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J. P. TELOTTE

The Mouse Machine

DISNEY AND TECHNOLOGY

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Introduction:
Main Street, Machines,
and the Mouse

I

Disney's gift, from the beginning, was not as is commonly supposed a "genius" for artistic expression . . . it was for the exploitation of technological innovation.

—Richard Schickel, *The Disney Version*

In the Disney theme parks, appearance is everything. The company's insistence on accurate research and detailed reproduction is well known, and the Disney Main Street, while what Stephen Fjellman has described as "a romanticized, idealized, architecturally controlled" creation (170), supposedly modeled on the downtown of Marceline, Missouri, where Walt Disney spent his formative years, quickly affirms the corporate emphasis on detail. The parks are also notoriously *clean*. Attendants—or "cast members," as employees are all termed—constantly walk the streets and pathways, picking up trash, wiping and polishing, watering the decorative flowers and shrubs, and generally making sure that there is little to mar the planned illusions. In addition, perspective is carefully controlled, so that guests see things—and are encouraged to take photographs—from calculated vantages, ones that afford the most picturesque views and that avoid glimpses of all that is "backstage." As a consequence, much of what allows for those attractive appearances,

what makes the parks work, is never seen. For example, just underneath Main Street (and the other streets in the Magic Kingdom, as well as part of Epcot) snakes an elaborate complex of passageways, or "utilidors," as Disney terms them, providing quick access to all areas of the parks and holding the water, gas, and compressed air pipes, electrical wiring, computer cables, heating and air-conditioning ducts, and so on, that make these immense structures function so efficiently and entertainingly.¹ The appearances here are, in fact, designed not only to provide guests with a pleasurable experience, but also to obscure the fact that these parks are not fantasy worlds but great technological wonders, with their creation and propagation reminding us of how accurately Richard Schickel estimated Walt Disney's true genius.

By remaining largely invisible, those technological underpinnings are supposed to make the parks seem to work by magic, thereby adding to the "magical" atmosphere that Disney sells—as a vacation destination, a purveyor of television and radio programs, a retail sales source, and a film studio, among other things. Of course, at times the appearances do fail. Rides inevitably break down; cast members, playing one of the Disney characters in a full body costume, have been known to faint; in 2006, a forty-nine-year-old tourist died of heart failure after riding Epcot's "Mission: SPACE" attraction. And when doing so can contribute to the company's profitability, Disney itself does lift the curtain and let us glimpse the mechanisms at work. Visitors to the Magic Kingdom, for example, after paying the usual park admission, can also take the rather pricey "Keys to the Kingdom" tour, a four-to-five-hour guided exploration of the utilidors, the waste treatment plant, parade staging area, and various other logistical and operational components unseen by the usual park visitor. Other Disney parks have also added versions of this behind-the-scenes experience, such as Epcot's "Behind the Seeds" tour of the high-tech food and plant cultivation that supports the park and its restaurants, or Animal Kingdom's "Wild by Design" excursion that shows how the park operates and cares for its animal inhabitants. As Disney has learned, revealing how the "magic" works can prove a rewarding experience for visitors, as well as a lucrative extension of the company's larger synergistic strategy; in fact, such revelation provides further evidence of Disney's status as what Janet Wasko terms "the most synergistic of the Hollywood majors" (*Hollywood* 53).

The aim of this book is to follow the company's lead in this regard, to offer a selective look at some of those often-unseen—or unconsidered—technological supports or developments that, in film, television, and the theme parks, have been crucial to the success of the Walt Disney Com-

pany and, at times, also a clue to its limitations. The result, I hope, is a very different, if admittedly limited kind of studio history, one in which we focus on both the manner and the implications of the company's investment in technology and technological culture. Certainly, wherever we look at the company that bears the name of one of its founders—and throughout this study we shall use the Disney name mainly to designate the company, but at times also its original driving force, Walt Disney—we see the traces of both this technological development and a technological attitude that have become almost as fundamental to the company's identity as its trademark cartoon characters: Mickey and Minnie Mouse, Donald Duck, Goofy, and the rest. Yet those seemingly real figures and the fantasy realm they inhabit often, and even purposely, distract us from the technology that, as in the theme parks, operates just below the surface, making possible the various fantasies the company sells. By exploring the technological context for the various Disney creations, the literal foundation of the many Disney worlds, we can better understand not only Disney's phenomenal development from a small Poverty Row film studio to one of the largest and most influential media and entertainment companies in the world, but also its powerful appeal to a contemporary worldwide audience, an audience that seems increasingly aware that it inhabits a thoroughly technological, mediated environment—one to which Disney lends a most inviting and even seductive countenance.

This technological perspective should also shed some light on Disney's role within that contemporary media environment. For even as it has branched out from its early primary function as a small cartoon studio to become a key presence in television, radio, the Internet, book and music publishing, theme parks, theater, and the more amorphous leisure industry, the studio has retained something of its original character, a kind of technological fingerprint that attests to Schickel's assessment. Today Disney functions as an important part of what the cultural philosopher Paul Virilio has termed "the vision machine" (*Vision* 59), as a segment of that contemporary technological culture that conditions how we see—and inhabit—our world. Esther Leslie has observed how early discussions of the cinema frequently anticipated this impact, describing the ways in which film "obliges the viewer to see the world" in particular ways—in terms of tracking shots, master shots, close-ups, a montage of juxtaposed images, and so on (105). A wide array of subsequent analyses has tied that conventionalizing of vision to film's powerful ideological impact. But more than simply pointing towards such ideological manipulations, Virilio's development of this notion emphasizes two points that are typically overlooked. One is a kind of totalitarian force that

pervades the contemporary cultural environment,² a force that he a bit exaggeratedly terms "a eugenics of sight," but one that might more accurately be described as a tendency towards a "standardization of ways of seeing" (*Vision* 12, 13), an inclination to control how we see. As initially noted, some of this standardization is crucial to the Disney theme park experience, which carefully organizes and controls its guests' point of view. As Alexander Wilson notes about the Epcot experience, "There is never a moment or space that is not visually, aurally, and olfactorily programmed" (122) there. But that very tendency for programming and control, this fundamental character of modern technological culture in general, also charges the entertainment experience with a kind of challenge. And here is Virilio's second key point: that the workings of such a cultural force implicate us, across cultures and classes, in an ongoing struggle, in our own sort of negotiation, "not in an effort to destroy it, but in order to transfigure" that environment by rendering its effects quite transparent and thus less controlling or pernicious (*Armitage* 157), as we negotiate between our desire for entertainment and our mindfulness of the ideological baggage often hidden in that experience.

In fact, Janet Wasko, Mark Phillips, and Eileen Meehan have already situated the contemporary work of Disney in one version of this struggle. Approaching the company as a conglomeration of globally focused entertainment technologies, they describe how various audiences have developed different strategies for addressing and coping with Disney's efforts at "standardization," and the often "dazzling" effect of those efforts on worldwide audiences. As they observe, some audiences readily recognize the manipulative and even exploitative effects found in Disney films, television programs, comic books, and other products, and resist those effects—although ironically, as Phillips notes, that resistance usually "does not stop them from liking the products produced by the company" (48). Others acknowledge some of those effects but are able "to compartmentalize Disney the business from Disney as entertainment," and to distinguish "between 'classic' Disney and current Disney" (Phillips 48), that is, between a historical set of texts, linked to Walt Disney, to which they are more kindly disposed and those elements, produced by the more recent company regimes, that immediately affect their lives and seem to emphasize a consumerist ethic. Yet another audience segment, as they offer, adopts a strategy of appropriation, incorporating the Disney experience into family or cultural rituals, thereby translating Disney from something "uniquely American" to something perceived as "mine" (Phillips 55). Thus in her study of Disney audiences in Denmark, Kirsten Drotner observes how they "form and sustain their own cultural

identities" by defining "what they see as being Danish through a process of contrastive validation to what they perceive as being American" in the Disney texts (113). Through these various strategies we can begin to see the complexity of response that the technological world, and Disney as a powerful component of that world, not only elicits but almost requires of audiences throughout the world.

While the technological perspective outlined in Virilio's work has at times been charged with overlooking just such cultural strategies in favor of more formal phenomenological concerns, I would suggest that Virilio's emphasis on a sense of struggle or "wrestling with" the technological (*Armitage* 10, 157) links his vantage in an important way to analyses like those described above. For it points to the broader nature of this technological contention, implicating both the audience and the companies that employ it in a nexus of negotiations, and suggesting that both must similarly bargain with all that constitutes our technological climate. Since commentary on the studio has, over the last two decades, been dominated by rather strict ideological assessments that emphasize reception, treat Disney like a monolithic agent, and largely exempt technology from the equation, Virilio's perspective seems a valuable vantage to bring to such a powerful component of the media environment. Thus, a primary aim of this study is to open a broader perspective on Disney by examining the company's technological workings—i.e., both its attitudes towards technology and its efforts at relating technology to a mass audience—and hopefully rendering them far more transparent.

It is also in the context of this imperative to deal with the power of technology and the nature of modern technological culture that I see Disney playing a crucial and in some ways instructive role, one that can help to explain some of its great attraction, even for those who, as Phillips points out, generally resist the studio's work, or as Drotner suggests, approach it with a sense of "ironic enjoyment" (113). For as we shall see, throughout its history, Disney has constantly been engaged in what we shall metaphorically describe as "negotiations" with various components of the vision machine. Like most companies in the entertainment industry, Disney has, in order to survive in an increasingly competitive environment, repeatedly had to innovate or adopt new technologies or move into new media forms, and in some cases to innovate and then abandon new technologies that proved unprofitable or problematic. The development of sound cartoons and the corporate partnership with television are two obvious examples of the former path, with sound allowing the studio to differentiate its product from most other early cartoon makers, and television creating a new source of revenue and advertising,

as well as an outlet for its product in a powerful emerging medium in the 1950s. As instances of the latter situation, we might recall Disney's development of stereophonic surround sound for *Fantasia* (1940) and its rather quick abandonment of that technology after its costly road-show failure, as well as the studio's move away from hybrid animation in the late 1940s after both audiences and critics responded coolly to this development. Moreover, the studio's various productions—texts that cut across all aspects of our media environment—have provided audiences with numerous sites wherein they can both observe and vicariously participate in these most important negotiations. In them we repeatedly encounter dramatized examples of how we might deal with the difficulties of this world, situations Disney has carefully measured and worked out for us, as in the case of *Monsters, Inc.*'s solution to the energy crisis—the substitution of laughter for screams as an infinitely renewable energy source, and analogously, the need for optimism rather than fear in addressing the obvious problems posed by limited natural resources.

Before further considering these various technological encounters, though, we should pause a moment to clarify how we might use that term *technology*, since today it often means different things to different people. For many the term simply denotes a category of mechanical or electrical tools or devices, specific *things*, while others, particularly in the area of cultural studies, liberally deploy it to describe a set of practices commonly centering on how we manipulate our world. I want to stake out a kind of middle ground between these extremes, using technology to suggest something more than what Neil Postman limits it to, that is, “merely a machine” (*Amusing* 84), but also something less than what Andrew Ross, in an example of the excesses of cultural studies, far too ambiguously defines as a “cultural process . . . that only makes sense in the context of familiar kinds of behavior” (3). In between is an area that includes both hardware and software, or perhaps more precisely, specific mechanical constructs like the multiplane camera, media such as television, and even a scientific mindset that construes and constructs the world according to technological principles, such as regularity, efficiency, and speed. To consider only hardware or technical extensions of the body would obviously exclude most cultural considerations, while to go completely in the direction that Ross suggests, to see practically all human behavior as a form of technology, ultimately renders the term almost meaningless. That approach creates an identity between technology and culture because it wants to emphasize human or social agency, but that perspective risks forgetting a point that has often been made: that

many apparatuses, even mechanical and electronic devices, are far from neutral.³ Ultimately, I want to suggest a more complex and, I hope, more *useful* relationship than either of those extremes usually permits.

