INTRODUCTION

Creating Memories of the Space Age

THE Nobel Prize laureate Orhan Pamuk's novel, *The White Castle*, is a subtle reflection on the power of memory. Living in seventeenth-century Istanbul, two main protagonists—an Italian scholar and a Turkish noble—share their most intimate memories and gradually adopt each other's memories as their own. Their distinct identities begin to blur until they (and the reader) can no longer recognize who is who. Eventually they switch their original identities, as the power of memory overwhelms them. The Turk becomes a scholar and leaves for Italy, while the Italian abandons science to enjoy luxurious life at the sultan's court.[1] This parable suggests that our memories determine who we are, and manipulating these memories affects the very core of our identity.

Key events of the Space Age are especially memorable—this is why it is called "the Space Age" in the first place. The triumphs of Yuri Gagarin's first flight and Neil Armstrong's first step, and the tragedies of *Apollo 1*, Gagarin's death, *Challenger*, and *Columbia* are among recent generations' most vivid and emotional memories. But what do we really remember when we remember the Space Age? In 1986–88, the cognitive psychologist Ulric Neisser conducted a study of forty-four student subjects, who were asked how they first heard the news of the *Challenger* disaster. The first round of questioning took place the next morning after the event, the second round—with the same participants—two and a half years later. It turned out, none of the later accounts fully coincided with the original report, and over one-third were, as Neisser put it, "wildly inaccurate." Moreover, even when confronted with their own earlier written reports, the subjects were convinced that the later memory was true. The original memories quite simply disappeared from their minds.[2]

Recent research in cognitive, social, and clinical psychology and in cognitive neuroscience indicates that our memory is a much more dynamic and malleable process than previously thought. Our memories are not stored in a fixed form; we do not pull them out of a permanent storage and then put them back intact. According to the constructivist approach to memory, every act of recollection is re-creation, reconstruction of a memory.[3] Every time we "recall" a memory, we relive the event that caused it, emotionally relate to it, remake that memory, and store a new version, overwriting the old one. At the moment of recollection, the memory becomes unstable, and it can be modified

and even "erased," or a false memory can be planted.[4] Recalling something is essentially similar to making a new, original memory. "Recollection is a kind of perception," psychologists argue, "*and every context will alter the nature of what is recalled*."[5] As a result, we do not really remember the original event; we remember only our last recollection of that event. The more we remember and the more often we recall something, the more we reconstruct and alter that memory, getting farther and farther from the original event.

According to the school of "narrative psychology," linking individual memories into a coherent narrative, which supplies meaning to past events, plays an essential role in the formation of one's self.[6] As the neurologist Oliver Sacks has put it, "We have, each of us, a life story, an inner narrative—whose continuity, whose sense, *is* our lives. It might be said that each of us constructs and lives, a 'narrative,' and that this narrative *is* us, our identities."[7] When our present self constructs and distorts our memories of the past, the very fallibility of these memories serves a purpose—to establish continuity between our present and past selves. The literary scholar Paul Eakin has argued that memory is "not only literally essential to the constitution of identity, but also crucial in the sense that it is constantly revising and editing the remembered past to square with the needs and requirements of the self we have become in any present."[8]

We are what we remember, and this is equally true for individuals and societies.[9] The notion of *collective memory*, introduced by the French sociologist Maurice Halbwachs, stresses that individual memories are grounded in social interaction. By focusing on the notions of "collective memory" and "social memory," cultural history draws on the metaphor of society as a remembering subject, which constructs its identity based on collective remembrance and can go through a psychological "trauma" profoundly distorting collective memories.[10] Collective memory—culturally sanctioned and publicly shared representations of the past—shapes social identities and provides narratives through which individuals publicly describe their selves, remember the past, and interpret the present.[11]

When the constructivist model of individual memory is applied to cultural history, the implications are profound. Like individual memory, collective memory is continuously re-created, supplanting original memories with later versions. Cultural memory thus becomes self-referential: it feeds on itself and recollects its own recollections. The more a particular society or group remembers an event, the more intensely collective memory is at work, the more we mythologize and the more we forget. Remembering and mythologizing are the same thing. Just like false private memories reinforce the continuity of the individual self, cultural myths shore up national or group identity.

