In hospitable World

Cinema in the Time of the Anthropocene

Jennifer Fay
CONTENTS

Acknowledgments ix

Introduction 1

PART I: On Location . . . 21
1. Buster Keaton’s Climate Change 23
2. Nuclear Conditioning 59
3. The Ecologies of Film Noir 97

PART II: . . . at the End of the World 127
4. Still Life 129
5. Antarctica and Siegfried Kracauer’s Extraterrestrial Film Theory 162
Conclusion: The Epoch and the Archive 201

Notes 209
Bibliography 229
Index 243
CHAPTER 1

Buster Keaton’s Climate Change

In the spectacular climax of Buster Keaton’s *Steamboat Bill, Jr.* (1928), a small Mississippi River town is besieged by a ferocious cyclone. The unrelenting storm brings down piers, boats, and buildings as hapless residents scramble to find shelter. Eventually the camera settles on the local hospital where the hurricane-strength winds collapse all four of the structure’s walls to reveal Will Canfield Jr. (Keaton), sitting upright in bed, startled awake by his sudden exposure to the elements. Buffeted by airborne debris and witness to destruction in every direction, a frightened and confused Will pulls the sheet over his head, only to have the intensifying winds blow his bed across town, discarding our bewildered hero in front of a rickety house. What follows is perhaps the most famous sequence in Keaton’s oeuvre. Framed in long shot, Will stands facing the camera with his back to the house when the entire two-story facade breaks free from its structural moorings and falls right on top of him (Figures 1.1 and 1.2). Will survives unscathed only because he happens to be standing at the exact position of an open, second-story window through which his body passes in an application of providential geometry. Despite the show-stopping virtuosity of the stunt, Will’s survival burlesque continues apace: the storm tosses his body like a ragdoll, heaps detritus on top of him, and drags him through the mud of this all-but-disappeared town. When he regains his footing, he leans so far into the brutalizing wind that he seems to defy gravity, a body suspended midpratfall (Figure 1.3). Gradually Will turns dimwitted survival into ingenious engineering and brute physical strength. He eventually boards his father’s old paddle steamer, the town’s sole place of refuge. Utilizing ropes and eccentric nautical savvy, he rescues the film’s three other main characters, including, of course, his soon-to-be bride.
Figure 1.1 Will (Keaton) stands with his back to the house facade that is about to fall over him. *Steamboat Bill, Jr.* (1928).

Figure 1.2 Will (Keaton) is now standing over the house facade. *Steamboat Bill, Jr.* (1928).
Will Jr. proves himself worthy of modern love when he transforms his bumbling incapacity into a form of accidental aptitude in the face of natural disaster. In the end, Will improbably brings order to people, things, and the environment they traverse. In fact, beyond merely weathering the storm, he turns its destruction to his romantic advantage. Eric Bullot and Molly Stevens explain that the Keatonian transformation “from obvious incompetence to extreme capability” is typically the result of “urgency, necessity, and the virtues of pragmatism that force him to observe, calculate, and predict” unforeseen outcomes under duress.\(^1\) Failures in the social world, Keaton’s heroes manage to thrive in extreme and exceptionally dangerous circumstances, despite that his success is often inadvertent and could just as easily lead to failure.\(^2\) Instead, these heroes discover that destruction is the engine of narrative reconciliation. This is the catastrophic aesthetic of what Bullot and Stevens refer to as Keaton’s singularly “devastating humor.”\(^3\)

This chapter reads *Steamboat Bill, Jr.* as not simply a trajectory of devastation, but a study in environmental design that always anticipates its future ruination: in other words, the storm scene described previously exposes a manufactured world and a simulated environment that is most virtuosic.
in its unworking. Creating the most expensive comedy to date, Keaton’s company built to scale three full blocks of the fictional River Junction town along the banks of the Sacramento River not far from the state capital. According to the studio press book, thousands of people gathered on the day of Keaton’s storm “to witness the synthetic holocaust” that reduced the entire set to rubble. The spectacle of weather design was the central attraction, and the press book explains the engineering behind Keaton’s cyclone to his adoring public. Several hoses, cranes, cables, and six wind machines powered by Liberty airplane motors created the fierce drafts and pelting rain. The wind current generated from just one engine was strong enough, recalls Keaton, “to lift a truck right off the road.” The Los Angeles Times declared in its review that the “wind machines and other storm-producing devices . . . must have been numerous and effective during the making” of Steamboat. “There is no end of a hullaballoo when a tornado breaks loose in this comedy. . . . The cyclonic finish of this film is the best part of its entertainment.”

