Sometime in the pre-dawn hours of July 16, 1979, an earthen dam holding back wastes produced by United Nuclear Corporation's uranium mill parted in Church Rock, New Mexico. From the widening breach poured ninety-four million gallons of highly contaminated effluent and 1,100 tons of wet slurry sands.

The spill filled the nearby Pipeline Arroyo and flowed south into the Rio Puerco. . . . About one hundred and fifteen miles downstream, in Holbrook, Arizona, monitors registered chemical alteration at the junction of the Rio Puerco and the Little Colorado rivers.¹

This was the largest radioactive waste spill in U.S. history, releasing more contaminants into the atmosphere than the Three Mile Island accident.

Flora Naylor, a Navajo shepherd, was one of the people affected by the Church Rock disaster. Not knowing about the contamination, she walked across the river that morning to get to some of her sheep. Her sister, Etta Lee, described what followed:

"Not even a month later her feet started getting sores; open sores, with pus, in between her toes. She went to the Indian Health Service in Gallup. . . . They amputated below her ankle. . . . A month later they amputated again, above the ankle. Then a year later below the knee."²

¹Explorations in Ethnic Studies, Vol. 13, No. 2 (July, 1990)
American Indian people, the first inhabitants of the North American continent, have also been first and longest in their exposure to nuclear power and its effects on the continent and its inhabitants. As much as half of the uranium reserves in the United States are located on Indian-owned land in the west, mostly in the Grants Belt of northern New Mexico. Navajo, Jemez, Laguna, Zia and Zuñi own the land, though only the Navajos and the Laguna Pueblo have so far leased land for exploration and mining. From mining and processing through testing and finally the nightmare of attempts at reclamation and coping with waste, the invention and development of the nuclear present and future has occurred in proximity with, and affected the lives of, people who have maintained with stubborn persistence the ancient cultures of North America.

This paradox has not been lost on writers dealing with American Indian themes. Authors like Wendy Rose and Linda Hogan in poems and journals, Paula Gunn Allen in fiction, and Stephen Popkes in science fiction are among those who have addressed nuclear issues in relation to American Indian themes and values.

The two authors who have presented the most extended examination of nuclear issues from the perspective of Native American people are Leslie Marmon Silko and Martin Cruz Smith. Silko's *Ceremony* and Cruz Smith's *Stallion Gate* provide extended critiques of the nuclear age. Both authors identify themselves as Native American and both have made American Indian culture and characters central to much of their writing. In spite of fundamental differences in tone, plot and outcome, *Ceremony* and *Stallion Gate* are remarkably similar. In both, nuclear weapons and nuclear power (desire, invention, construction and use of nuclear power and its artifacts) are seen, not as a special case of weapons or power, or a new phenomenon, but as the logical and inevitable culmination of western empirical thought. In both novels this mode of thought is juxtaposed, and in conflict, with the philosophy of the peoples within whose lands the nuclear age is created.

The two books focus on central characters with very similar life experiences, although the differences in literary tone and mode could not be more extreme. *Ceremony* follows the design of romance and ritual comedy: a young hero undertakes a quest for a remedy to rescue his community from a plague or disaster (in *Ceremony* the plague is a drought); with the help of wise, powerful and sympathetic guides he reaches a resolution that sees the questor healed and matured while the drought is lifted and scapegoats are expelled. The protagonist of *Ceremony*, Tayo,
is a young man lately come home from World War II and a Japanese prison camp. The novel follows his healing journey, centering on traditional Pueblo and Navajo beliefs and ceremonial practices through which he becomes cured of the maladies of psychological disintegration, guilt and hopelessness contracted during the war.

_Stallion Gate_, by contrast, is a skeptical, pessimistic probing of intrigue, deceit, arrogance and greed. Its protagonist, Joe Peña, is a young sergeant from the fictional pueblo of Santiago who has escaped from the Philippines after the Japanese invasion and who is assigned to be chauffeur to J. Robert Oppenheimer at Los Alamos and to be "liaison" with the Indians in the area. Though it moves without deviation towards a tragic ending, the tone of _Stallion Gate_ is cued to Joe Peña's wry, acerbic, often harsh with _Ceremony_ and _Stallion Gate_ contain remarkable similarities in their settings, in the back-grounds of their protagonists, and in the philosophical oppositions within the divided society the novels picture. Both novels are set in New Mexico at some time in the mid to late forties. In _Ceremony_ Tayo has returned to Laguna some time after being released from a hospital where he was treated for illness apparently brought on by battle and prison camp. The sections of _Stallion Gate_ are precisely dated, from November 1943 to the first atomic explosion, July 16, 1945; important events take place in the fictional pueblo of Santiago, as well as at the Los Alamos laboratories and the Trinity test site at a former ranch called Stallion Gate.

The protagonists in both _Ceremony_ and _Stallion Gate_ have taken on the traditional role of warrior in their stories: both are soldiers who have fought in the Pacific and experienced the Japanese occupation. Tayo has been a prisoner of war in an unnamed tropical country. Joe Peña has survived an incredible rescue in the Philippines when, after being wounded in the retreat from the Japanese invaders, he is sent adrift in a small boat and picked up by a United States naval vessel.

