit to Vietnam, October 18 - November 26, 1962, in Department of State, *Foreign Relations of the United States, 1961-1963*, Vol. II Vietnam, 1962 (Washington DC: United States Government Printing Office, 1990), 768.

²¹ Buckingham, 80; Telegram from the Embassy in Vietnam to the Department of State, July 7, 1962 in State, *FRUS*, 1962, 505.

frames the Saigon River, but on all the charts and deep in all the sharp heads, it ended at the map line dividing III and IV Corps.”²²

Furthermore, South Vietnam, like the western United States, seemed to require improvement. The threat of a disordered landscape pervaded discussions of the problems in South Vietnam. As early as July 1961, members of the Vietnam Task Force worried that “there was no plan...for sweeping the country clean.”²³ Robert Komer of the National Security Council insisted “after Laos, and with Berlin on the horizon, we cannot afford to go less than all-out in cleaning up South Vietnam.”²⁴

This could be accomplished only with American know-how. “A considerable boom may be observed in the vegetable growing areas of Đà Lạt. Using American tractors, the local farmers are conquering virgin lands. Irrigated terrace gardens are built on slopes of hitherto bare hills.”²⁵ One of the goals of the United States’ Civic Action program was teaching the Vietnamese how to use more effectively lands they had been farming for centuries. The United States Operations Mission (USOM) aimed for “rural rehabilitation” and planned to provide “pest control programs...fertilizer supplies, seeds, advice on crop patterns”²⁶ Chemical defoliation was one of a set of mechanisms through which the United States could “clean up” the landscape, an explicit goal of Ranch Hand.

²² Michael Herr, *Dispatches*, (New York: Vintage Books, 1991), 92.

²³ Memorandum from the Deputy Director of the Vietnam Task Force to the Director of the Task Force, July 1, 1961, in Department of State, *Foreign Relations of the United States, 1961-1963*, Volume I, Vietnam 1961 (Washington DC: United States Government Printing Office, 1988), 196.

²⁴ Memorandum, Robert Komer to Walter Rostow, July 20, 1961, in FRUS, 1961, 236.

²⁵ To Brig. Gen. Edward G. Landsdale from Maj. Gen. Bela K. Kiraly, National Security Files, Countries-Vietnam, General, 10/4/61-10/9/61, Box 194, Doc 13a, JFKL.

²⁶ Briefing Paper for a Presentation by the Director of the Vietnam Task Force Before the Special Group (Counterinsurgency), March 22, 1962, in State, *FRUS*, 1962, 259.

“...In this operation we are merely clearing jungle growth along the sides of roads,” much as Americans had already done in the western United States.²⁷

These three assumptions, however valid they may have been in conquering what became the western United States, were hindrances in South Vietnam. The South Vietnamese landscape was not empty save for mesquite and oak, which could be eradicated with 2,4-D and 2,4,5-T but instead contained hundreds of different species, many not found in the United States. The first systematic government research into what exactly was growing in Southeast Asia took place in late 1963, almost 2 years after the spraying operations began. Fred Tschirley, from the Crops Research Division of the Department of Agriculture, toured Thailand for a “first reconnaissance...to identify the characteristic types of foliage growing in wooded areas.”²⁸ The research team put together by the Pentagon’s Advanced Research Projects Agency (ARPA) described an environment astonishingly different from the roadside vegetation of Texas and California, including evergreen forests with “200 or more different types of plants per acre”.²⁹ The jungle was not only a metaphor for the uncertainties and discomforts of Vietnam; it was, literally, a fact on the ground. The vegetation was so thick in many parts of the country that, in the 1960s, both North and South Vietnamese forces sometimes rode on elephants rather than attempt to travel on foot.³⁰

Plotting a grid on the Vietnamese landscape did not make the environment easier to subdue. Spraying chemicals only on precisely designated areas was much easier

²⁷ Joint State-Defense Message – Task Force Vietnam, December 1961, NSF, Countries, Vietnam-General, 12/14/61-12/18/61, Box 195a, Document 2, JFKL.

²⁸ House Committee, *A Technology Assessment*, 13.