Steamboat Bill, Jr. is only the most obvious example of Keaton’s climatology. We could also refer to the raging river in Our Hospitality (1923), the avalanche of primordial boulders in Seven Chances (1925), the abrupt, evicting California storm in One Week (1920), and the monsoon-like rains in The Boat (1921), to name just a few. Repeatedly, his characters are confronted with erratic and treacherous environments whose unpredictability is incorporated into the gags. Critics rightly discuss Keaton—and slapstick more generally—within the context of urban modernity, machine culture, and the dizzyingly generative and comical features of mechanical reproducibility. But in the examples listed previously it is striking that weather is itself unnatural. Alan Bilton remarks that the “natural world” in Keaton’s southern-themed work is “another enormous machine, a vast organic engine prone to both overheating and breaking down. . . . Nature is simply another primed and waiting booby trap . . . deserving respect for its lethal ingenuity and explosive power.” Keaton’s films fascinate not just because they depict calamitous weather; his shooting itself occasions the production of this weather, the direction of its force, and accurate prediction of its effects on real locations, north and south, and this artificiality, moreover, is part of his films’ allure as is clear in the publicity and reviews.

These experiments in manufactured weather were not produced with a consciousness of global warming or the planetary force of human enterprise. Yet they tap into an interwar awareness that “natural” disasters were often attributable to industry and war, that “nature” was already a product of “culture.” In the American South, for example, coal mining, logging,
cash-crop cotton agriculture, and hydrological management had severely disrupted the fragile ecosystem of the Mississippi Delta. In the aftermath of the Great Mississippi Flood of 1927, the most devastating in US history to that time, Americans could not deny that their geo-engineering was a force like nature but one whose long-term consequences were increasingly difficult to calculate. In his 1927 account of the disaster, noted New Orleans journalist Lyle Saxon lambasts the “levees only” policy for flood control that functionally disabled the river’s natural spillways, many of which were already destroyed by riverbank settlements.11 Saxon appears to endorse an editorial from The Outlook, reproduced in the book’s appendix: “The great floods now ravaging the Mississippi Valley are considered by many to be an ‘act of God.’ They are, on the contrary, most distinctly the work of man.”12 Though the history of the Mississippi is a history of its flooding, Saxon’s account describes the catastrophe as a distinctly modern, anthropogenic event.13 Indeed, many compared its violence to World War I. The New Republic reported that it was the “gravest problem” the nation had faced “since the Great War,” and that “the stench from the corpses of drowned animals” decomposing in the floodplain “completes an impression of desolate misery like that of the French devastated regions in the War.”14 In attempting to control the river through the levee system, engineers instead amplified the river’s lethal energy. In his own Mississippi River comedy, Keaton plays with cinema’s capacity to structure and thus make legible environmental contingency in the age of such “natural” disasters, and he is attuned to the resolutely modern notion, as Ian Hacking explains with reference to Charles Sanders Pierce, that the universe is “irreducibly stochastic.”15

That Keaton actually designs violent weather (rather than inadvertently unleashing its destructiveness) suggests that the mere comparison between wars and floods does not go far enough. Steamboat’s “synthetic holocaust” is an entertaining artifice analogous to the militarization of climate science during World War I. Specifically, it is an answer to the creation of lethal environments, or what Peter Sloterdijk calls the paradigm of “ecologized war” inaugurated when Germans released poison gas onto the battlefield at Ypres in 1915.16 With the enemy entrenched and inaccessible to conventional weapons, Germany’s new military strategy targeted not the soldier’s body but his life-sustaining environment through a slow-drifting chlorinated “microclimate.” Ecological warfare intoxicates the enemy’s breathable habitat while keeping one’s own airspace clear. From this point forward, writes Sloterdijk, “atmoterrorist warfare” ushered in a wholly new horizon of environmental partition and manipulation, and the concomitant vulnerability of life in times of war and peace. Contra
Walter Benjamin, who asserted that after World War I “nothing remained unchanged but the clouds,” Sloterdijk’s study tells us that the clouds, above all, changed everything.17

Keaton himself knew a thing or two about the risks and slapstick potential of violent storms and war. His early childhood in Piqua, Kansas, gives *Steamboat* a decidedly autobiographical touch. In his memoir, Keaton tells us that shortly after his birth, the town was “blown away during a cyclone” in 1895. As a toddler, a few years later, he awoke to “the noise of a Kansas twister. Getting up I went to the open window to investigate the swishing noise. I didn’t fall out of the window, I was sucked out by the circling winds of the cyclone and whirled away down the road.” It was, he deadpans, “a pretty strenuous day . . . But superb conditioning for my career as ‘The Human Mop.’”18 Honing his survival skills in tornado alley also prepared him for his service as a foot soldier in France during World War I. Where he expected to encounter bombs and enemy fire, “in that war, we saw little but rain and mud.”19 In this respect, Keaton’s war was a bit like his childhood in inclement Kansas; conversely, we may productively think of *Steamboat Bill, Jr.* with its rain, mud, and shelterless town as Keaton’s combat film, his “World War I along the Mississippi.”

Creating microclimates for his film-aesthetic practice, Keaton reprises his childhood brush with tornados in Kansas, but he also reflects the weather-mindedness of World War I, even as he anticipates the unnatural weather of our contemporary moment. From the unwitting, reactive calamity along the Mississippi to the witting and strategic production of atmospheric weaponry in Europe, Keaton’s cinema foregrounds anthropogenic environmental change and modern—at times tragic—modes of inhospitable world-making. Thus, his environmental comedy enables us to glimpse both modern meteorology and what I will describe as modernist weather in the making.