_Warriors abroad_, both men are outsiders in their birthplaces. While their mothers are Indian, the race or allegiance of their fathers is doubtful. Tayo's mother is Laguna but his father is unknown, a Mexican or possibly an Anglo, it is rumored. While Joe Peña's mother is a potter and so conservative that she still wears traditional dress, his father had been a bootlegger and silent partner in an Albuquerque nightclub.

Both Tayo and Joe Peña, furthermore, are rejected by the women who are or who act as their mothers, in favor of brothers
whom the mothers consider more acceptable. Tayo's mother, seduced by men and alcohol alike, leaves her young son with her elder sister, always called simply Auntie. Throughout Tayo's childhood Auntie blames him for the embarrassment and shame she feels at her sister's behavior, as she blames him later for returning home alive without bringing with him her own son, Rocky, who has died in the prison camp. Joe Peña's mother, Dolores, considers her younger son, Rudy, her "only real son" (SG 74), and tells Joe not to return home until he brings Rudy, also captured or dead in the Pacific war, home with him.

For all their similarities in background and in being cast in the classic Indian role of warrior, essential differences in temperament, outlook and goals mark the two men. Joe Peña is urbane, street-wise, witty and cynical. For him, traditional village life is oppressive and dull. A jazz pianist and prizefighter, he is loyal and principled but survives by his wits, "your usual scams" (SG 6) as his commanding officer, Captain Augustino, remarks. His goal in the plot is to get $50,000 to buy out his father's partner and own the Casa Mañana, an Albuquerque jazz club, and to further this end he steals and sells from the project stores, and then arranges a fight and then bets on it on the eve of the Trinity test. In between his legal and extra-legal jobs he finds time for a robust sex life.

Tayo, by contrast, is quiet, introspective and most at home in the open pastures, mesas and mountaintops. He acts out his quest for healing and for psychological as well as physical return to village life in the search for a small herd of spotted cattle that his uncle, Josiah, had purchased some years before in Mexico as a breed most suited to the high arid ranges of northern New Mexico. If Joe Peña in his expansive sex appeal and con-man skills calls to mind some traditional and contemporary urban tricksters of Native American lore, then Tayo exemplifies the pastoral figure of the shepherd, the exemplar of a materially simple life sought in harmony with nature.

Science and Prophecy

Both novels depict their protagonists' quests in a context of clashing cultures and opposing world views. In both, atomic power, its production and its effects, is seen to be a logical and inevitable product of Western--that is, European or Anglo-American--thought and values. This idea is made clear through the contrast between two ways of thinking: the philosophy of the civilization that opened the uranium mines and eventually
produced the bomb, and the belief system of the older cultures that developed and persist on the land where the bomb is produced. In each book the differences in Indian and non-Indian thought are the differences between an epistemology that is essentially phenomenological and one that is basically empirical. Native American thought, as portrayed in these novels, seeks understanding that is holistic and integrating, and its mode of discourse is prophecy and story. The Western-European or Euroamerican-world view, by contrast, tends toward atomism and the disintegration of dissection and calculation; its mode of discourse is mathematical model and reductive analysis.

In Ceremony the contrast between the two modes of thought occurs in Tayo's recollections of school days and science teaching:

He knew what white people thought about the stories. In school the science teacher had explained what superstition was, and then held the science textbook up for the class to see the true source of explanations. He had studied those books, and he had no reasons to believe the stories any more. The science books explained the causes and effects (C 94).

Later in the novel another recollection of science class opposes two views of nature: the American Indian attitude, which requires reverent and careful treatment of a sentient, fragile world on the one hand, and on the other hand the analytic viewpoint that regards nature as merely functional and essentially dead. Tayo considers how his search for reintegration into his community through ceremony and myth might be crazy, the kind of old-time superstition the teachers at Indian school used to warn him and Rocky about. Like the first time in science class, when the teacher brought in a tubful of dead frogs, bloated with formaldehyde, and the Navajos all left the room; the teacher said those old beliefs were stupid. The Jemez girl raised her hand and said the people always told the kids not to kill frogs, because the frogs would get angry and send so much rain there would be floods. The science teacher laughed loudly, for a long time; he even had to wipe tears from his eyes. "Look at these frogs," he said, pointing at the discolored rubbery bodies and clouded eyes. "Do you think they could do anything? Where are all the
floods? We dissect them in this class every year" (C 195).

Empirical science, the way of thinking that belongs with analytical prose, textbooks and capitalist entrepreneurs, takes the view that the natural world is inert, a reactionless object from which formulas or laws may be abstracted through probing, dissection, and measurement.11

*Stallion Gate* emphasizes on every page invasive, objectifying Western empiricism. The apparatus of empirical science obtrudes everywhere: miles of cables, uncounted geiger counters, sensors, cameras, recorders and calculators litter a landscape that has been dug out, paved over and cleared of living things. The Trinity explosion is to be a gigantic exercise in testing and measurement, for the purpose of which the desert, the atmosphere, and the earth itself are seen as nothing more than a single giant laboratory.