Certainly, as we shall use it here, technology does implicate a variety of specific tools or devices that have proved crucial to the development of the Disney empire. Yet those devices are invariably tied to a certain technical mindset or context, what some might broadly describe as a cultural discourse, that has helped propel Disney's development. While the specific tools of sound technology, such as Vitaphone's sound-on-disk, Movietone's sound-on-film, or the RCA Photophone system were essential to transforming the film industry in the late 1920s, a larger discourse—i.e., both popular and scientific—about sound and about how it could affect both film production and the film experience was also crucial. So as the following chapters, in order, chronicle Disney's innovation of sound cartoons, its application of three-strip color, its efforts at giving depth to the animated image, its partnership with television, its experimentation with widescreen technology, its development of the theme park and Audio-Animatronics, and its movement into digital animation and effects filmmaking, they will also invoke a broader technological discourse or attitude, such as that involved in the space race of the 1950s and 1960s, that surrounding issues of digital representation much later, or, in several chapters, that central to the increasing popularity of the genre of science fiction. The result, I hope, is a situating of technology in what might broadly be termed a technological context, and an avoidance of the extremes that often characterize many discussions of the subject.

Within this context, we might see my initial description of Main Street and its functions as pointing towards two technological issues that will periodically resurface here, ones not only central to the Disney universe, but also crucial to contemporary culture, to that cinematized landscape we all inhabit but that Disney has made its special province. One of those concerns is a persistent challenge facing contemporary culture: how do we find an accommodation with the technological? This effort at accommodation is something that Disney as a company has, practically from its inception, practiced, almost invariably profited from, and regularly, in its films, television programs, and theme park attractions, models for audiences. In this project we find a telling explanation of why, despite its frequent nostalgic evocations, Disney has also, like no other American cultural institution, always been invested in the technological, and how it has effectively made the technological seem like a natural or complementary element of our world. As an example,

we might recall how this dual effort surfaces in Disney's *Swiss Family Robinson* (1962), wherein the shipwrecked title family determines not simply to build a tree-house shelter, but, as a matter of course, to equip it with elevators, running water, fans, and a host of other modern appliances that effectively link their primitive island home with the advanced European culture from which they have come, as well as with the modern world of the audience for whom such features are simply commonplace. Appropriately, Disney has featured versions of this tree house in several of its parks, where it serves to suggest this sort of easy connection and to demonstrate the possibilities of such accommodation—an accommodation *with* technology that is also enabled by the technology. This attraction, located off of Main Street and just within Adventureland in the Magic Kingdom, affords an especially comforting presence for audiences who are living through accelerating technological change and its attendant challenges. In fact, it suggests that we should see a visit to a Disney theme park not so much as a retreat from the real world into fantasy, as many commentators would offer, but as a rather comforting affirmation of our ability to live *with change*, to recognize, as the Audio-Animatronic theater of the Carousel of Progress offers, that "there's a brave new beautiful tomorrow, just a dream away," and to encourage us in that dreaming by modeling it for us.

The other key concern to which I have already alluded might be described as *connection* itself, often embodied in various forms of communication. Of course, maps are distributed as guests enter any Disney Main Street or park, and maps to treasures and lost civilizations propel the action in a wide array of Disney films, from *Treasure Island* (1950) to *National Treasure* (2004). Messages conveyed in various ways, including bottles and magic mirrors, are central to *20,000 Leagues Under the Sea* (1954), *Snow White and the Seven Dwarfs*, and *The Rescuers* (1977). Television's shaping force on a child's imagination drives the two *Toy Story* movies; and both *Monsters, Inc.* (2003) and *The Incredibles* (2004) suggest that there are disconcerting and even "incredible" dimensions to our world just beyond a closet door or within the cookie-cutter suburban house next door—connections just waiting to be discovered. While at times suggesting a kind of simple wish fulfillment and firmly embedding most of the Disney product within the realm of the fantastic, this emphasis on connection also underscores an important dimension of the Disney product, the way in which it consistently points to the possibility of unseen, often denied, but also hoped-for links, ways of bridging the past and the future, connecting to others, and even of reaching other, most secret parts of ourselves, often with the assistance of some sort of technology.

In short, those concerns with technology and connectivity underlie and enable that nostalgic veneer on which most Disney commentators have dwelt, while they also help to explain why people of various cultures have been drawn to Disney and have welcomed not only its films but also its theme parks—and with them its peculiar ideologies—into their own countries. This is a point Virginia Nightingale makes explicit in her study of Disney audiences in Australia, where she observes that most of her survey respondents see Disney texts as "*not* uniquely American," but rather as "universal or multicultural" (67).

I would suggest that these concepts are linked and form one of the key Disney contributions to contemporary culture. For within the Disney universe the technological *does* seem natural or at least congruent with nature—and usually fun, as the tree-house attraction demonstrates. And the technological repeatedly plays an important role in enabling just the sorts of communications and connections that we implicitly sense are lacking in our world and that we most desire, so that the Disney version of the technological typically, even necessarily, speaks a message of promise or need satisfaction. While the movies allowed Disney to speak to millions and develop a media machine that could reach all corners of the earth, that could link everyone as part of a global village—or World Showcase, as the Epcot park styles it—technology as envisioned by Disney has become crucial to connections of every sort. It is precisely for this reason, I would suggest, that another of the key Disney emblems, the geodesic dome that stands as Epcot's symbol, houses a ride, "Spaceship Earth," that is devoted precisely to depicting the changing nature of our communication technologies. Much like the various Main Streets, this structure functions as an official entryway, as well as a point of divergence, dramatically conveying for all who pass through it the Disney ethos of communication and connection.⁴ From here visitors may turn to visit the various technological pavilions that occupy the front portion of the park or end that experience and take the central walkway leading to the different national exhibits that comprise the World Showcase—all of them identified by traditional, easily identifiable structures that recall past glories or stereotyped characteristics of their respective cultures. Past and present, a brave new world and an equally valued old one are, as the park's technological products affirm, here able to strike a bargain, to fit in relatively easy harmony, and even to allow visitors to move almost effortlessly between them.

Of course, there is a danger precisely in the seemingly effortless nature of that ersatz harmony, in the hidden difficulties of negotiation, in the entertainment itself. Too often the Disney world—and especially

every Disney themed "world"—does seem to be preaching the pure gospel of what Virilio has termed "technological fundamentalism" (Armitage 5), suggesting that we can invest a kind of absolute and unquestionable value in every new technological development. Like the complex support system of the utilidors, we seldom glimpse the great effort and difficulty involved in making that world run properly and with the sort of marvelous efficiency promised by the Machine Age into which Walt and Roy Disney had been born and in the promise of which Walt was so invested. The entertaining nature of the Disney products all too easily projects the sort of "utopian" sense that Richard Dyer argues is a fundamental effect of most popular entertainment, that Howard Segal describes as part of the aura that commonly attaches to all technological development, and that is certainly one of the bases on which technologies are commonly sold to the public, both by Disney and by much of contemporary culture.⁵ One of the seductive lures of the Disney technological world, consequently, is the sense that those negotiations might occur quite naturally, without any effort on our part, and certainly without the sort of trade-offs and even crippling false steps about which a number of recent critiques have warned. As Edward Tenner has observed, any history of technological development should include a chronicle of technology's many "revenge effects," of the various ways in which our technical ingenuity has also backfired (6). But telling the story of such revenge effects would distract from the primary message here, and certainly from the entertainment factor.⁶ For through its constructed worlds Disney dramatically plays out for its audiences the possibility of such negotiations, suggests that they can in various ways be accomplished, much as the Walt Disney Company would seem to have done throughout its history. As a partial corrective, this study tries not only to chronicle a number of Disney's key technological achievements, but also to begin to *denaturalize* the negotiations implicit in those accomplishments, to sketch some of the very real difficulties that have been involved in and through a range of Disney texts.

II

The Disney Main Street, as I have suggested, is an appropriate place to begin thinking about these sorts of negotiations. Guests who walk its length encounter a kind of modern-day Potemkin-village, certainly not on the grand scale of the Russian original, but a tremendously effective piece of entertainment and foolery nonetheless that suggests they have entered an older, simpler, less problematic world. However, its carefully

scaled facades and forced perspectives hide no impoverished peasantry or backward culture; nor is the illusion here ever more than momentary and at times even quick to reveal itself, as guests who opt to tour the utilidors find. And as Eleanor Byrne and Martin McQuillan have observed, while for many the Disney text is "synonymous with a certain conservative, patriarchal, heterosexual ideology" and an aggressively capitalist stance, it is often and surprisingly almost "self-evidently" so (1-2), or, as I might suggest, rather *self-consciously* so. In any case, they believe that "the blatantness of Disney is what makes it so resistant" to much of the dominant contemporary critical agenda (3). And indeed, the results of several reception studies support this notion. Drotner, for example, finds in her audience surveys that "Disney products have not been accepted wholeheartedly and without reservation, nor have they promoted a uniform acceptance of American values and norms"; in fact, the Disney products have often "served as eye-openers about [local] cultural identity" (115). Yet while we continue to dissect the company's obvious weaknesses, and while the company itself, understanding that political correctness sells, has increasingly sought to counter those perceptions through the release of gender conscious and cross-culturally focused films like *Pocahontas* (1995), *Mulan* (1998), and *Holes* (2003), what continues to slide all too easily from view on Main Street and elsewhere, save for when the company chooses to *sell* that very view through one of its special tours, is the mechanism at their base, as well as the mechanistic attitude—one that emphasizes machine-like formulas, careful regularity, and efficient output—that drives Disney's worlds.

We might begin our walk, then, by noting that there is a theme to the Disney Main Streets: Technological Progress. The various shops and buildings we first encounter suggest gas-lit and rather conventional structures recalling the late nineteenth century, but as we move down the street, we find increasingly elaborate facades and interiors, depicting an electrified and prosperous early twentieth-century America.⁷ Moreover, wherever they are located, the Disney Main Streets all share one quite striking, readily evident feature of this technological progress, one that identifies them as part of the larger Disney entertainment machine. Each one contains—or rather, depicts—an old-fashioned motion picture theater, often running a bill of classic Disney cartoons, but sometimes simply showing promotional films for other Disney efforts. That theater represents the ur-technology out of which the entire Disney universe—a multicultural, media-informed, and media-driven realm—has come into being. For the movies, and the mouse within those movies, the mouse that, as Walt Disney was fond of noting, made it all possible, *represent*

the machine where Disney began, a key point of origin and connection, although just one segment of the larger Mouse Machine, as we might term it. While this depicted technology is small and unprepossessing, simply part of the varied cultural landscape offered to park-goers and a sort of technology that is meant to make them feel comfortable—if for no other reason than the fact that it offers a shady rest stop amid a sea of concrete—it begins to point us in an important direction. It suggests a level on which all that follows in the parks, all that branches off from Main Street, is designed as a cinematic experience, even a rather reflexive one. But more significantly, it hints of a level on which the entire Disney enterprise is linked to the development of what Virilio has described as “an entirely cinematic vision of the world” (*War and Cinema* 66)—a vision enabled by this technological progress, one that is part of contemporary technological culture, yet one that often goes unremarked.