**WAITING FOR THE STORM: HOLLYWOOD NORMS AND GRIFFITH’S EXCEPTION**

Simulated weather effects were common practice in Hollywood and had coevolved with the creation of climate-controlled film studios and the immense back lots where entire villages and towns could be erected and recorded under natural light and an open sky. Yet open-air filmmaking became something of an exception by 1928. The migration of film companies from the East Coast to Los Angeles during the 1910s is a move typically understood as a search for better weather and more diverse natural
locations. Brian R. Jacobson explains that, contrary to this narrative, West Coast production consolidated around the efficiency and artificiality of the enclosed studio and its ability to fabricate any locale. Indeed, Los Angeles weather, he notes, was not as uniformly sunny as its promoters promised. Spring rains, the almost daily clouds, and morning fog meant that even the studio back lot was beholden to California’s seasons.20 Balancing the need to make films on a reliable basis and to satisfy the demand of exhibitors and audiences for interesting and realistic landscapes, the studio heads overcame Southern California’s weather system with a “studio system” of their own: “A flexible pro-fil mic space comprised of interior studio stages lit by electrical lights, sun-lit back lots built on the principles of studio interior, and ‘natural’ locations that, like manufactured sets, could serve as repeated shooting sites,” as Jacobson explains.21 As companies expanded their real estate and invested in décor and special effects, “sunlight and natural settings [were] useful but often either inessential or reproducible.”22

With the coming of sound in 1927, the soundstage, insulated from the outside world and infinitely malleable to reproduce the world’s appearance, became the dominant space of production. In 1929, the Los Angeles Times remarked that “outside locations, while still used more or less effectively, seem to be gradually relegated to the background, and the magnificently constructed settings are becoming more and more prevalent.”23 The author describes the dimensions of an enclosed studio that is 240 feet long, 137 feet wide, and 40 feet high, large enough to accommodate a “complete two story building” and its expansive gardens. The interior landscape boasts “forty varieties of flowers and seven kinds of hedge plants, and the entire set is surrounded by a hedge twenty feet high, topped by towering pine trees.”24 By the 1930s it seemed that there were no places or even weather events that could not be simulated within the confines of the studio under the complete control of the director and production designer. The very title of Hedda Hopper’s 1937 article “Hollywood Sets Would Fool Mother Nature: Scenic Experts Make Land, Sea and Sky Look More Realistic than Reality” sums up the unbounded ambitions of production design. While the studios had vast tree nurseries and enormous outdoor lots, designers favored artificial trees anchored in cement. And while grass could grow on the soundstage, designers opted for artificial grass “which could be sprayed with a brighter green hue for brighter results in Technicolor.” Indoor lakes were dyed to look more like water when filmed. Rain and floods remained on the soundstage “because technicians find they can control floods much better indoors than out.” This is artificiality “done for the sake of realism.”25

Keaton’s environmental design is best appreciated against these emergent norms of studio production, on one hand, and the disappearing arts of
on-location shooting, on the other, both of which aspired to climatic and dramatic verisimilitude.

Keaton’s contemporary D. W. Griffith was perhaps the most strident proponent of scenic realism, an exception to Hollywood’s simulationist ethos that proved the efficiency of its rule. *Way Down East* (1920), Griffith’s adaptation of Lotte Blair Parker’s successful 1897 stage play, is a case in point. This familiar tale of a waifish, working-class, virginal maiden (Lillian Gish) betrayed by an urban aristocratic cad and then rehabilitated by a worthy, upper-class lover was already out of fashion when Griffith embarked on the project. His attraction to the story, however, had less to do with the defense of Victorian virtue than with the demonstration of cinema’s superiority over the Victorian stage and even over earlier, studio-bound, special effects. The film climaxes when Gish’s character is cast out of the house and into the night blizzard, a storm to which the play symbolically gestures and can only statically stage. In the film adaptation, the violence of the eviction and the girl’s emotional turmoil are matched by an actual storm that Griffith shot on location. Gish’s Anna Moore, wearing only a thin dress and a shawl, drifts through a blizzard, is blinded by the snow, and is repeatedly blown over by the brutal winds. Griffith expands the parameters of the play’s cataclysmic weather when Anna wanders onto a frozen river where she falls unconscious, her hand and hair dangling in the water while her body rests on the ice. At dawn the ice breaks and Anna is prone on a swiftly moving ice floe until her lover, David Bartless (Richard Barthelmess), leaping from one unstable floe to another, rescues her seconds before they would both be engulfed by a massive and precipitous waterfall (Figure 1.4). Filming in Mamaroneck, New York, and White River Junction, Vermont, Gish and Barthelmess performed their own stunts, suffering frostbite and exhaustion as a result and jeopardizing themselves for the sake of Griffith’s realism. The *New York Times* reported at the film’s premiere that enraptured audiences

realized finally why it was that D. W. Griffith had selected [this play] for a picture. It was not for its fame. Nor for its heroine. Nor for the wrong done her. It was for the snowstorm. And not just the snowstorm alone, but for the peril-fraught river with its rush of swirling ice cakes.