In contrast to all this scientific testing and measuring is the epistemology of the elders and clown priests in the Pueblo village. Clowns have a special and complex role in Pueblo religious ritual. Among their duties are the testing of society's rules by showing the effects of breaking rules, and restoring community harmony and equilibrium with parodies of exaggeration and excess.12 Whereas graphs, formulas and mathematical models are means of scientific discourse, the traditional discourse of the Pueblos is carried on in ritual, story and prophecy. In *Stallion Gate* the clown priests dance a story mocking the experimental bomb and its promoters, General Leslie Groves and J. Robert Oppenheimer; they go so far as to identify and involve Oppenheimer himself in finally setting off the firecracker that stands for the bomb. Captain Augustino, surely intended to represent the OSS, believes the clowns may be passing on secret information to some current or future enemy of the United States government. Oppenheimer, on the other hand, believes he has a deep empathy with the Indians—or rather, that they have a deep empathy with him and his project:

The Hill isn't a place; it's a time warp. We are the future surrounded by a land and a people that haven't changed in a thousand years. Around us is an invisible moat of time. Anyone from the present, any mere spy, can only reach us by crossing the past. We're protected by the fourth dimension (*SG 142*).

Oppenheimer and Augustino are both wrong.
Late in *Stallion Gate*, as the bomb test date draws near, magic sticks painted like lightning appear planted in places that have suffered fire. Joe Peña knows the sticks are intended to draw lightning that will destroy the testing equipment and ruin the experiment. A soldier asks incredulously if the Indians "really think they can bring lightning?" Joe replies, "They think they make the world go round" (*SG* 202). Mere spying does not figure on the agenda of the Pueblo elders. Neither does expanding the limits of empirical science. Their allegiance is not to a nation state or an ideology, but to the earth itself.

Opposed to the empirical process of truth-seeking, with its probing, testing and measuring, is the prophetic mode of arriving at knowledge, exemplified in story and dream. Both *Stallion Gate* and *Ceremony* contain prophecies about the atomic bomb. Throughout the twentieth-century events of *Ceremony* Leslie Silko interweaves verse-pattern renditions of several Keresan myths. Among them are the account of the creation and peopling of the world; the quarrel between Thought-Woman (Nau’ts’ity’i), goddess of the earth and all life and growth on the planet, and the people who neglect their duties because they are fascinated with witchcraft; and the legend of the hero called Tayo, who challenged the Gambler in his cave and won back the rain clouds for the people.

She casts her account of the creation of Europeans in the form of one of these traditional legends. It all began with witchcraft, according to Silko's poem, when a society of witches convened at the beginning of the world. One of the witches, eschewing incantations and potions, offered his craft in the form of a story:

Okay
go ahead
laugh if you want to
but as I tell the story
it will begin to happen.

A race of destroyers emerges. They are scientists. They look at the world objectively—that is, as an object, reductively:

They see no life
When they look
they see only objects.

The world is a dead thing for them
the trees and rivers are not alive (*C* 132-138)

Further characterizing this race of destroyers is a will to power fueled by greed and driven by fear:

They fear
They fear the world,
They destroy what they fear.
They fear themselves.

The work of the destroyers will culminate, according to Silko's prophecy, in destruction of the world:

Up here
in these hills
they will find the rocks,
rocks with veins of green and yellow and black.
They will lay the final pattern with these rocks
they will lay it across the world
and explode everything (C 132-138).

Later Tayo finds the myth confirmed as he begins to understand the events of the second world war. Walking through the abandoned uranium mine on the Laguna reservation, he contemplates the ravaged landscape, his proximity to Los Alamos and the Trinity site, and the relationship of it all to the holocaust at Hiroshima and Nagasaki. The destroyers have created "a circle of death that devoured people in cities twelve thousand miles away, victims who had never known these mesas, who had never seen the delicate colors of the rocks which boiled up their slaughter" (C 246).

Stallion Gate also contains prophecies of the overwhelming devastation that will result from the careless release of nuclear energy. Two Pueblo elders, Joe Peña's uncle Ben Reyes and the blind old man called Roberto, advise Joe Peña early in the story that the business at Los Alamos should be stopped, even though according to Joe (and popular opinion) they do not know or understand what is going on (SG 98). Later, they explain to Joe that their information has come in dreams which predict in symbolic images the proximate events of the book--the preparation and detonation of the test bomb--as well as the long-term consequences which none of the scientists is taking into account. Four people--in Taos, Hopi and Acoma--have all had the same dream: "They were making a gourd filled with ashes. . . . They take the gourd to the top of a long ladder and break it open. The ashes fall and cover the earth. . . . The ashes will poison the clouds and the water and the ground and everything that lives on it" (SG 206-207). Joe Peña's scornful response ("Sounds like scientific proof" [SG 207]) betrays a
careless obliviousness to the diseased and radioactive cattle that he himself has had to destroy.