²⁹ Buckingham, 50

³⁰ “Off to Battle on Elephants”, *LIFE*, March 16, 1963, 3.

plotted than done. Wind and weather patterns often prevented the chemicals from reaching their intended targets, sometimes blowing them back onto the planes themselves.³¹ The chemicals were also difficult to control. Fumes from drums of herbicide stored at Tân Sơn Nhứt air base killed surrounding vegetation, including two flame trees, and initial tests of Agent Purple eroded the rubber seals in the spraying mechanisms.³² Even empty barrels were unstable; about 1% of the chemical remained after the contents were emptied, and this small percentage was enough to kill plants near the barrel.³³

Reclamation of the land through the use of chemicals also proved prohibitively difficult. Rachel Carson's *Silent Spring* raised serious concerns about the domestic effects of 2,4 – D, and other scientists had similar reservations about its effects in South Vietnam. Biologist Arthur Galston warned of increased soil erosion, contamination of the water supply, and laterization of the soil, a process by which the soil bakes and becomes less fertile.³⁴

The immediate effects on people were equally damaging; despite assumptions to the contrary, the land was not empty. Ranch Hand's punishing effects on the South Vietnamese themselves precluded any cooperation with American efforts to tame the landscape. A RAND Corporation study bluntly stated the problem. Many South Vietnamese had come "to believe that [the crop spraying operations] are directed as much

³¹ Buckingham, 36, 38.

³² Buckingham, 33, 39.

³³ Stellman, 685.

³⁴ Rachel Carson, *Silent Spring*, 40th anniversary edition, (Boston: Mariner Books, 1962, 2002), 75-83; Arthur W. Galston, "Changing the Environment: Herbicides in Vietnam, II," *Scientist and Citizen*, August/September 1967; Michael E. Ritter, *The Physical Environment: an Introduction to Physical Geography*. □2006. May 19, 2007, http://www.uwsp.edu/geo/faculty/ritter/geog101/textbook/title_page.html

against the peasants...as against the Viet Cong themselves.” The study found that defoliation and crop destruction had built widespread and lasting antipathy toward the United States.³⁵

Perhaps not surprisingly, given the administration’s assumptions about the South Vietnamese landscape, Operation Ranch Hand did not succeed in its aims. Sir Robert G. K. Thompson, the British specialist who led the counterinsurgency effort in Malaya, was skeptical that Ranch Hand would work. He “doubted that the effort involved in defoliation was worthwhile on the grounds that even when the foliage was dead, sufficient branches and twigs remained to provide hiding places for the Viet Cong.”³⁶ Where the chemicals did defoliate the Vietnamese jungles, the effects on the insurgents were less than expected. An Australian observer noted that defoliation actually benefited the insurgents by providing a clearer field of fire to roads.³⁷ The ineffectiveness of the operations frustrated members of the administration. Michael Forrestal complained that, “efforts were made to destroy crops and defoliate trees, and then we’d find out...the techniques that we were using to defoliate and destroy crops were not any good, because they didn’t either destroy crops or clear the trees.”³⁸ Roger Hilsman, Director of the Bureau of Intelligence and Research for the State Department, toured a testing site and

³⁵ Betts, Russell and Frank Denton, *An Evaluation of Chemical Crop Destruction in Vietnam*, RM-5446-ISA/ARPA. (Santa Monica, CA: RAND Corporation, 1967), xii, 13.

³⁶ Memorandum of Conversation, April 4, 1963 – Meeting with John F. Kennedy, David Ormsby Gore, British Ambassador; Sir Robert G. K. Thompson, Head, British Advisory Mission to Viet-Nam; Chalmers B. Wood, Director, Working Group, Viet-Nam, NSF, Countries, Vietnam-General, 4/1/63-4/13/63, Box 197a, Document 20, JFKL.

³⁷ Roger Hilsman, *To Move a Nation: The Politics of Foreign Policy in the Administration of John F. Kennedy* (Garden City, NY: Doubleday, 1967), 443.

³⁸ Michael Forrestal, Oral History, 1964, JFKL, 130.

discovered that “as for removing the cover for ambushes...the results were not very impressive.”³⁹

The Kennedy Administration’s “New Frontier” was not new when it came to South Vietnam. Ideas about the Vietnamese landscape, and the appropriateness of defoliants and herbicides, had been conditioned by entrenched ideas about the western United States. The understanding of the land as empty, the importance of the grid as a means of control, and the perception that the land required reclamation and improvement pervaded the administration’s views of Vietnam. However, these stereotypes interfered with efforts to control the Vietnamese landscape through defoliants and herbicides. What may have worked in the western United States proved futile in the “new frontier” of South Vietnam.

³⁹ Hilsman, 443-4; also House Committee, *A Technology Assessment*, 12.