In keeping with this linkage, Main Street appropriately occupies a sort of cusp position in the Disney worlds that signals its various technological functions and frames the many “narratives” that follow. Leading away from its theater, the street directs park visitors into both the past (Frontierland) and the technologically driven future (Tomorrowland), into an idealized America, along with its European roots (Fantasyland) and its unspoken imperialist aspirations (Adventureland). The trip down, and through, any Disney Main Street is thus a bit like boarding a machine that, like the movies themselves, allows for both space and time travel, taking visitors both backward and forward, to Disney’s early media origins and along the varied cultural paths it has staked out with its commitment to an assortment of evolving media technologies. Main Street is, very simply, a terminus for multiple connections—even a site of contradictions—and an emblem of how the many technologies at work in the Disney enterprise all serve to “transport” audiences in a variety of ways. Even more specifically, it reminds us that the Disney worlds are driven by various technologies (and technological attitudes), that they deploy those technologies in carefully calculated ways, sometimes disguising their actual functioning, but often, disingenuously, presenting technology as their focus or subject matter, thereby helping to shape our perceptions of the very forces through which the Disney texts work so effectively on us.

In describing the impact of technology on our world, on what he tellingly describes as “the cinematic landscape” of contemporary life (*War and Cinema* 79), Virilio notes how, in the common experience, “geographical space has been shrinking,” so much so that “technological development has carried us into a realm of fictitious topology in which

all the surfaces of the globe are directly present to one another” (46)—or at least, in our everyday routine, might seem so. This effect, underscored by the rapid proliferation of video cell phones, global positioning tools, and Blackberry-type gear, can be, by turns, promising and rather disorienting. It hardly requires much prodding as we walk the Disney Main Street to see it and the entirety of the Disney theme parks, as symptomatic of that “shrinking” and as part of this new, technologically constructed “topology.” In fact, one might argue that the original Disneyland is the real prototype of such topologies, and the proliferation of Disney parks, along with the company’s increasing cross-cultural emphasis, points up its ongoing role in fostering this newly intimate topology, or what some have termed a “global culturalism.”⁸ Obviously, Main Street leads into Disney’s own geography, that of Tomorrowland, Fantasyland, Frontierland, and Adventureland, all preexisting in the imaginary of the original *Disneyland* television show⁹ and, we might suppose, in the imagination of Walt Disney himself. This special topology also points toward the final destiny of the Epcot theme park’s design. For here a proposed “Experimental Prototype Community of Tomorrow” would, when it was reconceived and constructed sixteen years after its announcement, give way to those two strangely contiguous lands: the technology-intensive Future World at the front of the park, and at the rear the World Showcase, a series of international exhibits centered around a detailed and reduced-scale simulacrum of a country’s signature and pointedly traditional architecture—e.g., an English pub, an Italian palazzo, a Norwegian stave church, a replica of France’s Eiffel tower. As the pathways through Future World inevitably lead audiences into this ersatz old world crafted from the latest materials, Epcot demonstrates how the technological future can serve to neatly package and offer an easy, if questionably satisfying, connection to a traditional cultural past.

In fact, Disney has repeatedly and proudly boasted of how it painstakingly creates the sort of imaginary topology that branches off from Main Street as the basis for its various rides and attractions. Thanks to the transforming power of modern technology, the company has been able to carve out for each of its theme parks an amazing yet carefully planned *physical* landscape, marked by a series of arresting monuments: Space Mountain, Splash Mountain, the Matterhorn, Animal Kingdom’s massive Tree of Life and Expedition Everest’s 200-foot tall version of the Asian peak, Epcot’s trademark geodesic dome, World Showcase Lagoon, and, most obviously, the European-style fairy-tale castles that mark all of its theme parks. These are landmarks that, with great technological effort, at massive cost, and with a keen appreciation for the visual power

of the monumental, Disney has carefully constructed from the natural world—the orange groves of California, the swamplands of Florida, the marshes near Tokyo Bay—to serve not just as spectacles and attractions, but as living testimony to the power of technology and a technological mind-set. It is an attitude that, as Schickel suggests, seems intent on reshaping nature, on creating a new and very real world, partially populated by technological (Audio-Animatronic) figures and well-rehearsed performers, placed within carefully fashioned cultural contexts, and always waiting for guests to appreciate its perfection, to participate in and thus complete the illusion. The result is a world in which Disney guests can feel comfortable and safe, can experience the various geographies and cultures of the globe, albeit on a reduced scale, without the obvious importunings of politics and within the pleasant confines of a new sort of media landscape, one that artfully passes off that mediascape as a part of the natural world of the imagination. In short, it is a landscape that helps Disney to advertise and sell the broad-based cultural experience it has to offer, including that of technology and technological progress.

This description already begins to suggest where Main Street ultimately leads us. With its Audio-Animatronic denizens, its movie theater, its carefully disguised surround-sound audio environment (with speakers practically everywhere, piping in appropriate mood, theme, or culturally appropriate music), its cinematic lighting, its images of the past cinematized by the very latest technological developments, Main Street attests to the Disney partnership with technology that has allowed the company, like a kind of embodiment of the media itself, to grow, to branch out, to spread to other territories—Paris, Tokyo, Hong Kong—and, in the process, to redefine itself as the model of the postmodern international media enterprise. For the Disney Company has grown from a small cartoon advertising enterprise (Laugh-O-gram Films of Kansas City) to its current status as media monolith not only by negotiating links for us with the past and with other cultures, but also by constantly making deals for or striking compromises with the latest developments in entertainment technology, often in the face of rather difficult economic circumstances or significant shifts in the cultural or industrial landscape. It is a tendency that Steven Watts especially appreciates as he describes how, under Walt and Roy's original leadership, the company would periodically assert itself "with a remarkable burst of activity" that would almost invariably prove "both psychologically revitalizing and financially profitable" (285). And it is a note that Walt himself often struck, as when addressing the Society of Motion Picture Engineers, he remarked, "There is no know-

ing how far steady growth will take the medium, if only the technicians continue to give us new and better tools" (142).

III

Of course, our prime concern here is not with the parks, but with Disney's crucial place in the entertainment world and especially within the film industry. Thus I want to extend the implicit path of Main Street along a temporal line into a rather different sort of studio history, to describe how, at certain crucial moments in the company's development, Disney has innovated, adopted, and exploited a variety of key technological innovations. The following chapters, then, will look in detail at a long line of those developments. Among them, we shall note how the studio explored hybrid animation with its early "Alice" films and resurrected this technique with increasing technological sophistication at various points in its history, culminating in the critical and popular success of a film like *Who Framed Roger Rabbit* (1988). The studio also helped innovate sound into animation with the Mickey Mouse cartoon *Steamboat Willie* (1928), in the process creating one of the most popular and enduring "stars" in world film. It blazed a trail into three-strip color filming through its 1932 agreement with the Technicolor Corporation, which granted it a two-year monopoly on the use of the new technology. Disney added a greater illusion of depth to animation with its award-winning development and application of the multiplane camera, certainly a key ingredient in the success of its first animated feature, *Snow White and the Seven Dwarfs* (1937). To showcase its experimental animation of musical themes, *Fantasia* (1940), it created a stereophonic and surround-sound system that anticipated industry developments in this area by more than two decades. At a crucial point in the history of the film industry it helped open the way to cooperation between the studios and the new technology of television through its 1954 deal with ABC to produce the *Disneyland* television series; and by leveraging this deal for financial support, Disney was able to innovate a new and increasingly powerful form of entertainment with its development of the similarly named theme park in 1955. Further pursuing that media path, Disney established its own cable television network in 1980, eventually acquired ABC's television and radio affiliates in 1995, and through a series of partnerships with such media powerhouses as the Hearst Corporation, GE, and NBC gained access to a variety of highly successful outlets, such as ESPN, Lifetime, and the A&E Network. Through its partnership with and eventual purchase of

Pixar Animation, it committed itself to state-of-the-art digital animation, a technology that has had ramifications not only for the future of the company's animated offerings, but also for the whole range of feature film production; as Disney's digitally rich, live-action features of recent years, such as *Armageddon* (1998), *Pearl Harbor* (2001), *Pirates of the Caribbean* (2003, 2006, 2007), and *The Chronicles of Narnia: The Lion, the Witch, and the Wardrobe* (2005), clearly demonstrate. And Disney has also developed an effective internet presence that it uses, with growing sophistication, to entertain, to inform audiences about its latest productions, and, of course, to sell all things Disney, including artifacts from its theme parks, hotels, and movie productions. Through these many initiatives, it has become one of the world's largest and most powerful media and entertainment companies, a giant that today largely stakes out the technological path that other entertainment companies follow.

With these various and ongoing moves, chronicled in the following chapters, the Walt Disney Company has also done something more. Under the guidance of Walt and Roy Disney, later of Card Walker and Walt's son-in-law Ron Miller, and more recently of figures like Frank Wells and Michael Eisner, and today Bob Iger, it has gradually come to recognize that its province is not simply the animation that brought the company into being or even the larger field of the movies. In fact, acknowledging this broadening purpose, as well as the changing nature of the entertainment industry, in 2004 the company terminated most of its traditional animation staff and closed the animation facilities in several of its locales, practically abandoning the company's original function. In its place we find a more focused emphasis on creating those fictitious topologies, as we have termed them—or, at any rate, on what they *represent*. Todd Gitlin has characterized the contemporary media as "occasions for and conduits of a way of life identified with rationality, technological achievement, and the quest for wealth, but also for something else entirely, something we call *fun, comfort, convenience, or pleasure*" (5). And Disney, as a corporate entity, has come to understand that its real province is the entirety of this "something else," that ultimately it sells *entertainment itself* (thus Walt's description of Disneyland as "The Happiest Kingdom on Earth"). The many technologies the company has pioneered and/or embraced over the years have simply provided various innovative opportunities for it to constantly expand that product line—not only to reach out to audiences in different ways, but to offer them new connections, new experiences, new versions of their world.

Here, then, is where the Disney Main Street, in fact, the whole of those amusement parks and all the other products that make up the Dis-

ney enterprise today, invariably leads. For with its embrace of the various media technologies that form today's international cultural topology, that of the movies, television, the new media emerging from the computer, and the core mechanical, electronic, and cybernetic technologies that drive its amusement parks, the Walt Disney Company demonstrates, and speaks to, a larger cultural effort at coming to grips with a thoroughly technologized environment, an environment that is not simply the world in which we live and work, but one that, in its very fictitiousness, often seems to function as "entertainment," as the place of the cultural imaginary with its implicit connections to our past and to other cultures. In keeping with a postmodern spirit, the many Disney worlds—of film, television, theme park, and so on—thus emphasize, even call our attention to, a level on which our whole world seems constructed, Potemkinized for our entertainment, or perhaps for our distraction, while also suggesting both a certain inevitability to this condition and our very real and continuing need to negotiate with this mediated environment.

