NASA’s cooperation with India began with the establishment of satellite tracking stations and space science. Cognizant of the contributions made by Indian scientists in the field of astronomy and meteorology, a scientific tradition that stretched back several decades, NASA outlined a cooperative program that focused on mutual exploration of the tropical space for scientific data. The cooperation started in the early 1960s with the loan of sounding rockets, launchers, and the training of Indian scientists and engineers at selected NASA facilities dedicated to astronomical and meteorological research. This initial collaboration gradually expanded and more advanced space application projects brought the two democratic countries, in spite of some misgivings, closer together in the common cause of using space sciences and technologies for developing and modernizing India. In the process NASA ended up coproducing a space program that articulated the sentiments of the postcolonial scientific and political elite of India. Conversely, the experience with India imparted a new meaning and architecture of what a space program should be in developing countries in Asia and Latin America.

NASA’s relation with India is contextualized here in the framework of the United States’ relations with India beginning in the early 1950s. The global Cold War and the ambiguities, desires, and tensions of a postcolonial nation-state vying for leadership among the newly decolonized states in the Afro-Asian region forms the essential backdrop to understanding the origins and trajectory of NASA-India relations. Using theoretical underpinnings from postcolonial, diplomatic, and science and technology studies, complemented with oral histories, this chapter weaves a narrative describing the motivations, justifications, and the trajectory of NASA’s relations with India.

Two interconnected themes frame its organization. First, the history and discourse of modernization and development will be used to situate US-India foreign relations in the postwar period. In the wake of the Bandung conference (1955) leaders of newly decolonized states hoped to construct a third, “nonaligned” force in the international arena that was independent of the competing ideologies of progress that defined Cold War rivalry. Bandung also became a platform for developing nations to embrace the mantra of rapid modernization and self-reliance to leapfrog into modernity. This movement was not always welcomed by the United States, which remained at arm’s length from India until its defeat in a
border war with China (1962) and the Chinese nuclear test (1964). The Chinese threat was given a global dimension: the People’s Republic of China (PRC) would become the model for newly liberated countries in the “Third World.” To counter this threat the United States hoped both to accelerate India’s emergence as a major regional power and to use its technological advantage to direct India’s nuclear and missile ambitions into civilian space projects. US-India cooperation in space-based technologies was seen as a prestigious and useful alternative for the development needs of the country. The Indian scientific and political elite, aware of the evolving nonproliferation regime defined by the United States and the Soviet Union, sought to “indigenously” develop their own space technologies both for civilian and military purposes by creating new institutions domestically, and through the transnational traffic of experts, systems, and software. These themes are explored in what follows by tracing NASA’s relations with India on four technological systems—tracking stations and sounding rockets, communication satellites, remote sensing, and launch vehicles.1

**US-India Foreign Relations**

One cannot understand postindependent India without reference to the United States. Scholars who have studied the history of Indo-US relations over the last five decades have almost exhausted the English vocabulary to describe the tensions that prevailed between the two largest democracies.2 In the Cold War that ensued between the United States and the USSR soon after the independence of India and Pakistan from British rule in 1947, the United States favored an alliance with Pakistan owing to its strategic location, bordering the USSR, China, and the Middle Eastern countries. The ensuing partnership was intended to counter any communist expansion from China or the USSR into the South Asian region. While India espoused the policy of nonalignment, Pakistan sided with the United States, joined the Baghdad Pact and the Southeast Asia Treaty Organization (SEATO), and received extensive military supplies. This close alliance between the United States and Pakistan resulted in increased alienation between the United States and India and in the words of Dennis Kux, there was “a failure to understand each other’s political, economic, and geo-strategic complexities,” which ultimately “deepened these asymmetries.”3

However, though the political relations between United States and India seemed “estranged” on the surface during most of the Cold War, it is rather intriguing to see, underneath this “cold peace,” the extensive role the United States played through different government institutions and agencies to modernize India and to establish it as an alternative to the communist model adopted by the Soviet Union and, above all, China. As decolonization gathered momentum, the United States felt that it was imperative to stabilize and develop the country along capitalist and democratic ideals so as to win the hearts and minds of millions of people in the Afro-Asian region. This is evident through the massive economic aid India received from the United States during the first two decades of India’s independence and the constant traffic of experts—from science and technology to cultural, linguistic, and economic fields—between the “metropolis” and “periphery.”4 Early nuclear cooperation, the origin and development of the Indian space program through NASA, artificial rainmaking experiments,