It is one thing for filmmakers to use the natural world as an occasional backdrop, as was already the norm in Hollywood. Griffith, however, structured his production around New England’s seasons, waiting for each in its proper time to film harvests, sled rides, barn dances, and summer fields. The biggest and perhaps most costly drag on production was Griffith’s
insistence that the final sequences be shot in an actual winter storm. In her memoir, Lillian Gish explains the imperative: "This film needed a real blizzard, not any snowstorm. We had to be able to act in a real blizzard, not subtitled with a sentence description. If this film was going to work, the audiences wanted to see the real thing. Otherwise, whatever we did would be laughable." Theatrical effects, too well known and worn for film audiences, were out of the question, but cameraman Billy Bitzer feared that even a real storm would not be photographable or, worse, might not look authentic on black-and-white film. On March 6, 1920, the skies over Orienta Point in Mamaroneck, New York, where Griffith had built his film studio on a twenty-four-acre estate, finally delivered the much-awaited blizzard with gale-force winds raging across the Long Island Sound. Gish with her costar took to the wintry woods, filming round the clock while the storm persisted. The river sequence was staged weeks later in Vermont, where the crew had to dislodge physically the ice on which Gish floated. Impressive shots of deep-winter Niagara Falls were interspersed as a bit of creative geography to convey the stakes of the last-minute rescue, despite that the actors were really endangered on Vermont ice. In addition to the long shots that find Gish a collapsed figure on swiftly moving drift ice and spectacular panoramas of the ice field and snowstorm, Griffith framed

Figure 1.4 Anna (Gish) awaits her rescue on an actual ice floe. *Way Down East* (1920).
close-ups of Gish in the blizzard, her sweet face made raw by the whipping winds and frozen by the real snow and ice that clung to her lashes (Figure 1.5). American literary critic Edward Wagenknecht, who appreciated the deft cinematography and editing of these thrilling last scenes, nonetheless castigated Griffith. “No director has the right to ask . . . what Griffith asked, and no film can be worth such risk and suffering.”

The production budget for *Way Down East* totaled $800,000, Griffith’s most expensive film to date and among the most expensive films in history up to that time. He financed it at great risk to his own personal income and property, and against the film’s international distribution rights. He thus felt compelled to justify the expenditures before the film’s release. In an unpublished open letter to his fans, Griffith posed the question of how a film depending only on “tears, comedy and human interest” and shot in relatively modest sets could cost so much. The answer simply was that the crew first had to wait for each season “to secure the proper atmosphere,” and then devote months of time to the final blizzard sequence:

> We have attempted nothing that seemed so impossible as the photographing of the elemental resistless force. . . . The plain truth, that despite its simple setting,
it is the most expensive entertainment that has ever been given since Caesar plated the arena with silver for the citizens of ancient Rome.\textsuperscript{32}

Though the film was as successful as it was hazardous (according to \textit{Variety}, it earned $5 million at the box office and was the fourth-highest-grossing silent film in US history), Griffith struggled to keep his production company in the black.\textsuperscript{33}

For his next monumental feature, \textit{Orphans of the Storm} (1921), Griffith built elaborate and historically accurate sets over fourteen acres of his Mamaroneck estate to reproduce France on the eve of revolution. While he could build replicas of Notre Dame, Versailles, and the Bastille, the snow required for the winter scenes had to be real. Chastened by the wait for \textit{Way Down East}'s perfect storm, Griffith took out what was a curious first in the annals of American actuarial science. He insured his production against losses up to $25,000 not in the event of a storm, but rather in the nonevent of snow not falling between October and November 20, 1921, in Mamaroneck when production was scheduled to end. As the \textit{New York Times} reported, “A real storm is needed, for only on the stage can the two orphans be lost in a fall of paper snow.” The weather risk was distributed among eighteen companies. The \textit{Times} continues: “This is the first time a policy has been written in America for a snow storm. Many have been written against a storm.”\textsuperscript{34} When November 20 came and went without flurries, Griffith apparently submitted his claim.\textsuperscript{35} As a first, this film insurance may also have been the last.