**Earth Mother/Thought Woman**

The two ways of thought identified as Indian and European are associated in both *Ceremony* and *Stallion Gate* with opposing views of the natural world. In the Indian view, as presented in the two books, the earth is life-bearing, female, and to be respected. This recognition stands in opposition to the western or capitalist notion that land is an inert commodity, an exploitable source of wealth that can be destroyed for the amusement of the destroyers. Both *Stallion Gate* and *Ceremony* associate the female character of the earth with life-giving and nurturant qualities as embodied in the ancient myths of the people.

Much has been written about landscape and the sense of place in *Ceremony*. Paula Gunn Allen makes the connection of earth-life-female-myth most explicit in her discussion of "The Feminine Landscape of ... *Ceremony.*" She writes that

There are two kinds of women and two kinds of men in Leslie Marmon Silko's *Ceremony.* Those in the first category belong to the earth spirit and live in harmony with her, even though this attunement may lead to tragedy. Those in the second are not of the earth but of human mechanism; they live to destroy that spirit, to enclose and enwrap it in their machinations, condemning all to a living death. Ts'eh is the matrix, the creative and life-restoring power, and those who cooperate with her designs serve her and, through her, serve life. They make manifest what she thinks.

Allen places the alcoholic and sometimes sadistic veterans, the witches in the traditional stories, the destroyers in Silko's own prophetic myth, and Tayo's cousin, Rocky, in the category of those who follow "human mechanism." Rocky is not an evil person, but he is a "progressive Indian" who rejects the life-stories of the people in favor of the science books' teachings, and thus rejects the life-affirming view of the world in favor of sterile materialism. To these examples we may add the ranchers who have fenced off Mount Taylor and fenced in Josiah's cattle.

Ultimately, absent in person but present in their effects on the land, are the unnamed capitalists and government operatives who first expropriated the land and water rights and then exploited the area's mineral resources. Their development
efforts have transformed the land at the Cebolleta uranium mine from a place of extraordinary beauty into a lifeless wasteland:

They were driving U.S. Government cars, and they paid the land-grant association five thousand dollars not to ask questions about the test holes they were drilling. . . . Ever since the New Mexico territorial government took the northeast half of the grant, there had not been enough land to feed the cattle anyway. . . . Rain eroded big arroyos in the gray clay, and the salt bush took hold (C 243).

By the time of Tayo's story "they had enough of what they needed and the mine was closed. . . . They left behind only the barbed wire fences, the watchman's shack and the hole in the earth . . . the last bony cattle wandering the dry canyons had died in choking summer dust storms" (C 244).

The hole in the ground that is the mine forms a deadly counter-symbol to the Pueblo understanding of the earth as literally the mother of all life, including the people themselves. The creation story at Laguna Pueblo explains that Thought Woman is the genetrix of the universe: she originated all things by naming them.15 The process of creation also involves, as in all the creation myths of the southwest, the people's migration up through their earlier, underground world(s) and their final emergence into the present world.16 The place of emergence is a sacred hole in the ground, and it is represented in the village by the sipapu, a small round hole in the kiva floor. Kivas now are sometimes square buildings, but the ancient ruins of abandoned cities show that they were round and often underground.

This origin place in the Pueblo world is not merely symbolic or representative, but understood as the actual opening through which the people emerged. A Pueblo scholar has called the Tewa center "earth mother earth navel middle place,"17 though the term navel seems a euphemism, since the opening appears to function rather as a vagina. In the traditional planting ceremony, "The medicine men are believed to be able to reach right through the ground and place the seeds of all cultigens in the navel, thereby reawakening all of nature for the new year."18 While details of kiva construction and arrangement of ceremonies differ from village to village, all the Pueblos share these concepts of a center in the earth that connects the village in this upper world to original world(s) beneath, and through which the life-sustaining water and plant and animal life emerge.
So, in *Ceremony*, the uranium mine shaft where the final horrifying scene of Tayo's dream plays out, and where the bewitched and drunken veterans turn on each other in a rage of fear and sadism, was created to exploit the mineral wealth of the earth's interior. It is more than a visual blight, it is a real rape: a confiscation of the earth's life-sustaining resources for the purposes of destruction. The mine is the work of capitalist enterprise in the service of violence:

The gray stone was streaked with powdery yellow uranium, bright and alive as pollen; veins of sooty black formed lines with the yellow, making mountain ranges and rivers across the stone. But they had taken these beautiful rocks from deep within the earth and they had laid them in a monstrous design, realizing destruction on a scale only they could have dreamed (*C* 246).

There is more than aesthetic blight here; this is fundamental blasphemy. The concept belongs to religious thought and is in keeping with the premise of the sacredness of land and life. The discourse of history and public policy enlarges, in grim irony, the novel's religious conceptualization of the nuclear disaster: in 1972 the Nixon administration suggested designating the blighted Four Corners region (i.e., the Navajo and Ute reservations) as a "National Sacrifice Area"--that is, an area "rendered literally uninhabitable through the deliberate elimination of the water supplies . . . and the proliferating nuclear contamination."¹⁹