IV

The various case studies that follow and that describe what I have termed negotiations all proceed from two rather simple assumptions, one a factual observation and the other a critical guideline. The first of these is that Disney, as one of the largest and most influential media/entertainment conglomerates today, offers a key model for the application of cutting-edge technologies to the world of entertainment. In fact, its very reach largely derives from its investment at key moments in company, cinematic, and, more generally, entertainment history in a variety of significant new or emerging technologies at which we have already pointed: synchronized sound, color cinematography, three-dimensional imaging, stereophonic sound, Audio-Animatronics, broadcast television, the cable industry, CGI (computer-generated imagery), and so on. That acceptance of various technologies, as we shall see, has repeatedly helped the company to innovate new dimensions in entertainment, while furthering one of the most fundamental of business strategies: differentiating its products from those of its rivals. It also marks Disney as a potential model for studying the rest of the film and entertainment industry, as its ability to innovate or respond to the most significant technologies, those that promise—or even threaten—to alter the course or nature of the industry, has allowed it to grow, prosper, and ultimately to assume a leading international role in the world of entertainment and in the marketing of that utopian sense that entertainment conventionally generates.

This investment also shows up in the company's increasingly frequent focus on science and technology in its films, television programs, and theme parks, resulting in a substantial number of science fiction films, what the company at one time termed "science factual" television shows and theatrical documentaries, and technologically themed rides or other park attractions, such as Disneyland's original "Rocket to the Moon" ride, Disney-MGM Studio's "Backlot Tour," or the Magic Kingdom's "Carousel of Progress," all of which foreground Disney's corporate attitude towards the technological and even *celebrate* its technological achievements, rather uncritically suggesting what our own attitudes towards the technological might be. In this repeated focus, the company has sought to draw science and technology into the realm of entertainment by locating in the mechanisms that enable its work the very stuff of entertainment. And in the process it has managed a rather remarkable paradox: rendering those mechanisms and their cultural impingements nearly invisible even as they *are* being celebrated.

The second assumption behind this study derives from Neil Postman's analysis of technology's impact on contemporary culture. Observing American culture's eager acceptance of all things technological, he describes the emergence of what he terms a "technopoly" in our recent history, that is, the subordination or "submission of all forms of cultural life to the sovereignty of technique and technology" (52). That obvious impact—one that is hardly limited to America—prompts his warning that, "It is inescapable that every culture must negotiate with technology, whether it does so intelligently or not. A bargain is struck in which technology giveth and technology taketh away" (5). Disney's success in its technological investments and commitments, as I have implied, follows precisely from the sort of "bargains" it has, through the years and across various media, managed to strike with those different technologies, with the practices of the larger entertainment industry, and with the technological mindedness of its audience, from the sort of balance it has found in what technology gives and what it takes—or as some of the company's more skeptical critics would contend, what the technology has allowed *it* to take. By walking the technological path suggested by the Disney Main Streets through a variety of Disney texts, both classic and contemporary, this study aims to map some of the negotiations that have effectively created the Mouse Machine and helped it prosper.

This mapping should help us not only to better understand Disney as a cultural institution, but also to look beyond the Disney context. For as I have suggested, that Disney negotiation, thanks to its historical importance, ongoing development, and enormous success, models simi-

lar developments in the entertainment industry and in some instances pointedly parallels other studios' approaches to technological innovation and adoption. Certainly, Disney's technological history, particularly its embrace of sound film, its early involvement with television, and its profitable partnership with other media outlets, suggests some similarities to the industrial path followed by rival studio Warner Bros.¹⁰ As a consequence, this study might also allow us a glimpse inside the box where entertainment and technology have effected their partnership, one that has come to typify the contemporary media and entertainment landscape, and to inform so much of our lives and condition the negotiations in which we are involved on a daily basis.

A further benefit of staking out this company and industry path is that through it we might better understand the central role Disney has played in a larger cultural trajectory at which we have hinted. Virilio, whose analyses are woven throughout this study, describes how we have come to inhabit a thoroughly "cinematized" realm today—an environment in which we often see our world as if it were a kind of movie set and ourselves as if we are players within a larger, technologically impelled narrative over which we have little real control. As he allusively puts it, today we are all in some way "victims of the set" (*Art and Fear* 79) and of a kind of totalitarianism that seems built into our various communications and entertainment technologies. Consequently, instead of confronting—and perhaps effectively dealing with—the real world, he suggests, we increasingly find ourselves encountering a "reality effect," a situation in which we are hard put to determine not so much what is *real*, as Jean Baudrillard might suggest, but rather *how* and *if* we can effect any change in a world that has become so obviously elusive/illusory. Yet what we can do, as Virilio reminds us, is to recognize the fact of this "cinematic derealization," try to map its shifting dimensions, and engage it, on both personal and cultural levels, "in a struggle, like Jacob with the angel" (Armitage 159).

On one level, we might think of the work of Disney, as many ideological assessments presume, simply as symptomatic of this situation and as another agent of manipulation and repression. It may be that Disney has achieved its prominent status in both the entertainment industry and in the world mainly because it so fully captures this spirit, works so easily and congruently with this broad cultural trajectory, and has labored throughout its history to link its name with notions of fun, family, and fantasy. Certainly, the Disney theme parks *are* like Potemkin-villages, and in walking through them we do find a postmodern pleasure in their very artifice, especially their naturalized vision of life-as-a-movie-set. For

the sort of cinematically derealized world they offer us just corroborates—while also rather sanitizing—our everyday experience. This vantage, at any rate, might help explain why today many think of Disney as, first and foremost, a creator and operator of such parks, of “Lands” and “Worlds” into which vacationers happily cast(away) themselves, becoming part of the various fantasy narratives that the company, in all of its forms, “tells.” Yet on another level, Disney, thanks to the various channels through which it speaks to a worldwide public—television, cable, film, internet sites, company stores, vacation resorts, and so on—also begs to be considered as more than just a symptomatic manifestation. Through its various technological negotiations, Disney has itself become a powerful driving force that contributes to this “derealization” effect, as well as a site that, somewhat surprisingly, at times makes its effects practically transparent and, in the process, also helps us to recognize and deal with them.

For such reasons, Byrne and McQuillan pause early on in their cultural study of Disney to raise a question. Acknowledging—and effectively satirizing—that long recent fashion of cultural critiques of Disney, analyses that have accused the company of a staggering range of ills, including “sexism, racism, conservatism, heterosexism, andro-centrism, imperialism (cultural), imperialism (economic), literary vandalism, jingoism, aberrant sexuality, censorship, propaganda, paranoia, homophobia, exploitation, ecological devastation, anti-union repression, FBI collaboration, corporate raiding, and stereotyping” (1), they wonder if there is anything left to say about Disney or even any point to say it within this common climate of vilification. Certainly, that litany, with its strange mix of well-documented historical problems and every manner of more trendy accusations, might give anyone pause, particularly if one were trying to stake out some alternative territory. Yet they also wonder if, perhaps, the very nature of the various Disney texts is in some way responsible for both the persistence of these often extreme attacks and their almost inexplicable resistance to such challenges. In the face of numerous deconstructions and demythologizings, Disney simply continues to grow in popularity and profitability. Part of that strength may derive from the way in which the Disney name has become a rather slippery signifier, one that, like our constantly changing technology, suggests “a set of contradictory and unstable ideological codes” (5). But another part is that Disney has become so much like the very fabric of our modern technological culture.

Again, I would take our constant need to negotiate with the technological as a lead. For the Disney texts not only grow out of a corporate/

industrial negotiation that involves constant change, but in their depictions of a thoroughly technological world, they also provide audiences with changing narrative models of that activity, whether effective or ineffective, ranging from Mickey’s all-too-eager embrace of the Lindbergian gospel of the air in *Plane Crazy* (1929), to Captain Nemo’s abjuring of 1950s-era nuclear technology in *20,000 Leagues Under the Sea*, to *Tron*’s (1982) demystification of the world of the computer by equating it with game playing. These and many other Disney texts, including, as we shall see, an increasing number of the theme park rides, are pointedly narratives *about* our relationship to technology—narratives that dramatize key cultural concerns or anxieties, suggest possible terms for responding to those concerns, and invite audiences to project themselves into those circumstances, albeit often from the generally passive vantage of rider or audience. In the process, they grant audiences a certain satisfaction not simply from the sort of imaginary solutions offered—indeed, some Disney texts sketch far-fetched solutions to the concerns they foreground—but more from that sense of participation in or, more precisely, witnessing of a dialogue about those concerns. It is a dialogue that carries little immediate cultural guilt since, at least in recent times, it tends to be scrupulously politically correct, as a film like *Atlantis: The Lost Empire* (2001) particularly demonstrates in its defeat of early twentieth-century technology by a superior and far older nature-based technology. Yet it is also a dialogue—and this is part of its fascination—that seldom seems to make heavy demands on its audience. Thus, Byrne and McQuillan deftly describe the typical Disney text of today as projecting an “aporia of undecidability” (55), as in its efforts at addressing a family audience it also slips away from controversy and extends those negotiations within the narrative to the realm of the audience, as it prompts us to work out *our* attitude towards the real as well. It is as if the Disney text has simply become our own magic mirror, one compelled by our *desire* to strike deals with that technological world, to confirm our most widely held feelings.

Leonard Maltin has pointed out how, for Disney’s most recent executive regimes, “embracing new technology is now a way of life” (*Disney* 351). In fact, Al Weiss, president of the Walt Disney World complex of parks, recently announced that while the company plans on “adding new shows, new attractions, and new lands” in all of its parks, the larger corporate strategy is “to look at technology as a way to continue to grow our business” (Schneider). What this study should demonstrate is that this attitude and the resulting corporate growth are not new; they have always been “a way of life” at Disney, even if that way often grew out of

the conflicting impulses of Walt to pursue the latest technological developments and Roy to resist their inevitable costs. The manner of this embrace, the constant round of negotiations that always require trade-offs and concessions for every element of gain, has become part of the studio's corporate identity and of the cultural partnership it enjoys. For the Mouse Machine has, from the start, helped innovate and effectively deploy the latest developments in film and entertainment technology, and the negotiations involved in their adoption and employment have produced a wealth of texts that have fashioned a successful working—and entertaining—relationship with the technological, even pleasurably depicting such a relationship for Disney's family audience. The result is, like a walk down any Disney Main Street, typically a pleasant enough experience, one that makes few real demands, that prods us to admire and perhaps to discuss some of the effects we experience, even as it also, like the larger machinery of culture, impels our movement in a generally agreeable direction, one carefully and promisingly laid out for us. The technological "exploitation" that Schickel noted only follows from an ongoing struggle with and in terms of the technological—a struggle that has become a constant of the entertainment industry and part of our modern way of life. Yet Disney has proven itself quite capable of negotiating this struggle and even of finding ways to integrate it into its diverse texts, so that the Mouse Machine can continue, profitably, to work, to grow, and to produce its many pleasures.

I Sound Fantasy

The great satisfaction in the first animated cartoons was that they used sound properly—the sound was as unreal as the action; the eye and the ear were not at war with each other, one observing a fantasy, the other an actuality.

—Gilbert Seldes (in Leonard Maltin, *Of Mice and Magic*)

In his commentary on early sound film, the noted critic Gilbert Seldes lavishes an ostensible praise on those pioneers like Walt and Roy Disney who embraced the potential of the new technology. It is, of course, something of a backhanded compliment, alluding, on the one hand, to some of the misbegotten efforts at sound narrative readily found among the live-action feature films during the rush to sound in the 1927–28 period, while also implying that the first sound cartoons, such as those produced by the Disney Company starting in 1928, were quite limited in scope, and that Disney especially had elected to use sound, as Alexander Walker also concludes, "non-realistically" (189). Certainly, in many of the early sound films—a situation lampooned in a movie like *Singin' in the Rain* (1952)—image and sound often seem at odds with each other, particularly as the *imperative* to talk combined with the era's bulky and sensitive sound equipment to stultify action in many live-action films. That account, however, along with the critical assessment that has often followed it, hardly does justice to early Disney efforts. For it seems to suggest that we see them all simply as part of a natural aesthetic trajectory that would culminate in a feature film like *Fantasia* (1940), a work that does in many ways seem designed to see just how closely fantasy images might be matched with fantastic sounds.