As a set designer, Griffith was a fastidious recreationist, dedicated to constructing buildings and interior rooms on location with maddening exactitude for historical detail. But when it came to filming actual weather, Griffith was a naturalist, and the weather, it seems, eluded exact prediction. Eighteen companies could not foresee the pattern of snowfall and wintry precipitation in New York between October and November, and Griffith, collecting on his policy, had to extend his shooting schedule. Yet in Griffith’s sentimental dramaturgy weather is never random, however indifferent it may be to his filmmaking purposes. In both \textit{Way Down East} and \textit{Orphans of the Storm}, rain, snow, and even sunshine are attuned to human emotions and they amplify (though are rarely the root cause of) characters’ suffering and joy. It is not snow but the class inequality and the anarchic storm of the French Revolution that besets the poor girls in \textit{Orphans}, and their fragile social state is played against snowy scenes twice in the film. First is when the two infants are laid at the “foundling steps of Notre Dame.” Louise is abandoned because her mother, a countess, has married a commoner. To protect his family’s reputation, the countess’s father orders her husband
slayed and leaves the baby (his own granddaughter) on the snow-swept steps. Henrietta, the other orphan, is born to impoverished parents who, unable to feed her, plan to leave her at the cathedral. Yet when Henrietta’s father sees this other infant freezing in the snow, he decides against deserting his own daughter in the elements and commits to raising baby Louise as his own. His ruse of leaving an infant in snow to attract the pity of passersby works too well. “So Life’s journey begins.” In the second snow scene Louise (Dorothy Gish), now grown, is blind and forced by a dastardly family who has abducted her to beg outside of Notre Dame. The snow falls, Louise trembles with cold, and citizens leaving church give her alms, including the countess and the good doctor who will eventually restore her vision. These two snow scenes are not just important to convey the precariousness of these girls to the audience; Griffith’s weather sentiment is explicitly part of the characters’ plotting. Leaving babies in the snow, forcing a blind girl to beg—the characters in this film orchestrate the sympathy of others by exploiting the pathos of these natural conditions. “You’ll shiver better without a shawl,” says the mustachioed hag to Louise. Stripping her of her last protection against the elements and thus making her plight as an impoverished blind girl even more obscene, the old beggar pushes her back onto Notre Dame’s steps. These characters know that weather carries a pathetic charge.

At the end of the film, the revolution gives way to “a REAL DEMOCRACY,” as an intertitle emphatically informs us. “Then are the rights restored and do gardens bloom again.” Naturalizing this state of political affairs, Griffith stages the sisters’ long-awaited reunion and Louise’s restored vision in a blooming garden. The radiant sun is a sign and supplement to the sisters’ abundant joy. But just off-screen, we must surmise that Griffith was still waiting to film the snow. In Orphans of the Storm Griffith plays pathetic fallacy in the film against the unpredictable patterns of pro-filmic weather that erupts utterly independent of any human feeling, no doubt aggravating Griffith and his insurers. It is little wonder that West Coast set designers would take to the great indoors, creating storms, sun, and snow on demand and as required by the script, reserving what Mark Shiel calls “unmediated, chance-based images”—shots of actual storms, clouds, and rain—for those rare occasions when script, production schedule, and California weather aligned.

KEATON’S ENVIRONMENTAL DESIGN

Keaton’s environmental design is of an entirely different order. Taking a page from Lillian Gish’s memoir, he understands that artificial weather
has an inherently comic touch and *Steamboat Bill, Jr.* rather uniquely thematizes weather *simulation* (as opposed to its pathetic registers) within the diegesis itself. One of the many winks to the audience, on this score, comes with the first of two weather reports. Following a shot of Will in sunny skies, an insert of the local newspaper gently warns: “Weather Conditions: Unsettled—wet and cloudy.” We then cut back to Will slogging through strong winds and a unrelenting downpour. Moments later we have an update from the same printed source: “Storm clouds in the offing.” In the shot that follows we find the town dealing with a full-fledged cyclone. Using comic understatement, the sequence highlights the familiar disparity between the techniques of presumably high-tech weather prediction and local experience, while the film also mocks the inadequacy of modern technology, sciences, and infrastructures—for example, River Junction’s bank, new hotel, modern rival steamboat, and twentieth-century meteorology—all of which collapse in the face of a good old-fashioned storm. Or, perhaps it is more accurate to observe that Keaton uses modern technology to produce local weather experience that is designed to insult advanced prediction and assault modern institutions.

Keaton’s weather reflexivity continues when Will scrambles into the community theater seeking shelter. A medium shot shows us the stage door. When Will arrives, Keaton cuts to a long shot and we discover that this door frame is freestanding because the rest of the wall to which it was once attached has been blown away. Soon, in slapstick fashion, this door too collapses over Will as he passes through the threshold—a small-scale version of the house-falling gag discussed earlier. Behind him we see piles of debris: bed frames, decimated furniture, bits of roof and scaffolding, and broken trunks full of clothes (or are they costumes?). Tearing down the first and the fourth wall, the storm promiscuously mingles art and life, whereby theater props are indistinguishable from the scattering of River Junction’s “real life” furnishings such props presumably replicate (Figure 1.6).37 But the scene continues to confound artifice and on-location realism: the next camera position juxtaposes storm rubble in the foreground against a bucolic river landscape that mirrors the film’s opening image of the tranquil shoreline of River Junction (Figures 1.7 and 1.8). At first glance the shot seems a continuity error or a violation of temporal sequencing, until we realize that this idyll is a painted backdrop hung from the theater’s one remaining wall, and thus an unwitting memento of an unruined town. The momentary disruption of the illusion of the total storm is a matter of perceptual organization, one that coyly cites cinema’s theatrical inheritance while also sensitizing the viewer to the suspensions of disbelief required to achieve weather semblance. Keaton then literalizes this altered consciousness (and momentary suspension) when he cuts to reveal the theater’s fly loft and
Figure 1.6 Will (Keaton) enters the local theater where real and diegetic props mingle.  
*Steamboat Bill, Jr.* (1928).