*Stallion Gate* develops the same parallels between life/female/nature and earth, and death/male/the artificial and mechanical. Joe Peña's mother, Dolores, bequeathes to her son a token of her special relationship to the earth. Dolores is a potter. Besides being a shaper of earth (as is the blind elder, Roberto, who mixes adobe for his livelihood) she is related to some of the accounts of the making of people, in which the creatrix first forms people from mud.²⁰ Some time after her death Joe finds one of his mother's pots, "a little black seed bowl, round as a ball with a small hole" (SG 100). This pot, "a dark moon with a seed-sized hole on top" (SG 105) is as Joe realizes "like a little, smooth earth" (SG 185), a miniature planet, container of potential life and complete with tiny navel/vagina emergence hole. The novel explicitly contrasts the seed pot against the mock-up of the bomb being constructed by soldiers and scientists: the bomb "was a sphere of steel plates bolted together at the edges. It looked like a large steel spore--or a steel seed pot with a jagged rim" (SG 169). Instead of life
this pot carries destruction; it is, as in old Roberto's dream, a gourd of ashes.

Throughout *Stallion Gate* those who engage in wanton destruction also belong with the culture of the bomb, and are set in opposition to the people who belong to the land. On Joe's first visit to the test site, he meets two Mescalero Apaches and a Navajo who explain how the army has expropriated the land for itself: "Army bought the ranchers out," one tells him, "but they made it in one payment so the ranchers had to give it all back in taxes, and if the ranchers try to get back on the land, they bomb them" (*SG* 46). A few hours later Joe, Oppenheimer, Groves, and Klaus Fuchs watch army bombers sighting horses with phosphorus bombs and then strafing them:

> From the bomb came running shapes: horses, brilliant with lather and the glare of the bomb, racing under the wing. Mustangs out of the mountains for the night grazing and the mares the ranchers had left behind. . . . At a distance of a mile, he thought he could hear not only their hooves but their breath, although he knew they were drowned out by the sounds of piston hydraulics and .50-caliber rounds. . . (*SG* 54-55).

The scene is eerily prophetic of the book's ending, which finds Joe Peña himself running, crazed, away from a bomb set off in the same place.

Two other scenes in *Stallion Gate* of animals being shot serve to define the opposition between those who respect the earth, especially as genetrix, and those whom both authors characterize as the destroyers. Joe Peña is horrified when Captain Augustino shoots a gravid she-elk, and he almost shoots the captain in retaliation. As Alphonso Ortiz points out, the Tewa proscription against hunting animals in their mating season shows that the practical and the symbolic are inseparable aspects of the people's paramount project, survival and the continuance of life: "Most important, the Tewa do not want to kill the females with young because this would jeopardize the future availability of game." 21

After the elk-shooting episode, in the course of destroying what he takes to be a radioactive steer, Joe Peña himself kills a cow that is about to calve. The sight brings back to him the earlier hunting incident:

> Now he remembered why he was so upset with Augustino when they'd gone hunting. . . . Not shooting an animal that was carrying was an Indian
stricture, a primitive taboo. Not against killing life, but against killing the seed of life (SG 60).

This idea of the seed of life is contrary to Oppenheimer's fantasy that the pueblo is some sort of ancient, indulgent "time warp." What the traditionalists know, rather, is that it is the present that contains both past and future, and that must be protected. They see that the nuclear business is poisoning the land, which is immediate and present, and thereby destroying the cattle which are the people's subsistence and future. The explanation for the cow's radioactive condition lies in the volatile, fragile nature of the earth itself, which has been disturbed by aggressive mining undertaken on the pastureland: "Every canyon around Los Alamos had cows, and every canyon had sites where poisonous isotopes were vented or exploded, spewed and sown into the soil and water" (SG 60). The nuclear enterprise sows death.

In Ceremony Silko describes in a similar manner the destruction and devastation at the Cebolleta mine:

Early in the spring of 1943, the mine began to flood with water from subterranean springs. They hauled in big pumps and compressors on flat-bed trucks from Albuquerque. . . . But later in the summer the mine flooded again, and this time no pumps or compressors were sent. They had enough of what they needed, and the mine was closed (C 243-244).

Both Ceremony and Stallion Gate depict the beginning of the spillage and contamination that continue today, poisoning Flora Naylor and her flocks and jeopardizing the future for all the people. In discussion of the Rio Puerco contamination among a group of Navajos

one man, seeing far into the future, said he felt guilty for handing down contaminated animals to his children and grandchildren. He said that the animals are part of the Navajo's religious and spiritual system and he was concerned that his descendants would reject their religious and spiritual heritage for fear that the animals would always be contaminated.22

For Leslie Silko and Martin Cruz Smith, as for the Navajo shepherds and their families, the fate of animals is both symbol for and prophecy of the fate of human children of Mother Earth. In fact, among the earliest victims of the nuclear industry were Indian mine workers, who besides being cheated in many cases out of ownership of early claims, suffered injuries from unsafe working conditions and equipment.23 Some studies report the
rate of death and incapacitation from cancer among Navajo mine workers as close to eighty percent.\textsuperscript{24}

Pueblo myths personify the earth's creative potential as a woman, and both \textit{Ceremony} and \textit{Stallion Gate} refer to her by name as Thought-Woman or Thinking Woman. Thinking Woman created the world in the beginning, bringing all things into being by thinking of them and naming them, and so she is the originator of language as well as of material things.\textsuperscript{25}

In \textit{Ceremony} Thought-Woman is the originator and muse of the story: at the very beginning Leslie Silko presents her authorial self as Thought-Woman's amanuensis:

\begin{quote}
Ts'its'tsi'nako, Thought-Woman
is sitting in her room
and whatever she thinks about
appears.
\end{quote}

She is sitting in her room
thinking of a story now

I'm telling you the story
she is thinking (C 1).