5 *Disney in Television Land*

I

The new technology of television had loomed on the horizon of the film industry for a considerable time. It was talked about, demonstrated, and even depicted in films throughout the 1920s and 1930s. It was the subject of numerous spectacular demonstrations during the 1930s, most of them illustrating its ability to transmit images over ever greater distances: broadcasting from one city to another, from one country to another, from one continent to another, and in one instance from England to an ocean liner in the mid-Atlantic (Mosely 17). That ability to obliterate distance and bring visual entertainment into the home produced a variety of utopian predictions, such as the one offered by RCA head David Sarnoff, who promised that "television will finally bring to people . . . instantaneous participation in the sights and sounds of the entire world" (42). Thus, as Joseph Corn and Brian Horrigan suggest, throughout the pre-World War II decades "the idea of television in our future heated the popular imagination as few technologies ever have" (24). And yet in spite of some early experiments with using television to broadcast films directly into theaters, it remained a rather problematic, even troubling technology for the film industry, as the titles of such early films as *Murder by Television* (1935) and *Trapped by Television* (1936) might well hint. Adding to this attitude in the post-World War II era was the fact that television was perceived primarily as a delivery system at a time when the major studios were, thanks to the Supreme Court's Paramount Decision, finding themselves barred from involve-

ment in product delivery. Consequently, the film industry generally saw television not so much as a sign of progress, as one more possible enhancement to or outlet for its work, but as a future competitor, even a potential replacement.

Because of that fear, which was only exacerbated by the downturn in attendance seen in the postwar era and the dismantling of the studio system that followed the Paramount Decision, the American film industry saw little possibility of negotiating an effective use of this new technology. In fact, as Fredric Stuart explains, the major Hollywood studios approached television in this period with an unofficial "policy of noncooperation" (302), buttressed by a series of internal moves—"reorganization, concentration on high-cost feature production, and technological development" (302)—designed to allow them to compete more effectively for audiences. And yet by the 1950s this new, potentially competing technology did have much to offer the film industry. Most obviously, it offered the studios a way of utilizing their excess production capacity; it might eventually provide another form of exhibition for companies that had been forced to divest themselves of their theater chains; it represented a powerful means of advertising the latest films to a wide audience; as had been the case with an earlier competitor, radio, television could provide a ground for developing talent that could be employed in feature films; and it might even prove an outlet for older films for which there was, under the old studio system, little use after their initial distribution. Moreover, since the studios also had much to offer the industry that was developing around television technology—and in great part fashioning itself after the film industry model—there was certainly room for bargains to be struck, in fact, bargains that would almost have to be struck as these industries moved into an ever more complex, mediatized environment, as it became increasingly clear that television was an unavoidable element of our technologized world.

As we have already suggested, recognizing such imperatives and responding to them had consistently been key strengths of the Disney Company. As far back as 1936, when Walt and Roy were in the process of renegotiating their distribution agreement with United Artists, the contract foundered on a clause assigning future television rights for the Disney films to UA. Disney biographer Bob Thomas cites a revealing comment Walt made at the time: "I don't know what television is, and I'm not going to sign away anything I don't know about" (Walt 141). It suggests an element of business acumen born in part of the various other financial negotiations in which the company had been engaged almost since its inception—negotiations, like that with Pat Powers for use of the

Cinephone system, that had made the Disney brothers justifiably wary. But it was also a response influenced by the business model that was quickly becoming a key to all of the company's activities, the pattern of synergy or integration of all corporate activities. In her *Understanding Disney*, Janet Wasko describes this pattern as a practice of "promoting . . . activities across a growing number of outlets, creating a synergy between individual units and producing immediately recognizable brands" (71), and she describes how this practice has become a fundamental tenet of all Disney operations today.

What often goes unremarked, though, is how early in Disney's history this practice developed, and thus how central it was to many of the studio's corporate moves, and ultimately to its start into television. As early as 1930, with their small animation studio desperate for cash to support its staple projects, as well as Walt's dreams of expansion, the Disneys were creating Mickey Mouse Clubs at theaters around the country and licensing the likeness of their "star" mouse to a variety of commercial vendors. Reflecting the fast-growing popularity of Disney's animated figures, sales for those licensed products—writing tablets, handkerchiefs, sleepwear, toys of every sort, even Mickey Mouse-embossed ice cream cones—quickly exceeded all expectations and led the studio to adopt such merchandising as a foundational part of company activity. Two spectacularly successful examples of this activity particularly stand out. One was Disney's contract with the Ingersoll-Waterbury Company, which, while executed at the height of the Depression, produced sales of two and a half million Mickey Mouse watches in just two years. In a second, almost equally successful agreement, Disney licensed the Lionel Corporation to produce a Mickey and Minnie Mouse handcar that ran on tracks. That product has been credited with helping Lionel not only to overcome bankruptcy, but also to gain the leading position in the American toy train market (Thomas, *Walt* 107–8). To facilitate such agreements, Disney set up a licensing office under the direction of advertising executive Herman (Kay) Kamen who, throughout the 1930s, negotiated agreements for the use of Mickey Mouse and other Disney characters to more than seventy-five manufacturers in the United States, forty-five in England, twenty in Canada, six in France, and six in Spain and Portugal, a move that, by the 1950s, was producing annual sales of over \$100 million (Watts 148), thereby helping to sustain the parent company's traditional film activity. In fact, by the time of the release of *Snow White and the Seven Dwarfs* (1937), the first Disney feature film, this new strategy had already become, as Steven Watts notes, "an intrinsic part of the moviemaking process" (149). For on the day that *Snow*

White opened, Kamen had in place a complete merchandising campaign that involved agreements with over seventy companies, thereby marking the start of an elaborate nexus of entertainment and advertisement that would eventually become a model for the American film marketplace.

More than simply establishing another possible source for capital funding, though, this new emphasis on combining entertainment and merchandising also helped propel the worldwide popularity of Disney's films and had a major impact on the company's entire production process. Certainly, this emphasis marked the beginning of a fruitful and enduring pattern of integration that would increasingly come to identify the company, to mark its unique place in American culture as the most successful example of the entertainment-marketing conglomerate, and eventually, I would suggest, to script the terms for the company's entry into the field of television and then other mass media. For Disney's first efforts in using the new technology of television show the influence of this internal company model. In 1950, responding to overtures from television, Disney created a one-hour Christmas special for NBC entitled "One Hour in Wonderland," featuring film and radio star Edgar Bergen and his dummy Charlie McCarthy as its hosts. The show took the form of a children's Christmas party at the Disney studio, providing the "guests" and television audience glimpses of the lot and soundstages, a sneak preview of Disney's upcoming theatrical release *Alice in Wonderland* (1951), and live-action scenes involving the voice- and image-model for Alice, the young English actress Kathryn Beaumont, and Bobby Driscoll, the child star of the studio's just-released live-action feature *Treasure Island*, as well as earlier efforts like *Song of the South* (1946) and *So Dear to My Heart* (1948). The show proved so successful at attracting a television audience that in the following year CBS approached Disney about doing a similar special. More important to Disney, though, was the fact that the first show had measurably contributed to the success of *Treasure Island* and helped to build a large audience for *Alice*; one commentator estimated that the telecast was "worth \$1,000,000 at the box office. . . . I think Disney has found the answer to using television both to entertain and to sell his product" (quoted in Cotter 4). Consequently, Disney prepared "The Walt Disney Christmas Show," a special with the then-record television budget of \$250,000. Designed as a Christmas party for children of different nationalities, Walt himself served as host, introducing several cartoons and animated segments drawn from the Disney archives, and once more providing lengthy previews of the studio's upcoming releases, this time *Snow White and the Seven Dwarfs* (entering rerelease) and *Peter Pan*.¹ Again, the result was a favorable critical and commercial reaction, con-

firming the possibilities that Disney had foreseen for integrating television with the company's other entertainment projects.

As the studio continued to study how it might move into television on a more elaborate scale, then, it was already anticipating that the new medium would function as part of a much larger media construct, one that would eventually extend far beyond both traditional film exhibition and the then-current model of television broadcasting, and that would open up various new synergistic possibilities.² In fact, this vision of television as part of an integrated media environment was one reason why the two leading networks initially balked at buying into Disney's ideas for a television series. While the networks viewed a deal with the studio largely in terms of the existing program paradigm, with Disney creating the product that they would sell to advertisers and then exhibit by broadcasting over network stations, Disney had another view of the new technology's potential, one in which the network distribution and exhibition would promote and help finance the studio's larger entertainment agenda. For Walt linked the creation of a television series to his idea for a Disneyland theme park. He wanted to leverage the negotiations for the former to provide funds for building the latter, while conceiving of each as advertising and drawing an audience for the other, as well as supporting the ongoing work of the film studio. Thus Walt and Roy Disney "made it clear that the Park was an integral part of the package they were peddling—no support for Disneyland, no show" (Cotter 58). Under such unconventional and potentially risky terms, CBS withdrew from negotiations, and while NBC continued discussions for several months, it too finally balked at making a commitment to the dual project. After Roy personally called new ABC head Leonard Goldenson, though, a deal was quickly struck, and on April 2, 1954, the new partners officially announced plans for the television series, as well as their financing deal for the theme park. Under this agreement the network would pay Disney \$2,000,000 for twenty shows (rather than the typical run of twenty-six), provide \$500,000 for a 35 percent ownership in the proposed Disney theme park, and guarantee up to \$4,500,000 in loans for the park's construction (Thomas, *Walt* 249). While the studio had not yet even determined the precise format for its *Disneyland* show, those negotiations officially set in place a key component of the new sort of vision machine that would eventually become a fundamental part of the American cultural landscape.

Premiering in 1954, the *Disneyland* show took the shape of an anthology series, a flexible format that would allow the studio to draw on the great variety of material in its archives, while also maximizing op-

portunities for further synergistic exploitation.³ The show that resulted, hosted by Walt, pointedly sold both old and new Disney: by packaging its large archive of short cartoons into thematic programs; by condensing or serializing its animated and live-action features; by creating sneak-preview episodes that promoted both new releases and films that, with its unique releasing plan, the studio regularly rereleased to ever-increasing profits; by pioneering "behind-the-scenes" or "making-of" documentaries that publicized the latest films; and by regularly reporting on the building and subsequent development of the Disneyland park. Thus, in its initial season the *Disneyland* show offered a condensed version of *Alice in Wonderland* and a two-episode presentation of *Treasure Island*. The "Operation Undersea" episode described the making of the new Disney feature 20,000 *Leagues Under the Sea*, particularly emphasizing the technological challenge of shooting its many underwater scenes. And several shows during that first season, including the initial episode, chronicled the various stages in the park's preparation, while also stressing the links between the theme park and the television show. As Walt himself explained to viewers at the start of the first episode, he believed that "Disneyland the place and *Disneyland* the TV show are all part of the same," and since the format of the show—weekly offering episodes from Fantasyland, Adventureland, Tomorrowland, or Frontierland—paralleled the planned structure of the park, that connection was consistently underscored. And conversely, since the park itself was, as Michael Real notes, "consciously designed as a total environment made of dramatic productions complete with plot, scenery, and characters," each visitor would, by design, pass "through a Disney experience just as a viewer is carried through scenes in a film by a camera" (47). Thus the genre contexts—of park, film, and television—gained a natural continuity, even a kind of *narrative similarity*, as they played off of the studio's origins in the world of film.