Taking seriously the view that culture is the myths we live by, historians

have focused on the cultural functions of collective myths—to structure and pass on historical memory, to create the basis for a dominant "master narrative," and to shape social identities. In this context, whether the myth is true or not is not particularly significant. What is important is the political and cultural force of cultural myths, whether ethnic, religious, or ideological—that is, their ability to act, to create a public appeal, to tell a story to identify with, and to forge an ideal to imitate.

The metaphor of society as a remembering subject may be misleading, as it obscures the active role of individuals in selecting, modifying, and combining various representations of the past and the dependence of these representations on the concerns and conflicts of the present. James Wertsch has proposed the term *collective remembering* to describe both narratives and nonverbal practices of commemoration.[12] Breaking down the umbrella term *collective memory*, Aleida and Jan Assmann distinguish between *communicative memory* and *cultural memory* by contrasting "living, embodied," autobiographical memory with culturally sanctioned remembrance, mediated by texts, symbols, and performances.[13] Communicative memory refers to passing everyday exchanges, such as jokes or gossip, while cultural memory is embodied in material objects and social customs. Cultural memory shapes group identity, provides tools for reconstructing the past, forms stable "heritage" formations, involves specialization and institutionalization, and serves educational, normative, and reflexive functions.[14]

Communicative memory actively interacts with cultural memory.[15] The institutionalization of cultural memory by nation states—the establishment of national archives, the public celebrations of various anniversaries, and the dissemination of favorable historical narratives—often serves the political purpose of reinforcing national identity and marginalizes individual memories and other social identities. Communicative memory reinterprets and devalues certain aspects of organized and ceremonial remembering practices, while private memories become "contaminated by national projects of remembrance."[16] The French cultural historian Pierre Nora argues that the old age of memory and tradition has given way to the new age of history and conscious narrative-construction. "Memory is constantly on our lips," he writes, "because it no longer exists."[17] Recent studies have focused on the origins of historical myths, their deliberate construction by political elites, and their repressive power to marginalize alternative stories and identities.[18]

Space history has its own recurrent myths. Comparing master narratives of space exploration in different national contexts, historian Asif Siddiqi has identified four common cultural archetypes, or "tropes," structuring these narratives: the myth of the founding father (in the Soviet case, Konstantin Tsiolkovskii), the myth of exclusively domestic space technology, the myth of

spaceflight as expression of national identity, and various stereotypical justifications for spaceflight—the destiny of humanity, glory for the nation, national security, economic development, scientific exploration, and benefits to the ordinary people.[19] Every nation develops its own variations, such as the American "myth of presidential leadership" and the triumphal "master narrative," accompanied by counter-narratives of right-wing, left-wing, and conspiracy-theory varieties.[20] The Apollo astronaut myth, as described by historian Roger Launius, features several key elements: the astronaut represents "everyman" yet personifies the American ideal, embodying the image of a masculine hero, a young, fun-loving, vigorous warrior, guided by an older, wiser leader, and showing the nation the path of progress toward utopian future.[21]

Like the Turk and the Italian in Pamuk's novel, who trade their identities by listening to each other's stories, the astronauts could hardly remain unaffected by their image in popular culture. A documentary titled *In the Shadow of the Moon* is composed entirely of interviews with Apollo astronauts, illustrated with fragments of archival footage.[22] The film is not organized as a collection of separate stories of individual missions; instead, it weaves together bits and pieces of astronauts' stories to create a meta-story that blurs distinctions among different missions and even among different astronauts. It is as if a composite image of the astronauts is telling a composite story of lunar landings. Another documentary, *The Wonder of It All*, uses a similar technique, interleaving commentaries from seven astronauts who walked on the Moon.[23] As one reviewer has noted, "the editing has been done so skillfully that instead of seven individuals talking, it seems more like one—each of them often continues a sentence that the other started."[24] Individual stories—and individual astronauts' identities—blend together seamlessly. How does this blending occur? Is this a trick of the filmmakers, or a fundamental cultural mechanism at work, in real life squeezing individual identities to conform to the dominant cultural stereotype of an astronaut? What happens to alternative memories? This artistic blending of memories may be viewed as a metaphor for society's erasure and overwriting of historical memory.