Figure 1.7 Will (Keaton) is dumbfounded by the theater's painted backdrop of calm weather.  
*Steamboat Bill, Jr.* (1928).
the obligatory sandbag that will fall on Will’s already bruised head: disoriented from yet another blow, Will attempts to leap to safety in the still waters of theater’s painted still life, only to crash to Earth. When the theater’s last wall gives way, Will is once again exposed to the cinematic world and Keaton’s storm surge. This series of gags performs the obsolescence of theater’s two-dimensional effects and early cinema’s studio-bound production in the face of cinema’s on-location realism. Though nineteenth- and early twentieth-century sensational melodrama created within the theater’s space spectacular effects such as conflagrations, floods, avalanches, and tornadoes, Keaton enacts here the transition from the shallow space of theater and painted backdrops to the unbounded dimensions and world-making capacity of the immersive cinematic environment, whose “naturalism” is always in doubt.38

The slapstick misrecognition on the community stage does more than literally and figuratively turn theater and artifice inside out; it functions as a mise-en-abyme that captures the technical achievement of manufactured weather on location. Gags such as the falling house require near-perfect environmental control, or as Keaton explains:

We had to make sure that we were getting our foreground and background wind effect, but that no current ever hit the front of that building when it started to...
fall, because if the wind warps her she's not going to fall where we want her, and I'm standing right out in front. . . . [I]t's a one-take scene. . . . [Y]ou don't do those things twice.39

With only a two-inch margin for error on all sides, the real weather conditions on the Sacramento River must be perfectly stable if Keaton is to survive this stunt. In fact, in many of the shots in which rain and wind pummel people and things, we see sharp shadows cast on the ground, suggesting that *Steamboat* was shot almost entirely under sunny skies, a mismatch anathema to Griffith's melodrama (e.g., see the shadows cast by the sun in Figure 1.3). We may surmise, then, that the painted backdrop in *Steamboat*'s theater sequence mimics the actual weather conditions—clear and calm—on the day that Keaton obliterated River Junction. In other words, Keaton's perfect storm does not originate in the clouds, but in the near-perfectly predictable and friendly environment at California's capital, just as Keaton's doomed river town must be built according to the most precise specifications so as to fall apart safely. His disaster architecture is likewise designed to succumb to the elements rather than endure their force. That Keaton reflexively reveals and riffs on the distinction between real and artificial weather means that any weather "pattern" is itself discontinuous, fragmentary, and, at times for these reasons, rather funny. One striking feature of Keaton's work is the constant shuttling between, and thus drawing attention to, these spontaneous incongruities of climatic simulation. After Miriam Hansen's famous formulation, we might call Keaton's weather a "reflexive modernist ecology" that foregrounds artificiality and the techniques of environmental design.40

The reflexivity of Keaton's gag structure, moreover, puts engineering on display such that we apprehend a distinction between the character's predicament and the metteur-en-scène's arrangement of and intervention into the diegetic world.41 Will, for example, survives the house-falling sequence only because Keaton carefully placed his character in the exact position of the open window and then cut power to the wind machines. Within the film, Will's survival is merely dumb luck. We are thus ever mindful when watching a Keaton film of the director's intelligent design and technological savvy that pushes the character's adaptability to new limits, a point to which I'll return later in the chapter.

The effect of Keaton's engineering is somewhat distinct from the techniques of the self-reflexive musical, slapstick's generic close cousin. Jane Feuer explains that the heroes of musicals are marked as such by their
spontaneous reappropriation of found objects and environments for use in their unrehearsed performances. This bricolage produces the effect of inventive spontaneity by concealing engineering or “technological know-how” of successful numbers.42 Let us consider what Feuer calls the “nature of this illusion” as exemplified in the well-known title number of Singin’ in the Rain (1952), conveniently a number about the weather in a story that selectively reveals the techniques of Hollywood’s behind-the-scenes artifice in the vast indoor studios. When Don Lockwood (Gene Kelly) erupts into song and dance while walking home in a serendipitous downpour, the apparent simplicity of the mise-en-scène and choreography conceal the number’s high-tech production and Kelly’s virtuosic technique. This concealment also relegates to the background the manufactured environment, despite that earlier numbers show Don manipulating fans, filtered lights, and fog machines to transform a dark soundstage into an idealized romantic setting. So that audiences would perceive Kelly’s carefully rehearsed tapping as Don’s mere spontaneous splashing, M-G-M had to pipe in “rain,” calibrate water pressure and pattern, and hollow out precise spaces for puddles to form.43 Within the diegesis, however, it is Don Lockwood who transforms a given space into a place of performance through his romantic burst of energy. To rephrase Feuer, this feat of engineering pivots on a vision of “nature” as convincing illusion against which the performance itself is naturalized. It is virtuous characters and not an off-screen director who order the world by imaginatively manipulating its elements.