The success of this format was immediate, as the show provided ABC with its highest-ever rated program—a number six Nielsen ranking for the year—and garnered a series of awards that quickly raised network prestige. For the initial 1954–55 season, *Disneyland* received Emmy Awards for Best Variety Series, as well as for Best Individual Program of the Year and Best Editing (both for the "Operation Undersea" episode); it gained nominations for both Walt Disney and Fess Parker in the category of Outstanding New Personality; and it won a Peabody Award for Outstanding Youth and Children's Program. Although in 1955 86 percent of the profitable television stations in the country were affiliated with the CBS or NBC networks, it was also the first year in

which ABC became profitable—a result due in large part to the Disney agreement, since *Disneyland* generated nearly half of ABC's advertising revenue that year (Boddy 117). Moreover, the partnership with a successful film studio helped vault ABC to the status of a major competitor to the other networks. Meanwhile, the show became a key component in a kind of internal negotiation, particularly in Walt's plans to, as Christopher Anderson explains, "transform the Disney studio from an independent producer of feature films and cartoon short subjects into a diversified leisure and entertainment corporation" (137). Yet what may be even more important is that the development of this show heralded the start of a larger transformation of the entire entertainment industry in the United States, since it demonstrated that television and the film industry could no longer simply ignore each other or act as antagonistic competitors. Rather, they began to recognize the mutual benefits of working together, of following Disney's own guiding synergistic principle that began from the assumption "that entertainment was the same in any medium" (Thomas, *Walt* 242).

While many of these benefits could be traced directly to the economic agreements involved in the move to television, there remained other areas to be negotiated. For although the agreement between Disney and ABC allowed the studio to advertise its base product, obtain working capital, construct and promote a completely new product (*Disneyland* the park), capitalize on its older films, and even foster future cooperation between the film and television industries, the very success of the *Disneyland* series produced new and unexpected challenges both to Disney's synergistic structure and to its approach to popular narrative. Certainly, the studio could calculate that the "Operation Undersea" episode would positively impact the release of 20,000 *Leagues Under the Sea*, and the immediate success of that film, as the previous chapter noted, quickly bore out that prediction. Yet Disney was obviously taken aback by the public response to several other episodes during that initial season, most notably the three Davy Crockett shows that aired on December 15, 1954, January 26, 1955, and February 23, 1955, sparking a national craze for which Disney, even with its successful merchandising history, was rather unprepared. As has often been chronicled,⁴ the studio's three-part miniseries gave birth to what Margaret King terms "one of the great popular culture events" of modern America (143), one that would bring both an unexpected demand for Crockett merchandise and a new level of critical response to the television medium.

Certainly, the success of the Crockett series was due largely to its being the right sort of story at the right time. Deep in the Cold War and

in the immediate wake of the very bloody Korean conflict, contemporary America readily responded to the sort of traditional hero it depicted, and especially to the distinct sense of identity and purpose embodied in Crockett's persona. One immediate measure of its impact was the success of the show's theme song, "The Ballad of Davy Crockett," which was the number one pop song in the nation for five straight weeks, was covered by singers of every sort, including Fess Parker (who played Davy), and sold approximately seven million copies in six months. While initially surprised by the way the series resonated with the American public and, perhaps more to the point, that any television show would have more immediate and measurable impact than its films, the studio rushed to capitalize on the popularity of both the figure and the actor who portrayed him. As Paul Andrew Hutton notes, in the effort to catch up to public enthusiasm, "every conceivable kind of item" was quickly branded with the Davy Crockett label (31), not only the naturally linked products, such as buckskin jackets, moccasins, jeans, toy guns, action figures, and especially coonskin caps, but also such items as bathing suits, bedspreads, bicycles, guitars, lunch boxes, mugs, pajamas, pillows, purses, puzzles, soap, thermos bottles, underwear, and wallets.⁵ With the success of "The Ballad of Davy Crockett," Disney quickly formed a subsidiary for releasing records, and costars Parker and Buddy Ebsen wrote and recorded a song for it, "Davy Crockett's Motto—Be Sure You're Right (Then Go Ahead)." Fess Parker was signed to a long-term contract, while the studio quickly looked for other properties that might exploit his sudden popularity. And in an unprecedented move, in fact, one that went against the prevailing wisdom of the time that said that audiences would not pay to see what television offered for free, the studio edited together a film version of the series, *Davy Crockett, King of the Wild Frontier*, which was rushed into theaters in June of 1955 and earned \$2 million (Anderson 149). Meanwhile, executives began to consider how the studio might develop additional material on its new franchise figure, even though Crockett had died at the end of the third episode. As Walt Disney candidly admitted, "We had no idea what was going to happen on Crockett. Why, by the time the first show finally got on the air, we were already shooting the third one and calmly killing Davy off at the Alamo. It became one of the biggest over-night hits in TV history, and there we were with just three films and a dead hero!" (quoted in Cotter 63).⁶

Yet even as the studio rushed to create a follow-up miniseries for the next season, one depicting an earlier Davy Crockett, Disney found itself facing questions about its approach to popular narrative. Certainly the three Crockett episodes had proven wildly popular and profitable,

but critical voices had also appeared. The most noteworthy was that of John Fischer, who, in a controversial *Harper's* essay, denounced the Crockett phenomenon as the product of what he termed "a simonized, Disneyfied version of history," one that was "as phony as the Russian legend about kind Papa Stalin" (16). Other critics and historians quickly followed Fischer's lead, weighing in not only on the Crockett material, but, what was far more important, also on the impact of both Disney and television in shaping our sense of history and our broad cultural perceptions. In retrospect it seems that the Disney portrayal was not so far off the mark as some of these accounts initially suggested. In fact, historian William Jamborsky claims that "for the most part Disney played reasonably straight with history," producing what he terms "a mature production . . . not expected by many critics of Disney" (105-6). Even Richard Schickel, often critical of the Disney films' social dimension, retrospectively found the Crockett material to be "a pleasantly exuberant adventure story," mainly because he felt that it "stood . . . outside the Disney mainstream" (256).

Perhaps a more significant reaction, though, might be seen in the way the studio approached the new Crockett episodes it had rushed into production ("Davy Crockett's Keelboat Race" of Nov. 16, 1955, and "Davy Crockett and the River Pirates" of Dec. 14, 1955). For these shows pointedly pull back from any illusion of a historical account and instead emphasize the Crockett of legend, as if trying to assure audiences that Disney's Crockett was from the start an amalgam of, as the Frontierland introduction announces, "tall tales and true." What had quickly become clear was the power of the new television technology to reach a broad audience, to affect popular opinion, and also to engender serious criticism—criticism that could eventually influence company sales. The response to the Crockett shows, both positive and negative, suggested that Disney would have to give more attention to the narrative power of the new technology, and that its television series would necessitate a new range of negotiations.

II

It is . . . our common destiny to become film.

—Paul Virilio, "The Last Vehicle"

When the studio began work on the *Disneyland* series in 1954, it quickly found that, despite its flexibility, the anthology format posed something of a programming problem, one manifest in the show's

very rhetoric. For as every episode began, a voice-over announced that the show would offer episodes drawn from four categories—Adventureland, Fantasyland, Frontierland, and Tomorrowland. While Disney had in its archives ample material to produce shows on the first two topics and had already explored frontier themes and characters in some of its cartoons, the staff had no previous experience and few ready ideas to fill the promise of what it termed Tomorrowland. As we have previously noted, science fiction was not part of the studio's prior fantasy vision, and the genre's typical themes did not easily lend themselves to the sort of family-oriented narratives that were Disney's strength. Moreover, Walt initially insisted that any Tomorrowland episodes be "science-factual" (quoted in Watts 311), a term that staked out a different and certainly more realistic path than that followed by traditional science fiction and that might involve the studio in a larger public discourse about science and technology. For these reasons and because, as Bill Cotter notes, "no one was quite sure exactly how to portray the future," the studio at first almost ignored this section of the show (64). Yet when a few episodes were produced in this vein, they were well received and some were released theatrically as shorts. Behind that accomplishment was the studio's response to a problem it had begun to recognize and that we have observed in *20,000 Leagues Under the Sea*: the difficulty of talking about a subject that had, in the mid-1950s, largely been drawn into the orbit of a sensationalized science fiction film genre, that "imagination of disaster," as Susan Sontag famously termed it, a description that obviously put the subject at some odds with the usual Disney family agenda.

In this chapter I examine the problem these early Tomorrowland television shows faced as they tried to develop a rhetoric that would allow for a balance between sensationalistic science fiction and that more realistic "science-factual" aim. This effort to negotiate a suitable way of talking about both science fiction and the "science-factual" would result in a narrative pattern that draws heavily on established Disney efforts in other areas, yet also shows a clear sense of that popular cinematic mode against the background of which these episodes would be seen and measured by the television audience. That pattern, however, would prove to be unstable, as the *Disneyland* episodes collectively known as the *Man in Space* series—"Man in Space" (Mar. 9, 1955), "Man and the Moon" (Dec. 28, 1955), and "Mars and Beyond" (Dec. 4, 1957)—gradually lose that balance. Despite Walt Disney's directive, a rather conventional rhetoric of science and technology would increasingly become colored by the practices of a cinematic fiction, with science and technology be-

coming essentially the backdrop for a project imagined in filmic terms. While these episodes represent some of the best of early *Disneyland* programming, garnering international attention and establishing a *potential* for speaking about scientific and technological issues in a thoroughly entertaining manner, they also evidence some of the problems of narrative negotiation at which the Davy Crockett shows hinted. For they suggest a level on which Disney's efforts, like the larger cultural move in this direction, were already being influenced by a kind of postmodern "destiny," as Paul Virilio puts it, one that would continue to shape the rhetoric of the studio's later feature efforts in science fiction.

In this instance, too, Virilio's critique of modern technological society, and especially his notion of how we are increasingly being "cinematized," can help us link the trajectory of these early Disney shows to later Disney science fiction, and even to other media efforts at talking about science and technology, at addressing what we today often term "technoscience."⁷ Simply put, Virilio's sense of our "destiny to become film" is reflected in the "destiny" of the *Disney Man in Space* shows.⁸ Virilio uses the cinema as a trope for a key effect of our technological society, the manner in which it distances us from the real by blurring the boundaries between the factual and the fictional (or, as he offers, "the relative fusion/confusion of the factual . . . and the virtual"), by replacing our normal experience of the world with what he terms a "reality effect" (*Vision* 60), and by troubling the very manner in which we describe the factual and the fictional—which was, of course, a criticism leveled at Disney's most successful television effort, the Davy Crockett shows. In the early Disney television episodes about technology, we see further signs of that effect, as if shows originally fashioned with a new format in mind and approached with a different, even scientific, sort of rhetoric gradually succumb to the "reality effect" Virilio identifies, effectively finding their destiny to become, quite simply, "cinema." We might say that while the Disney staff was puzzling over how to speak about or "portray" tomorrow, tomorrow was already finding its own voice—one largely derived from science fiction—and in the process already framing our postmodern fate.