Thought-Woman comprehends the whole of \textit{Ceremony}, witchcraft and evil as well as nurturance and healing. This comprehensiveness stands in sharp contrast to the manner in which she enters \textit{Stallion Gate}, and it is related to the difference in the moral universes of the two novels.

For Joe Peña, Thinking Woman is a mythical figure from a culture he has intellectually rejected (though he adheres to its ethical precepts of respect, loyalty and competence). Her avatar is Anna Weiss, a Jewish refugee from Germany working for Oppenheimer on the bomb project. Anna Weiss's job is to produce simulations, mathematical formulas that will predict the nature and extent of the bomb's damage. She is the only person on the project who considers the future, and like old Roberto and the other Indian dreamers she prophesies to Joe about the bomb:

No one looks ahead to after the bomb is used. Or asks whether the bomb \textit{should} be used, or, at least, demonstrated to the Japanese first . . . they don't think of the consequences. I have. On the punch cards are not only the fireball, the shock wave, the radiation, but also an imaginary city--so many structures of steel, of wood, of concrete. Houses shatter under shocks of one-tenth to one-fifth of an atmosphere. For steel buildings the duration of the
shock is important. If the pulse lasts several vibration seconds, peak pressure is the important quantity (SG 184).

With knowledge comes responsibility, and Anna Weiss in her prophecy is the only person who truly realizes and accepts the terrible responsibility which the bomb creates:

Nobody else sees it, as if they can't imagine a shadow until the sun is up. I see it every day. Every day, I kill these thousands and thousands of imaginary people. The only way to do it is to be positive that they are purely imaginary, simply numbers. Unfortunately, this reinforces a new fantasy of mine. There are times when I feel as if I am one of those numbers in one of the columns on one of the punch cards flying through the machine. I feel myself fading away (SG 184).

Both Anna Weiss in Stallion Gate and Tayo in Ceremony feel responsible for the destruction they witness, and both find that they are themselves subject to being eroded away by the destructive forces they encounter. What Anna Weiss describes as "fading away" is precisely Tayo's condition when he first returns to the U.S. after the war. For a long time he is invisible, a vapor, lacking even an outline and fading into the white walls of the institution where he spends some time before returning to the village. Like Tayo, Anna seeks healing in a renunciation of her connection with the project of destruction. But although she allies herself with the Pueblo traditionalists and their perception of the destructiveness of the bomb, her powers for healing are limited or nonexistent. Stallion Gate is a naturalistic work, and insofar as Anna Weiss embodies a prophetic voice, she is Thinking Woman in the role of Cassandra, not Demeter.

Good and Evil

The continued presence of Indian people on the North American continent and the existence of the atomic bomb have a parallel function with relation to the prevailing national mythology: both require that the American people confront their fallacy of collective innocence and their obsession with freedom from guilt. R. W. B. Lewis has documented how the formation of the country in the first half of the nineteenth century included the invention of an American national character endowed with prelapsarian innocence: America as the New Eden, and (descendants of European immigrant) Americans as the New Adam.26 Reginald Horsman details the simultaneous
and concomitant creation of doctrines of Anglo-Saxon racial superiority, which served to justify the continental takeover.27

Both fictions were necessary to justify aggressive expansionism and capitalist exploitation of the continent's resources, and the removal or domination of peoples who did not belong to the privileged group. The ideal of a New Eden required a garden. Thus was born the fantasy of a wilderness--pristine, voluptuous, and above all, empty--the romantic vision most poetically evoked in Nick Carraway's farewell to Jay Gatsby:

... a fresh, green breast of the new world. Its vanished trees, the trees that had made way for Gatsby's house, had once pandered in whispers to the last and greatest of all human dreams; for a transitory enchanted moment man must have held his breath in the presence of this continent, compelled into an aesthetic contemplation he neither understood nor desired, face to face for the last time in history with something commensurate to his capacity for wonder.28

But--contrary to Nick Carraway's fantasy, and the dreams and desires of millions of immigrants and their children--the New World Garden of Eden was not empty.

This pervasive American myth of innocent beginnings in a new, unpopulated Eden cannot be sustained in the face of Indian testimony, and especially in the presence of surviving Indians. "Man" had not just recently arrived from Europe, the land was not empty, not wilderness, not unsettled, not--according to the people already living in it--undeveloped. It was not an unpopulated Garden of Eden created expressly for a new race, but a continent with a population placed at the mercy of invaders with a superior technology in the service of an insatiable greed.