Soviet space myths showed remarkable similarity to their U.S. counterparts, with proper substitution: the New Soviet Man for the "right stuff," and the superiority of socialism for the superiority of capitalism. An important difference, however, was the Soviet erasure of any space failures from cultural memory. Bound by secrecy on the one side and by propaganda demands on the other, the Soviet master narrative of space history was reduced to a set of clichés: flawless cosmonauts flew perfect missions, supported by unfailing technology.

Unlike American public counter-narratives, Soviet counter-memories formed an oral tradition, completely separate from written accounts. Counter-

narratives are often associated with groups that are "excluded," "overlooked," or otherwise marginalized in historical accounts.[25] The counter-memories of Soviet space history, however, were cultivated by well-known public figures (cosmonauts) and by elite technocrats (space engineers), creating a tension between their private memories and their public personas. For example, the perceived need to conform to his sterilized public image made Gagarin into a "sincere deceiver," a skilled practitioner of "truth-lie."[26] "True stories" of events hashed up or distorted in official accounts were passed on from one generation of cosmonauts and space engineers to another, giving rise to counter-myths and forming the communicative memory of their professional groups. Counter-memories defined their private identity as much as the master narrative shaped their public image.

Spreading beyond the space community, the counter-memories mixed with public sentiment, which ranged from sheer enthusiasm to profound cynicism. This mixture gave rise to many urban mythologies—from the tale of Stalin's personal founding of the Soviet rocket industry to conspiracy theories of Gagarin's death to political jokes about overzealous cosmonauts and ignorant politicians.[27]

This book explores the interplay of cultural and communicative memory, examining a wide range of Soviet cultural practices of remembering the Space Age from the 1960s through perestroika to the post-Soviet era—from published reminiscences to public rituals to official histories. In the Soviet context, despite the stereotypical picture of top-down control of historical discourse, the boundaries between different forms of cultural memory were highly permeable, and multiple actors with diverse methods and goals participated in myth making.[28] In the semi-private spaces of the highly secretive space industry, the communicative memory of veterans' stories mixed with the symbolism of public rituals and formed the cultural memory of the space engineers and the cosmonauts. In these intermediate memory spaces—between the private and the public, between the informal and the official, and between technology and politics—memories hidden from the outside world were widely shared. Drawing on private diaries and interviews with space program participants, this book argues that both myths and counter-myths played a constructive cultural role by providing a set of shared tropes and references for public discourse, by shaping the identities of cosmonauts and space engineers, and by either embodying or challenging officially declared Soviet values.

Chapter 1 explores the formation of key myths of the Soviet space age, such as the Korolev myth and the cosmonaut myth, focusing on memoirs and commemorative events as cultural vehicles for mythologization of history. Officially disseminated Soviet space myths greased the wheels of the propaganda machine, gave tangible representations to the ideological concepts of

socialism and nationalism, and cemented the identity of a nation. Rather than seeing Soviet space myths as pure propaganda tools, this chapter examines them as a function of Soviet remembrance practices, both public and private. The space myths were not entirely constructed from above. Various historical actors—from the cosmonauts to space engineers to military officials to artists to the general public—introduced their own elements into space mythology, and these were not necessarily consonant with the official version.

The next chapter examines the impact of the professional culture of rocket engineering in late Stalinism on the engineering and organizational practices of the space program during the Khrushchev era. The Stalinist legacy and the dual military/civilian character of rocket engineers' work profoundly affected the identity of this elite part of the Soviet technical intelligentsia. Focusing on such notions as control, authority, and responsibility, this chapter examines the role of engineering culture in shaping the Soviet approach to the automation of piloted spacecraft control. Drawing on Stalin-era techniques of patronage and networking, space engineers of the Khrushchev period were able to overcome the inefficiency of Soviet industrial management and to advance their agenda of space exploration.