Feuer also tells us that the production of this uncharacteristic rainstorm in Singin’ in the Rain’s fictional Hollywood was threatened by an actual (and far more characteristic) Los Angeles drought. M-G-M competed for water and water pressure with the residents of Culver City who were sprinkling their parched lawns after work. With these extra-cinematic environmental conditions in mind, we may read the following exchange between Don and his girlfriend Cathy (Debbie Reynolds) before the title number as more than just romantic banter. At night, they stand at the entrance to her apartment building kissing goodbye under an umbrella as the rain pours down.

CATHY: Take care of that throat. You’re a big singing star now. Remember? This California dew is just a little bit heavier than usual tonight.

DON: Really? From where I’m standing the sun is shining all over the place.
Love mentally transforms rain at night into sunny skies, to be sure. In the case of this scene, shot over two sunny days in the midst of a drought, a steady downpour in Hollywood was wishful thinking: the sun really was shining all over the place.

More to the point, however, Keaton’s films stand out because the director’s will overshadows the characters’ abilities. Writing of the extended cannonball-train gag in The General, Lisa Trahair claims that what we see is not the character’s successful manipulation of the materials at hand, but the work of the director who stages and times the “perfect contingency” on which the sequence rests. The “instrumental malfunctioning of the Keaton character gives way to the ordering forth of the director who orchestrates the mise-en-scène to rescue [his character] from the consequences of his ineptitude.” Because we know that Keaton’s character is subject to the director’s manipulation, we apprehend as an illusion the idea that man is master of his world. It was this feature of slapstick’s agnostic fortuitous-ness that fascinated Siegfried Kracauer. He remarks that the character’s triumph is a result of chance. “Accidents superseded destiny; unpredictable circumstances now foreshadowed doom, now jelled into propitious constellations for no visible reason.” A character is beholden to “a random combination of external and completely incoherent events which, without being intended to come to his help, dovetailed so perfectly” that he has no choice but to survive deathly falls. Whereas Don Lockwood is in control of his environment, Will (along with Keaton’s other characters) is beholden to a nondiegetic force to which he can only react. “Keaton’s meditation,” concludes Trahair, “is a lucid articulation of what becomes of subjectivity in a world where film doubles reality (and vise-versa).” The modern subject finds himself in ever-diminished control over his simulated world and, at the same time, discovers new features of his ecological dependency—a form of knowledge that, for Sloterdijk, is the signature of twentieth-century modernist aesthetics.

MANUFACTURED CLIMATES AND THE ECOLOGIES OF WAR

The chlorine gas cloud over Ypres in 1915, argues Sloterdijk, is a climatological fabrication that “sheds light on modernity as a process of atmosphere-explication.” By gassing the troops and using their respiratory reflexes against them, the Germans explicated features of a habitable environment that were previously taken for granted or were, in the Heideggerian sense, the background givens of our world. Gasping for air, the Canadian soldiers were confronted with their dependency on an
oxygenated, nonchlorinated environment. The new reign of terror targets “the enemy’s primary, ecologically dependent vital functions: respiration, central nervous regulation, and sustainable temperature and radiation conditions.” And thus did World War I give rise to a “discovery of the ‘environment.’”

Apropos of Keaton’s layered mise-en-scène in which artificial weather foregrounds the fact that there is no “natural” weather in his film, atmospheric explication is both a revealing and simultaneous concealing of atmospheric conditions. Chlorine gas discloses the nonacidity of what had passed for normal nonchlorinated air. In concealing with chlorine the properties of Ypres’s typical air, the German military explicated its now-compromised quality. Under such circumstances, “the living organism’s immersion in a breathable milieu arrives at the level of formal representation bringing the climatic and atmospheric conditions pertaining to human life to a new level of explication.” In this respect, explication corresponds to Martin Heidegger’s notion of unconcealment whereby poison gas (in this case) makes available conceptual and then practical knowledge of atmospheric givens. Unconcealment names the event in which things that have always been present become known because they are now deemed useful or meaningful to our lives according to our orientation in the world. The perversity of Sloterdijk’s formulation is that whereas unconcealment leads to a new orientation and understanding of things as they are, explication produces an epistemology that is also a terrifying human ontology. That is, to know atmospheric explication is indivisible from being vulnerable to its lethal purpose. The “formal representation” of the atmosphere intimates how the designs for war and designs for art comingle in our perception of the modern world, such that we understand that air, climate, and atmosphere are manipulable “media of existence” whose now-explicated life-sustaining properties are no longer assured.