Likewise, the development and especially the use of nuclear weapons cannot have been the work of a people with no capacity for evil. Acute defensiveness even now permeates the attitude of apologists for the bomb; there is a compulsion to prove that the destruction of Hiroshima and Nagasaki was not merely militarily effective but morally defensible as well. Stallion Gate contains an extended example of this moral defensiveness in a debate carried on between J. Robert Oppenheimer and another physicist, Harvey Pillsbury, on the relative ethics of using the bomb on various targets. The simple admission that it will be used because it will mean conquest is not enough; the bombing of cities must be justified as saving lives, so that the act will seem guilt-free as well as successful.
In both *Stallion Gate* and *Ceremony* evil manifests itself as the atomistic and dis-integrating forces of greed and racism. Yet the books' visions of the moral universe are radically different. Silko presents good and evil as metaphysical entities, mysteries beyond rational thought. *Stallion Gate* has no gods; evil emerges in the actions of the novel's fallible, flawed characters.

Silko identifies fear and greed as propellants of racist destruction, which she sees as having its birth in European thought. According to the prophetic myth she constructs for *Ceremony*, the Destroyers, coming from far across the ocean, indiscriminately "kill what they fear." Their self-destructive rage to consume and to destroy will turn against them, however, and "stolen rivers and mountains/ the stolen land will eat their hearts/ and jerk their mouths from the Mother" (C 136).

Tayo recognizes race hatred as the work of the destroyers when he understands why he had persistently identified Japanese soldiers with his uncle and cousin:

> From the jungles of his dreaming he recognized why the Japanese voices had merged with Laguna voices, with Josiah's voice and Rocky's voice; the lines of cultures and worlds were drawn in flat dark lines on fine light sand, converging in the middle of witchery's final ceremonial sand painting. From that time on, human beings were one clan again, united by the fate the destroyers planned for all of them, for all living things (C 246).

Silko also links dis-integration associated with racism to displacement that removes people from the sustaining land to which they belong. Displaced by war from the arid United States southwest to the humid south Pacific jungle, Tayo lacks the proper resources for dealing with constant rainfall, and he acts inappropriately: he curses the rain and thus, in his mind at least, brings on the drought that besets his village when he comes home. The nature of his illness, and therefore the first step towards his cure, become defined in the Los Angeles railroad station when he collapses in the midst of a group of Japanese-Americans returning from the concentration camps in the desert and midwest to their forcibly abandoned homes and farms on the west coast. The first step toward healing must be a step towards home, a return to one's own place.

In *Stallion Gate* individual characters exemplify the same greed and paranoid hatred that Silko personifies in the mythical race of destroyers. The pottery broker, Mrs. Quist, embodies capitalist lust for profit in her relationship with
Dolores, buying pots for a dollar and selling them for fifty times as much. Joe Peña explains to the avaricious woman that his mother was not driven by market and profit, but by traditional Pueblo reserve, decorum and respect: "You always made that kind of money off Dolores. She always knew. I used to tell her, but she was too embarrassed for you to say anything. She was embarrassed for your greed" (SG 101).

If the venal Mrs. Quist personifies the demeaning greed of the capitalist mentality, mendacious and vindictive Captain Augustino provides the counterpart in paranoid fear. In charge of security at the project, Augustino bears an eerie resemblance to Oliver North: he is a man who says, "I don't need orders from anyone" (SG 31). Further, he pursues a fanatical vendetta against Oppenheimer, "the Third Great Jew . . . intent on developing an atomic weapon here only so that he can deliver the finished plans to his Soviet friends" (SG 31-32).

But Augustino is only the fullest efflorescence of the racism that flourishes everywhere in the America of Stallion Gate; from the crude and explicit bigotry of the Indian Service agents, to the whining nastiness of Klaus Fuchs, who makes known from the first his contempt for Joe and all Indians. Even Oppenheimer betrays the thinness of his fantasied empathy with the people he has been living among; when advised of Indian objections to the project he asks if Joe "really think[s] I'm going to let the effort of all these good men be endangered by a . . . tribe" (SG 309; ellipses in original).

Augustino's worst crime, however, is not against any person or group, but an attack on thought itself. He orders Joe to help him plant a piece of evidence in Oppenheimer's clothes to link the physicist to Gold, the spy working with Fuchs. Augustino's plot against Oppenheimer parallels Santa's work on propaganda. Santa is the project psychiatrist. Ostensibly present to study the effects of the bomb project on the mental condition of the men involved with it, he actually concocts propaganda stories intended to deceive the public:

"If the bomb makes a big bang, then we'll report that an ammunition dump exploded without loss of life. If we blow up the desert and everyone in it, then we'll have to come up with a different story . . . an alternative, assimilable emergency. 'Epidemic,' 'tainted water,' 'chemical warfare'. . . . The Freudians want 'tainted water,' naturally" (SG 219).

Like the witches in Ceremony, who create a counter-myth of destruction against the traditional myth of creation, both Santa and Augustino create stories. Their stories, too, are counter-
myths, corruptions of the European mythology of empirical science. Falsifying evidence and distorting results, they act out in Martin Cruz Smith's novel the self-destructive tendencies Leslie Silko personifies as witches.

