The 1960's brought cultural transformation through outbreaks of violence and contention. The "Love and Peace" slogan led to a bloody fear of "War and Hate." It was an era of protest and revolt. The decade began with the assassinations of John F. Kennedy and Martin Luther King Jr., escalated with the viciousness of Vietnam, and ended with the suspicion of Watergate. And somewhere in the terror of freedom, we saw two Americans walk on the moon. It was while staring at that crystalline sphere hovering above us that we pondered the scope of our opportunity. On that warm summer night it was a miracle of technology, a step into a new world, a celebrated triumph. We engaged in a political race to the moon against the Communists with a democratic pride that launched us to a new age of scientific exploration. They were footsteps that would be talked about for centuries bringing information that would influence us for decades.

America's Race for the Moon

Following the Atomic Bomb of World War II, the United States was a recognized "Superpower," the technological king of advancement. Through our new Elvis albums and poodle skirts, we were enjoying the satisfaction of being the "winning team." However, in 1957, our pride was pierced when news hit that Russia had successfully launched "Sputnik," the first artificial satellite to circle the earth. As President Kennedy said, "We are behind and will be for a period in the future" (Sullivan 142). We were no longer the superior champions we once were.

The Soviet Union seemed unstoppable; by 1961 Russian Major Yuri Gagarin became the first man to orbit the earth in a spaceship. Less than two months later, the United States publicly announced their 20 billion dollar space program, Project Apollo. Included in this endeavor was the continued establishment of the National Aeronautic and Space Administration (NASA) with its 1,600 acre manned spacecraft center in Houston, Texas, and the 88,000 acre launching site at Cape Canaveral, Florida. Project Apollo would require the talents of more than 100,000 team members and the technology of many industries. Giant caterpillar "earth crawlers" were built to transport pieces of the rockets from forty-five-story assembly buildings to the launching pad. Once assembled, the perfected spacecraft would reach half the height of the Washington Monument in D.C. Without a doubt, Project Apollo was the nation's most challenging task ever undertaken with the exception of war. And all this perfection was complicated when President Kennedy set this goal on May 25, 1961: "I believe this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the Moon and returning him safely to Earth" (Spirit 4).

Despite the United States efforts to score points in the "Space Race," the USSR remained ahead. In August of 1962, the Soviet Union climbed a higher rung with the Nikolayev-Popovich expedition. While orbiting the earth, the Twin Vostoks were so precisely targeted, that they came within an astounding three miles of each other (a matter of seconds at the speeds of space). This was the skill needed to accurately join the lunar module with the spacecraft after astronauts had walked on the moon.
Again the faithful words of Kennedy rang out through the TV stations and newspapers of America: "The eyes of the world look into space-- to the moon and to the planets beyond-- we have vowed that we shall not see it governed by a hostile flag of conquest" (Sullivan 142). The first landing would be hardly less significant if disaster should overtake the expedition and prevent the safe return of any or all the crewmen . . . Others would follow and return alive" (Sullivan 9). The media exposed the space race to national attention. Kennedy had said it. A man would walk on the moon before this decade was over, and James E. Webb, Space Agency Director, responded, "I happen to think we will make the lunar landing and return before they [the Russians] do" (Sullivan 9). But, the Americans weren't as far behind as they appeared. Sure Russia, had the technology to connect two spacecrafts of equal masses while in orbit, but the U.S. first discovered the magic of attaching spacecrafts of different sizes, which was more realistic. By 1968, Apollo 7 carried its first American crew into space; two months later Apollo 8 orbited the moon. The Russians were falling behind; they didn't have the economic resources to play the game.

A Man on the Moon

Ten . . . Nine . . . Eight . . Neil Armstrong, Buzz Aldrin, and Mike Collins sat pressed to their seats . . . Seven . . Six . . Five . . . Four . . . this would be the ride of a lifetime, a moment in history . . . Three . . Two . . . One . . . Blastoff! The engines roared and the vibrations rattled every bone in the men's bodies as the momentum of the explosions of crimson fire thrust Space Ship Columbia, the Apollo 11 mission into the black atmosphere. This eight-day mission would be man's most significant achievement.

Back in Houston, the mission control room was quiet with the anticipation of the lunar landing. A giant screen showed the green colored moon with the small spacecraft moving across the sky. It had been years of planning, months of supplies, and hours in the simulators. Everyone had their responsibility and each must do it correctly and precisely. Today was the final exam. Gene Kranz and his team of flight controllers sat at their consoles, listening intently to their lightweight earphones, anticipating each signal. Columbia's radio signals were out of reach and all the men could do was sit in stiff silence until the spacecraft came back into connection. Kranz motioned Security to lock all the doors as he switched to a separate communication loop, one that the VIP's and media were unable to access. He stood away from his desk. The new white vest his wife had sewn him added excitement to the occasion. The tense eyes of each team member turned toward him as he gave a pep talk worthy of a battlefield commander. "This is the best team I've ever worked with," Kranz said, "I have ultimate confidence in you people . . . What we're about to do now, it's just like we do in training. And after we have finished this sonofagun, we're gonna go out and have a beer and say . . . We really did something" (Chaikin 192).

* * * * *

Astronaut Mike Collins woke up early. He was scheduled for two more hours of sleep, but the excitement of the day coupled with the fact that Houston's radios wouldn't know he was awake let him check the course of the spaceship once again. Looking out the window, he sat in awe at the sight, "the majestic beauty of a blue-and-white Earth surrounded by the blackest black that you can conceive" (Folger 54). He pondered the thought of spending twenty-two hours alone in the Columbia space ship while Armstrong and Aldrin took the lunar landing module Eagle to the moon. He didn't resent the idea that he wouldn't be going with them but rather looked forward to the space inside the cabin after they were gone. After all, he would be taking more pictures and doing more scientific experiments than both of them combined.