The *Man in Space* shows derive from a series of articles on the possibilities of space travel, published in *Collier's* magazine between 1952 and 1954. Among the contributors were such luminaries of this new field as Dr. Fred Whipple, chair of Harvard's Astronomy Department; Dr. Joseph Kaplan, professor of Physics at the University of California; space illustrators Chesley Bonestell and Fred Freeman; the writer Cornelius Ryan; and a group of German rocket and space experts, including

Willy Ley, Heinz Haber, and most notably Wernher von Braun.⁹ Several pieces coauthored by Ryan and von Braun detailed proposals for launching an Earth-orbiting satellite, traveling to the moon via multi-stage rockets, and eventually journeying to Mars using nuclear propulsion, and all were done in a heavily illustrated, color format aimed at appealing to a lay audience. As the first issue's cover trumpeted, "top scientists" would tell how "man will conquer space soon . . . in 15 startling pages." The rhetoric of this "come-on" certainly struck a sensational note of its own, and in what was more a show-business than journalistic spirit, *Collier's* even organized a large-scale publicity campaign to promote the series, providing radio and press kits, releasing photographs to the large news syndicates, and arranging television interviews for von Braun on a number of nationally broadcast programs. While the point may have been to try to claim a share of the public's attention from the currently fashionable films of alien invasion and atomic apocalypse—films like *The Thing* (1951), *Invaders from Mars* (1953), and *War of the Worlds* (1953) that had already done their share to sensationalize science—one effect of this media campaign was to take on some of the aura of popular science fiction.

Both the quasi-scientific articles and the exaggerated publicity surrounding them caught the attention of artist and senior Disney producer Ward Kimball, who had been tasked with finding suitable subjects for the proposed Tomorrowland segments of the new Disney television program, and he suggested adapting part of the *Collier's* series. Serving as producer and director for the three shows that eventually aired over the course of *Disneyland's* first four seasons, Kimball certainly faced a difficult task in bringing the essays' popularized science to a television audience more familiar with the likes of *Captain Video*, *Tom Corbett: Space Cadet*, and *Rocky Jones, Space Ranger*. He had to find a way of marrying the various approaches typically used in Disney films to the hard science of the magazine articles—a task made more difficult by Walt's new suggestion that the programs combine "comedy interest and factual interest. Both of them are vital to keep the show from becoming dry. You need a good balance to keep it from becoming too dry or corny" (quoted in Watts 310). At the same time, he still emphasized that they "be based on scientific fact, not science fiction," and that "fantasy" be kept primarily to the Fantasyland segments (Piszkiewicz 84). Acquiring the services of Ley, Haber, and von Braun as technical consultants and even on-air commentators assured a strong emphasis on factual detail, scientific probability, and a sense of authority—all, of course, reinforced by their pronounced German accents. However, the initial packaging of

these elements, along with the rocket scientist commentators, into a "science-factual" show would remain a difficult proposition that later episodes would have to renegotiate.

In introducing the first *Man in Space* show, Walt explained to viewers what he hoped to accomplish: that the program might effectively combine "the tools of our trade with the knowledge of the scientists to give a factual picture of the latest plans for man's newest adventure." Within that commentary is a suggestion of the larger rhetorical strategy on which Kimball and his group had settled. The tools, of course, were largely animation, with which the studio was practically identified and which was one of the key resources it brought to the *Disneyland* television series. However, Disney had also developed a facility with documentary techniques, thanks to both the studio's wartime work doing military training films and its more recent success with its "True-Life Adventure" films.¹⁰ Through these efforts the studio had worked out the techniques for deploying a seemingly objective, detached camera, for structuring the images so captured in a "natural" manner, and for using voice-over narration to reinforce the apparent "truth" of those images without undercutting their impact. And implicit in those practices were the two goals the studio hoped to present as complementary: entertainment and education.

In fact, the difficult balancing of these goals points to the major problem Disney would have as it developed the Tomorrowland segments. All three of the *Man in Space* programs, as well as several subsequent Tomorrowland episodes, extensively employed new animated footage, particularly for their early sequences. The first episode combined animated images and archival footage, including scenes from Méliès' *A Trip to the Moon* (1902) and Fritz Lang's *Die Frau im Mond* (1929), to explain the history and basic scientific principles of rocketry, and it offered an animated comic figure, labeled "homo sapiens extra terrestialis," to demonstrate the physical problems of life in the conditions of space. In the second episode, "Man and the Moon," a lengthy sequence of animated images humorously explains mankind's historical fascination with the moon and illustrates various silly legends and superstitions that have grown up about it. "Mars and Beyond" provides a collection of animated speculations on the physical and mental nature of possible Martian inhabitants and culminates with a comic cartoon version of a typical "pulp" story about Martian invaders. The narrative pattern is quite similar. While each episode appropriately places science within a cultural context, suggesting how scientific knowledge arises from everyday experience and is constantly being constructed by that experience, each also places the

audience at a comfortable distance—both historically and aesthetically—from this construction, treating those prior assumptions lightly, making fun of their misconceptions, literally *drawing* a historical technoscience so broadly as to make it the subject of ridicule. The broad implication is that these historical constructions were not quite science, and that the contemporary audience has effectively—and thankfully—emerged from this dark period, as if in the modern world science and technology were finally free from all such cultural influences.

As a balance, and ultimately in contrast, the *Man in Space* shows underscore recent scientific efforts to better understand the problems of space flight, of travel to the moon, and of exploring Mars and the other planets in our solar system. In doing so, they treat scientific knowledge not as something culturally constructed, but rather as something solidly objective, to be articulated by those figures Kimball had marshaled to provide the shows with a sense of authority. Thus each episode offers its authorities: Ley to discuss rocketry; Haber to talk about the stresses the body faces in space flight; von Braun to lay out the scientific principles behind rocket flight and the practical problems of building a space station and reaching the moon; and astronomer E. C. Slipher to explain how scientists use the telescope, spectrograph, and other instruments to predict conditions on other planets. The general effect of these experts—typically dressed in business attire or lab coats, bearing slide rules, and wielding models, charts, and graphs to press their points home—is to shift the tone and to serve as a documentary-style counter to the earlier, predominantly animated scenes. These commentators present science in a very different light, as a set of hard and fast rules discovered and ready to be employed in the conquest of space by a sober modern America.

Yet each episode concludes with a sequence that ultimately seems nearer science fiction than fact. For extrapolating into a future created by the scientists' speculations, each show dramatizes the predicted events, and in a way that increasingly troubles the sort of balance at which they seemed to aim. For example, after von Braun's description of his "design for a four-stage orbital rocket ship" in "Man in Space," an animated sequence details the efforts involved in preparing and launching just such a ship. The style here is starkly dramatic, with a massive rocket poised against a dark sky on "a small atoll of coral islands in the Pacific," while "square-jawed technicians study their consoles," as the narrator ponderously describes the scene, and mankind begins to "bet his life against the unknown dangers of space travel." Its animated images are dramatically backlit and composed with a sense of the monumental, and its voice-over commentary lends an awe-filled tone. The result is, very simply, a

stilted and suspense-filled sequence that melodramatically constructs our attitude towards this scientific undertaking almost as much as did the initial humorous scenes.

"Man and the Moon" similarly concludes with a dramatization of von Braun's two-stage plan to reach the moon, starting with the construction of a space station and continuing with the launching of a rocket from there to the moon. After the animated depiction of the space station's construction, though, the following sequence uses live actors to portray astronauts who are journeying to and around the moon. That trip is not presented with the sort of clear calculation of the earlier scenes, but is narratized as a suspenseful adventure involving a meteor collision, which precipitates another animated sequence to dramatize how the moon rocket might be repaired in space. Because so little was known about the moon's surface and about its "dark side," though, the combination of animation and live-action never produces the expected climax of a moon landing, simply a trip around the moon, and thus a promise of more to come from future voyages—or cinematic sequels.¹¹ Moreover, that ending, by its very inconclusiveness, holds the technology depicted at a kind of distance from the audience, framing it not in terms of any perceptible social impact, but as adventuring on a grand scale, somewhat akin to the action of the television space operas, like *Rocky Jones*, that Disney had originally disavowed.

For "Mars and Beyond" the studio again produced an animated depiction of a proposed flight to Mars, designed, as a narrator tells us, by von Braun and Ernst Stuhlinger, another German rocket expert. In this instance, the technology is all speculative—or as the narrator offers, "still a dream for the future"—no longer involving the rockets with which audiences were by now becoming quite familiar through newsreels and television reports, but an atomic-powered spacecraft theorized by these scientists and oddly saucer-shaped, rather like the sort of craft associated with popular visions of alien invaders. In fact, we might note that this episode begins with animated images of three archetypal flying saucers heading into dark space, dissolves into a robot that introduces Walt Disney as the show's host, and, after an animated vision of a trip to Mars aboard a fleet of Stuhlinger's atomic spacecraft, concludes with another image of three flying saucers taking off from Mars, entering into the belly of a giant saucer that then speeds off into the darkness of space, bearing, as the narrator says, "our space pioneers of the future." The rhetoric of these framing images establishes a rather different atmosphere for this episode, one that draws on a certain limited factual base—although as the expert Slipper allows in his segment, "astronomers cannot draw too

many definite conclusions about Mars"—in order to fashion another sort of story, a primarily animated meditation, somewhat akin to Disney's classic *Fantasia* (1940), on the possibilities of life beyond Earth, life "with infinite variation," as the narrator offers, "on other planets throughout the universe."

Of course, this episode is intent on making precisely this point: the increasing coincidence between what many conceived of simply as science fiction and what was coming to be seen as "science-factual." But the various images of flying saucers, robots, atomic spacecraft, and alien creatures were very much the language of those exaggerated science fiction narratives with which audiences of the period had been bombarded; they all too easily evoked a kinship with films like *Earth vs. the Flying Saucers* (1956), *This Island Earth* (1955), and even *Invaders from Mars*. They hinted, in effect, that our destiny was, as Virilio offers, "to become film," or at least to embark on a future that was *like* that seen in those popular films, one that seemed adventurous, if also a bit cold and foreboding, full of unknowns that were, on the one hand, less than comforting to the traditional Disney audience, and on the other, rather problematic for those expecting the sort of authoritative scientific grounding at which the *Collier's* articles and the series' first two episodes largely seemed to aim.

Those images also did something more. They pointed to an increasing difficulty that the studio seemed to have in talking about the world of science and technology, or at least in balancing the different rhetorical elements it used to depict this world. While animation, the studio's stock-in-trade, was crucial to visualizing both ancient ideas and the projected possibilities of space flight, it occupies increased screen time in each episode and dominates the third, and this at a time when audiences were finding footage of real rocket tests and flights increasingly common in the newsreels and on television. That animation emphasis also created some problems of tone and perception, for the early animated sequences in each episode are pointedly encoded as humorous, as "comedy interest," thanks to their exaggerated styling, visual puns, and frenetic pacing. And that effect naturally has some fallout for the later, documentary-style animation that closes each show. The authorities are the linchpin, occupying the central sequences of each narrative and helping to adjust the tone for the concluding sequences. And while this strategy works effectively in the first two episodes, "Mars and Beyond" retreats from that authoritative commentary. In fact, in what was probably stock footage from the earlier episodes, von Braun and Stuhlinger are simply shown—but not heard—discussing their model for a spacecraft, while a narrator

notes that this is "still a dream for the future." Effectively, the scientists serve as little more than visual icons of authority here, touchstones for those who had seen the previous episodes.