Both Leslie Silko and Martin Cruz Smith meditate in their novels on the paradox of the creation of the nuclear world in such close proximity to ancient Pueblo culture. In an interview Silko has acknowledged that

The Pueblo people have always concentrated upon making things grow, and appreciating things that are alive and natural, because life is so precious in the desert. The irony is that so close to us, in Los Alamos, New Mexico, scientists began the scientific and technological activity which created the potential end to our whole planet, the whole human race. The first atomic bomb was exploded in New Mexico, very close by us. To me it is very striking that this happened so close to the Pueblo people. Stallion Gate and Ceremony can be read as extended meditations on that paradox. Both books present the perspective of the Pueblos as being a long-tested philosophy of human survival, and a critique of Western faith in technology.

The two novels differ radically in the possibilities they present for coping with the nuclear menace they describe. Silko's novel allows for redemptive healing in a world that can accept and give priority to a simple, pastoral life. It is a profoundly religious vision, affirming the possibility of spiritual transcendence and the creation of a nurturing community separate from the dominant culture, so long as the necessary connection with the land can be sustained. Stallion Gate offers only a secular world, where even--as Captain Augustino says--the laws of science are no longer dependable, and where each person lives out individual values in unsupported isolation.

Their basic premises, however, are the same. Although Silko offers a religious vision that postulates an inherently ordered universe, whereas Cruz Smith presents a rigorously secular view that emphasizes human limitations and imperfectability, both authors' critiques of the postnuclear world move beyond the immediate issues of weapons, war and power to question the sufficiency of rational thought itself.
Notes


2Hinchman.


5Green, 157-178. For discussion of Rose's and Hogan's poems see Paula Gunn Allen, The Sacred Hoop: Recovering the Feminine in American Indian Traditions (Boston: Beacon, 1986), 169-172.


9Martin Cruz Smith. Stallion Gate. (New York: Random House, 1986). The titles of both Stallion Gate and Ceremony will be cited in parentheses as SG and C, respectively, with page numbers in the text.

10As the sons of sisters, Tayo and Rocky are as closely related as brothers according to Pueblo family patterns; see Edward P. Dozier. The Pueblo Indians of North America (New York: Holt, Rinehart and Winston, 1970), 145-146.

11The dissection of frogs is apparently becoming a pervasive metaphor for the invasive, life-denying side of empirical science. In Gerald Vizenor's Griever: An American Monkey King in China (New York; Boulder; Normal, IL: Illinois State University/Fiction Collective, 1987) the protagonist recalls liberating live but doomed frogs from a high school classroom. In a speech at the Cooley Peace Conference at Earlham College (May 4, 1985) Barbara Stanford made the same parallel: "To study biology, I had to kill a frog. This is a typical initiation into science"; she reflects that the process perpetuates "two lies: (1) That science is superior to morality . . . (2) That relations between the parts of the object (e.g. the frog) are more important than the subject-object relationship (the frog and me)" (Peace Research Abstracts Journal. 23, 6 (1986) 71-73. In
Victorville, California, a high school student went to court in 1987 to establish her right to refrain from dissecting a live frog in her biology class; she won her case on appeal.


14*The Sacred Hoop*, 118.


16Ortiz, 1, 9.


18Ortiz, 114.


20Boas, 224.

21*The Tewa World*, 113.

22Hinchman, 10.

23Navajo miners often spoke of the hazardous working conditions. John Billsie, hired during the 1940s at age 13, recollected moving vanadium with shovel and wheelbarrow. Ventilation in the mines was poor, and though laws enforced by mine inspectors were supposed to protect the workers, "The mine inspector don't come around" (California State University Fullerton. Oral History Collection OH 275). Ned Yazzie and Jimmie Singer were both disabled as a result of faulty equipment; Yazzie was injured driving one of the mine's trucks: "It use to be bad before. The equipments were too old, out of order: [bad] brakes, no doors, no rear view mirrors" (Tr. Fern Charlie. OH 296). I am grateful to the CSUF Oral History program for use of their collection on the development of the uranium industry in the Four Corners area.
Critique

These days, most literary criticism, like the world view that spawned it, is obsolete, a luxury we can no longer afford. Too much of it is esoteric, egotistical, and trivial. While the world balances on the edge of annihilation, we count semicolons on our computers.

But such is not the way of Helen Jaskoski's article. It is good criticism—in the fullest sense of the word. She helps us to see the works—Ceremony and Stallion Gate—more clearly and, in turn, to see the world more clearly. And we need help with both. We need help to understand these novels more fully, for they arise from a very different world vision from the traditional paradigm of reality shaped by Western science—which most of us were trained to see. Ironically, however, understanding the vision of these novels, the traditional vision of the American Indian, in turn helps us to understand the emerging new vision of Western science.

Jaskoski begins by posing the paradox, developed in their respective novels by Silko and Cruz Smith, that American Indian people have been "first and longest in their exposure to nuclear power and its effects . . . ." Early on, she points out that in both novels, "nuclear weapons and nuclear power . . . are seen, not as a special case of weapons or power . . . but as the logical and inevitable culmination of western empirical thought. In both novels this mode of thought is juxtaposed, and in conflict, with the philosophy of the peoples within whose lands the nuclear age is created." She then takes us on a careful walk