It had been 4 days, 5 hours, and 45 min. since the three men had left the earth. Armstrong and Aldrin stood side by side anchored in harnesses to the walls inside the Eagle 50,000 feet above the surface of the moon. Through the small triangle window Armstrong recognized each landmark. Each checkpoint was passing a full two seconds ahead of schedule, and at the speed of one mile per second, the spacecraft would arrive two miles beyond their aimed point. Armstrong radioed Houston, "Our position seems to be a little long." The long brakes continued, 46,000 feet above the moon. Suddenly the high-pitches buzz of the Master Alarm pierced their ears.
"Program alert!" The urgency in Armstrong's voice conveyed panic, though his words were tight and crisp. "1202" flashed across the computer screens. It was something they had never seen before, and this was no time to pull out manuals regarding software programs. Gene Kranz cringed as the nightmare seemed like a bad simulation back in June. Thoughts of aborting bolted through his mind. Almost instantaneously he responded, "We're GO! We're Go on that alarm."

As the *Eagle* raced closer to the moon's surface, Aldrin could see the giant crater, larger than a football field and surrounded by rocky boulders. The elliptical landing sight 3 by 11 miles appeared ragged and harsh. Houston sat in silence as Aldrin cleared the crater and avoided too much speed. All they could do was watch and hope for enough fuel. There was only 90 seconds of fuel left and 20 seconds must be saved for an emergency abort. At mission control stomachs tightened; during simulation they would have landed by now.

There was a blur of activity and a moment of silence. They two men smiled at each other with their four day old beards masked inside bubbled helmets. "Houston, Tranquility Base here. The *Eagle* has landed." Neil Armstrong's words brought cheers of relief and applause of excitement. Seconds later, the report was given to President Nixon. "Mr. President, it is my honor on behalf on the entire NASA team to report to you that the *Eagle* has landed on the Sea of Tranquility and our astronauts are safe and looking forward to starting the exploration of the moon" (Wilford 296).

While the bases at Earth celebrated with the arrival of the *Eagle*, Armstrong and Aldrin began the task of "suiting up." Lunar shoes, gloves, bubble helmets, and life support systems were all combined in the 348 lb (earth weight, moon weight equals about 58 lbs) suit for walking on the moon. Soon Armstrong opened the hatch and began climbing down the ladder. At the foot of the ladder, he observed the fine powdery dust that covered the surface of the moon. The foot beds were only submerged one or two inches. His broad smile broadcast on television screens throughout the nation as he jumped the three foot distance to the surface of the moon. "That's one small step for man . . . one giant leap for mankind."

The words echoed through time. It was an achievement only imagined in the past, a mission which involved the whole nation. This was an event in which everyone paused and for a small moment and remembered where they were and what they were doing at the exact time an American walked on the moon.

The moon had a beauty all of its own. It was described as a grayish desert floating against a patent leather background. The crusty surface was speckled with rocks and craters, some as small as oranges and others as deep as stadiums. There's no such thing as sunrise on the moon. Because there is no atmosphere, light rays are not bent to create twilight; there's utter darkness followed by shear light. Gravity also has a large effect. Everything is one sixth the amount is it on earth. The astronauts felt stronger, they could lift more, jump higher, and move easier. Running and bouncing was easier than walking. They tended to bounce on their tiptoes, leaning at angles that would be impossible on earth. Falling was slower and softer than ever before. The men would lean back and melt into the soft powder. "Apollo was the program that took a human being and let him set foot on a body other than Earth" (Folger 52). It was a tremendous achievement marked with the flag of the United States with a plaque reading, "Where men from the planet Earth first set foot upon the moon, July 1969 A.D. They came in peace for all mankind," which was followed by the signatures of the crew members and the President of the United States.

**How Apollo Affected our Nation**

The beginning of the space age united Americans in a cause, that of fulfilling Kennedy's words to be the first nation to walk on the moon. One historian said, "Apollo gave us all a pride of participation-- a oneness. There were over 500 million people in the world listening to or watching TV, at the Apollo 11 lunar landing" (Spirit 32). Now, over twenty five years later we still watch in awe at NASA's achievements, yet we haven't been back. Dick Gordon, astronaut of Apollo 12, said, "I thought human exploration would not subside. I thought [by now] we'd probably have a permanent presence on the lunar surface and be well on our way to Mars. But neither of
those is the case. Things changed. The political climate has changed; the economics have changed" (Folger 46). Without the competition from Russia, there was no longer the national desire nor congressional funds to continue the program. Missions 18, 19, and 20 were canceled. Some believe it was because there was no need, we had already received the information we were going for.

Included with the wonder of space are the debatable questions: Who owns it? Who will clean up pollution to protect the ecosystem? Who is responsible for damage to solar bodies? Is it morally and religiously correct? Some believe there was a lack of interest to return, too high of a cost coupled with incredible risk. Whatever the reason it was definitely "disappointing, and certainly unexpected" (Folger 54).

The Apollo program stands as evidence that man's strong desire combined with the pride of a nation can result in achievements and vast possibility. Man has always had the desire to explore, to discover, and to excel. The Space Age opened a new galaxy of opportunity, a vast space for learning and growth. Through unlimited opportunity, we found ourselves. We discovered our planet for its intricate place in the orbit of stars and planets. We realized the delicate nature and magnificent power of the raging seas and jagged mountains. By viewing the Earth as a whole, we discovered truths about humanity that sparked a new perspective of thought and understanding for our generation and the generations to come. "We touched the face of another world, and became people without limits" (Chaikin ix).

Works Cited