Chapter 3 explores the tension between the public image of Soviet cosmonauts and their professional identity. Soviet propaganda often used the Soviet space program as a symbol of a much larger and more ambitious political/engineering project—the construction of communism. Both projects involved the construction of a new self, and the cosmonaut was often regarded as a model for the "New Soviet Man." The Soviet cosmonauts publicly represented a communist ideal, an active human agency of sociopolitical and economic change. At the same time, space engineers and psychologists viewed human operators as integral parts of a complex technological system and assigned the cosmonauts a very limited role in spacecraft control. This chapter examines how the cosmonaut self became the subject of "human engineering" and draws parallels between the iconic roles of the cosmonaut and the astronaut in the Cold War context.

Chapter 4 interweaves documents and stories about Gagarin's pioneering spaceflight. The official narrative of Gagarin's mission became a success story, and all the details that complicated the picture were purged from the record. Censors duly screened every publication, weeding out any disclosure of technical failures or social tensions related to the mission. In the official version, Gagarin's flight had no glitches, except for the little snag with an improperly closed hatch at the launch pad, which was quickly fixed. A sanitized version of Gagarin's flight communications transcript was published; a version sent to the Communist Party leadership was similarly edited. Before the Soviet leadership deceived the world for propaganda purposes, the management of

the space program attempted to hide technical and managerial errors from the Soviet leadership. Through memoirs, diaries, and documents, this chapter gives voice to conflicting accounts by many participants and observers, creating a multifaceted picture of myth in the making.

Chapter 5 focuses on the seemingly technical debates over the proper degree of automation of spacecraft control. These disputes were crucial to the definition of cosmonauts' requisite skills as either pilots or engineers. Here technology, professional identity, and social status became closely intertwined. Soviet cosmonauts were "designed" as part of a larger technological system; their height and weight were strictly regulated, and their actions were thoroughly programmed. In the absence of a long-term space policy, their missions were usually designed with short-term goals in mind, often without respect for human engineering specialists' advice. Soviet space politics, one might say, was inscribed on the cosmonauts' bodies and minds, as they had to fit, both physically and mentally, into their spaceships. The issue of onboard automation also raised larger questions of the meaning and purpose of human spaceflight. The debates over automation reflected competing visions of spaceflight as either a piloting mission or a research enterprise.

The next chapter is devoted to the tension between the public image and the professional identity of Soviet cosmonauts. The cosmonaut myth was conceived as novel, forward-looking, and high-tech, yet it was constructed out of traditional elements of Soviet propaganda. The medium—the old and clunky propaganda machine—subtly undermined the futuristic message. And the messenger, the cosmonaut, felt ambivalent about the message. All the questions that most interested the cosmonauts—the technological aspects of spaceflight, the emergencies in orbit, and plans for future flights—had to be left out of their public speeches. The cosmonauts were forced to follow the preset agenda of the space propaganda machine, just as they had to fit into the automated control system of their spacecraft. Neither machine left them much room for initiative. Just as they tried to broaden their control over spacecraft, the cosmonauts tried to gain greater control over their social role. Just as they were not perfect automatons on board, they were not ideal models in the social arena.

The last chapter focuses on the interplay of myth and identity in post-Soviet culture. In today's Russia, which has lost its former communist ideals and is still searching for a unifying "national idea," Gagarin's pioneering flight—the pinnacle of the Soviet space program—often stands as a symbol of history that the Russians could really be proud of, despite the trauma of losing the superpower status. Space history now becomes part of what the cultural critic Natalia Ivanova has termed "no(w)stalgia": neither condemnation nor idealization of the past, but its actualization as a set of symbols that provide

reference points for today's discussions.[29] In post-Soviet Russia the cultural heritage of the decades of the communist rule oddly mixes with the newly developing capitalist culture, as advertising campaigns often skillfully combine old Soviet symbolism with "new Russian" capitalist values.

The story of Soviet space mythology suggests a more complicated picture than the mere suppression of informal communicative memory by state-sponsored cultural memory. While the official history of the Soviet space program presented a mythologized version of events, space engineers and cosmonauts who cultivated "counter-memories" produced their own myths. Ironically, often the same people—flown cosmonauts and space engineers—propagated both types of myths but in different spaces of memory: the former publicly, the latter privately. In the cultural swirl after the collapse of the Soviet Union, as former idols were dethroned and former outcasts canonized, the neat analytic distinctions between public and private discourses, between communicative and cultural memory, and even between memory and history became blurred. The choice is no longer between history and memory but, rather, among the different versions of myth.