The future at Disney, however, would see little development of the dream they represent—at least apart from the latest theme park attractions, such as the Rocket to the Moon ride that had opened in the Disneyland theme park, or its later descendants, such as Epcot's much-ballyhooed Mission: SPACE. In fact, Disney would offer only two more shows that followed this pattern before eventually dropping such episodes altogether. The first, "Magic Highway U.S.A." (May 5, 1958), aired in the same season as "Mars and Beyond," and further traces the sort of narrative pattern we have described. In illustrating what Walt Disney in his narration terms "our magic carpet to new hopes, new dreams, and a better way of life for the future," that is, the modern American system of automotive transportation and superhighways, the episode offers an animated history of roads and automobiles, humorously done as in the *Man in Space* shows, and it follows those images with live-action film, or to be more precise, a hybrid film that mixed restored footage of travel along the first cross-country highway in 1913 with new scenes shot in the style of early silent comedies, parodying the problems facing those early motorists and speeded up to give the film a Keystone-like tone.¹² Subsequent live-action scenes of present-day highway construction techniques are mundane, offer little sense of new technology, and so eventually they too are speeded up and scored to humorous music to lend them the same comic tone as the earlier scenes. And absent here are the kinds of authorities marshaled for the *Space* shows, figures like von Braun and Haber; in their place the episode employs an actor who, dressed in the requisite lab coat, portrays a "modern highway engineer," offering a monologue about America's future requirements for modern superhighways. The show's final vision of future travel, another animated sequence, is done in an abstract rather than realistic style and follows from a series of cartoon caricatures of the various types of American citizens who have specific demands for future roads: the farmer, salesman, businessman, housewife, and so on. While obviously not quite science fiction, the show hardly seems driven by the sort of "balance" Disney had outlined for the first *Space* episodes.

The problem is not that the episode does not offer enough of the "science-factual"; in fact, by 1958 this vision of superhighways crisscrossing a continent was an all-too-familiar part of daily American life. Rather, it was the nature of the show's rhetoric, for in straining to avoid a mundane reality or trying to draw out the construction of our scientific

and technological knowledge in this area, Disney literally transformed the real into the cinematic: blending archival footage with re-creations to fashion a comic hybrid, "undercranking" scenes for humorous effect, "casting" his expert, and situating the audience as a set of comic caricatures, of "types" that were the staple of the era's domestic comedies. Virilio has suggested that "a mobile people" might well become "entirely victims of the set," seduced by the cinematic reality they seemingly inhabit (*Art and Fear* 79), and this episode points to just such an effect. For in describing the very mobility of the modern American audience and the promise of ever-increasing mobility, "Magic Highway" has clearly exploited the trappings of the set, the conventions of a cinematic world, conceiving its viewers as simple types who already inhabit a cinematized reality.

The last show in this vein, "Spy in the Sky" (Apr. 1, 1962), again credits Ward Kimball as co-director and co-writer, and similarly combines live-action and animation, the fictive and the factual, while pushing the pattern of "Magic Highway" to what we might term its destined extreme. The first half of the show, all live action, is essentially a half-hour trailer for the forthcoming Disney feature *Moon Pilot* (1962). That film is a broad comedy about the space race of the 1960s that takes the very authority figures who had served so successfully in the first two *Man in Space* shows—scientists, government representatives, the military—and makes them the subjects of its satiric thrust, as blocking characters who bumblingly interfere in an intergalactic romance. Several comic scenes from the film lead into what is supposed to be backstage at the Disney studio, as the actors rehearse and prepare to shoot additional footage—which is, of course, all carefully rehearsed and staged for the show's cameras, with the "real" interaction between the show's two leads, Tom Tryon and Dany Saval, scripted to parallel their comic-romantic relationship in the film, to suggest that their real life is *like* the film's story. The result is a dissolving of distinctions, as the backstage events prove every bit as contrived as the movie they promote, as the actors effectively "become film," and in the process point the way for the audience's future as well.

Awkwardly linked to this promotional piece through Walt Disney's narration, a theatrical short, originally released in 1959, concludes the episode. It mixes animation with a few brief live-action scenes, focusing on recent efforts to place satellites in orbit around the earth and linking those efforts with practical uses of such satellites. As in the *Man in Space* shows, this segment opens with animated footage, done in a comic vein, describing mankind's "questionable weather forecasting devices" of the

past, and follows with a combination of animated footage and dramatized live action—like the trip to the moon sequence of “Man and the Moon”—showing how satellite and rocket technology might someday be used not just to predict but to control the weather, thereby helping, as the narrator suggests, to transform the earth itself. The abrupt shift from the lengthy comic trailer to the dramatized scenes of rocket and satellite use suggests the larger trajectory that these shows have followed, as the experts disappear and narrative takes over—the broadly comic one of *Moon Pilot* and the dramatic, mainly animated one speculating on our control of the elements. Seen in retrospect, Walt Disney’s introduction to this episode, wherein he notes how “every achievement in outer space opens the way to more distant goals,” rings hollow as the episode becomes an extended ad for the studio’s latest film and a literal demonstration of a level on which the real “destiny,” the most important of those “distant goals,” was that of the cinema itself, or more precisely, the synergistic one of producing and promoting popular films, drawing on the studio’s expertise in comedy and animation—and by now, science as well.

We might note as well that this now-familiar mix of comic scenes of the past, factual footage of the present day, and dramatized images of tomorrow operates within a new context, for this episode, we learn at the start of the show, comes to us “from the wonderful world of adventure.” When Disney moved its anthology show from ABC to NBC in 1961, retitling it *The Wonderful World of Color*, the earlier thematic divisions that had given us Frontierland and Tomorrowland, and partly inspired the *Man in Space* series on the *Disneyland* show, had disappeared. And the change in format allowed little room for the hard science and factual emphasis that had initially energized the space trilogy, nor for the sort of distinctions Disney had originally emphasized between fantasy and science. Contrived “adventure,” what we might think of as a *cinematic* reality, was simply edging out “the real thing.” While the following season would see one last entry that recalls the Tomorrowland shows, “Inside Outer Space” (Feb. 10, 1963), it was just a compilation of the animation produced for the *Man in Space* series, linked by narration from a new “authority,” the Disney cartoon character Ludwig Von Drake, clearly evoking the many German authorities who were so prominent in postwar American science, but sanitized of their real-world Nazi associations. The shift from von Braun’s authoritative voice to Von Drake’s comically befuddled one, and from science presented in an entertaining way to what became an extended cartoon on various space themes, seems telling. Scientific speculation and the educational dimension of

that speculation were being swallowed up by entertainment media; the lines between the different elements of the formula Disney had tried to articulate were blurring precisely as the “space race” itself became a big show, a kind of popular entertainment done before cameras for the masses—a great cinematic and cultural spectacle that was already available, almost daily, on every television channel.

In this context, Neil Postman’s somewhat jaundiced warning about television and the nature of its public discourse is worth considering. He argues that, “Television is at its most trivial and, therefore, most dangerous when its aspirations are high, when it presents itself as a carrier of important cultural conversations” (*Amusing* 16). During the Cold War and in one of its key theaters of operation—that of scientific and technological development—the conquest of space was certainly among the most significant of those ongoing “cultural conversations.” In fact, it was part of our national agenda, as a result of a series of momentous decisions by presidents Eisenhower and Kennedy,¹³ and the rhetoric surrounding it—talk of thrust, escape velocity, capsules, reentry, recovery—had quickly entered into the popular discourse as Americans began to “talk science.” In attempting to participate in that conversation, the *Disneyland* series demonstrated the sort of “aspirations” that would win it a number of awards,¹⁴ make it one of the most watched and longest-lived shows on television, and indeed, demonstrate once more the power of this new technology to intervene in a national dialogue. Yet at the same time, the series displays some symptoms of that trivializing effect Postman charges television with, as it increasingly framed the larger human aspiration for transcendence and knowledge within a decidedly cinematic context, as a series of what Disney in other circumstances might well have simply described as “True-Life Adventures.”

Further fallout of this effect shows up in the technoscientific trajectory developed and depicted in subsequent Disney film productions. While, as we have noted, original programming on scientific and technological concerns nearly disappears from the television series following the “Spy in the Sky” episode, those concerns did quite literally become cinematized by mutating into a staple cinematic product of the studio, a move that we can trace in a series of increasingly trivial yet also consistently profitable efforts over the following decade. For films like *The Absent-Minded Professor* (1961), *Moon Pilot* (1962), *Son of Flubber* (1963), *The Misadventures of Merlin Jones* (1964), and *The Monkey’s Uncle* (1965), among others, would become typical of Disney live-action features in the late Walt Disney era, and they would provide an archive

of such material that, in turn, would later be programmed on the very Disney television show from which they had taken inspiration—in effect, completing the cycle of cinematization.

In all of these films, science and technology, along with their befuddled Von Drake-type scientists, typified by Fred McMurray's characterizations, simply become cartoon-like elements and point toward the even broader comic context in which they would continue to operate in later Disney films like *The Cat from Outer Space* (1977), *Honey, I Shrunk the Kids* (1989), *Flubber* (1997), or *Rocketman* (1997). In these works the science and technology that were essential to the ongoing space race and at the core of Disney's educational thrust of the mid-1950s seem increasingly detached from real-world conditions, or in a film like *The Rocketeer* (1991) with its 1930s context, rendered as nostalgia, much as had been the case with *20,000 Leagues Under the Sea*. Despite Walt Disney's idea for using television to develop a new way of addressing and popularizing the concerns of science and technology, one that even acknowledged an element of the cultural construction of science and technology, that rhetoric would be altered by the studio's recognition of what would best "sell," as well as by the general trajectory of our media culture—a culture that all too readily renders everything as part of the "set." In fact, that effect might help explain the persistence of the popular myth that the moon landings never really occurred but were simply "staged" by the U.S. government.

Under this same pressure, as well as a desire for an easily consumed product, science and technology would prove difficult components for negotiating into Disney narratives. Rather, they consistently become circumstances of comedy, regularly function as conventions of a cinematic world that all too neatly matches up with the cinematized reality we were coming to inhabit, or what would come to *pass for* reality, especially amid today's preoccupation with what we, without a proper sense of irony, all too readily term "reality programming." These early Disney television efforts provide us with a kind of early warning, and most vivid illustration, of this effect. In the way they try to speak to, and market science and technology to, a popular audience, they demonstrate not just a rather predictable trajectory, that is, the transformation of the "science-factual" into the science fictional, but also a mechanism—Virilio's cinematization and its production of a "reality effect"—that in the light of contemporary television programming increasingly seems almost a defining characteristic of our media landscape.

6. The "Inhabitable Text" of the Parks

I

Disney shrewdly perceived television's ability to link diverse cultural practices that intersected in the domestic sphere of the home. In effect, Walt identified the program with the park in order to create an inhabitable text, one that would never be complete for a television-viewing family until they had taken full advantage of the postwar boom in automobile travel and tourism and made a pilgrimage to the park itself.

—Christopher Anderson, *Hollywood TV*

We have seen how Disneyland, the Disney Company's original theme park, was quite literally produced by negotiations over another new technology, that of television. In light of Walt's long-standing interest in developing another sort of family-oriented type of entertainment, a park where parents and children might go to "play" together, and Roy's insistence on a sound plan for financing any such project, the studio agreed to produce *Disneyland* for ABC largely in exchange for the network's backing of the proposed park. And on the first episode of the series Walt himself emphasized the connection, suggesting a new concept, that audiences think of the park and television show as elements in an integrated entertainment system. Christopher Anderson sees this linkage as part of a crucial economic strategy for the burgeoning Disney empire and a sign of the growing complexity of the synergy that had long been