The correspondence between climatic weaponry and artistry (or the “art of terrorist warfare”) is essential to Sloterdijk’s historical argument. Poison gas “had all the features of an act of design, one according to which ‘within the rules of art’ human beings produce and design more or less precisely delimitable microclimata of death for other human beings.” Likewise, modernist aesthetics make explicit previously latent processes and backgrounds of artistic creation. Sloterdijk finds parallels between atmospheric war and the combative practices of both Kazimir Malevich’s suprematist compositions and Salvador Dali’s paranoid criticism. In Black Square (1913), for example, Malevich foregrounds and takes as his subject what was previously the background of the painting: “The background as such is meticulously painted and thus turned into the explicit figure of figure-bearing.”
Dali makes explicit the unconscious processes—the dreamwork, the automatic writing, the sublimated desires and willed madness—that modern artists channel. Admittedly, these aesthetic reprioritizations are a far cry from poison gas. But they share with this war the principle of objectifying what were once the unperceivable facets of artistic expression and thus are of a piece with modernity’s explicating regime. While no one is physically harmed by viewing Black Square, the artwork itself is a form of aesthetic hostage taking. The suprematist ambition provokes “the terror of purification,” where the negative composition “demands the unconditional surrender of viewer perception to its real presence.”

If the gassing of troops at Ypres is the founding event of atmoterrorism, Dali’s presentation at the 1936 International Surrealist Exhibition intimates its slapstick counterpart. Sloterdijk recounts how Dali addressed the London crowd in a scuba suit to announce his radical otherworldliness and his submergence in a kind of liquid unconscious. His speech was cut short, however, because he failed to provide himself with an oxygen source. “But,” writes Dali of this unscripted horror, “my facial expressions fascinated the audience. Soon they saw me open-mouthed, apoplectic, then turning blue, my eyes revulsed.” The crowd applauded enthusiastically, unable to differentiate Dali’s performance of the unconscious from its near actualization. For Sloterdijk, this anecdote speaks to the amateurism of surrealism, whose proponents misuse and confuse the objects of science for art, while showcasing Dali’s participation in atmospheric design attained, in this instance, through unbidden anoxia. The hostile environment is also the bedrock of Keaton’s comedy, of which the surrealists were ardent fans. A similar stunt closes The Navigator (1924). Rollo Treadway (Keaton) is dallying on the sea floor in a scuba suit trying to repair the eponymous ocean liner when cannibals cut his air supply. Treadway begins comically to asphyxiate and, like Dali after him, struggles in vain to release himself from the suit or detach his helmet. Thanks to Keaton’s real-world competency, however, Treadway manages to complete a spectacular underwater sequence, wherein he battles an octopus and then walks to shore, where he frightens the cannibals with his aquatic attire. In the film’s final moments, Treadway and his girlfriend flee the scene of near anthropophagy when a submarine unexpectedly emerges from the ocean depths and whisks them to safety.

Sloterdijk explains that the solution to Dali’s suffocation is to pry off the helmet and breathe the external air. Today such a response is almost pointless since the majority of us respire in contained and air-conditioned environments more often than not and the air, outside, is hardly uncontaminated. Is it thus fitting that in The Navigator, Treadway is
rescued from the cannibals when a submarine provides the escape hatch, not out of but into the vessel. Exchanging one underwater breathing system with a larger-scale version, Keaton’s dénouement testifies to Sloterdijk’s claim that “the process of atmospheric explication bars all return to once taken-for-granted implicit conditions.” As modern humans manufacture ever-expanding environments of death, they aggressively create contained conditions for life. Bereft of concealed places to hide, we have rendered ourselves homeless. Rereading Heidegger, Sloterdijk explains homelessness “in the sense of the human being’s banishment from its natural air-envelope and re-settlement in climate-controlled spaces; more radically still, the discourse of homelessness can be read as symbolizing the change of epoch implied by the exodus out of all the remaining protective niches and into latency.” This “change in epoch” that for Sloterdijk is aesthetic and militaristic modernism may also be read, of course, as the new geological paradigm of the Anthropocene.

Quite apart from climate design, the militarization of the weather has a long history because modern meteorology has always been a martial science. It was in the 1870s that Ulysses S. Grant established the US Weather Bureau housed within the Department of War by which time the language of “storm fronts” and descriptions of lightning’s sulfurous odor, akin to the smell of exploded gunpowder, were already firmly entrenched. Mary Favret remarks of the military and Romantic metaphoric: “The vehicle for understanding the weather is war—not vice versa: war is apparently familiar enough to explain the otherwise inexplicable or unknown. Destructive, volatile, and unpredictable in outcome, war and its gunpowder somehow humanizes the weather—or at least keeps it grounded.” Indeed, as she argues, the model of a global weather system was, in Britain, the meteorological response to the Napoleonic wars. The changing British skies encrypted news of distant battles, and weather, like war, was understood as part of a threatening global system. Before the late eighteenth century, weather was conceived as a local, edaphic phenomenon that erupted from the earth below and very often defined or naturalized the political spirit of a circumscribed place. D. W. Griffith’s sympathetic weather and sunlit democracy in Orphans of the Storm come to mind here. Does the sun shine on France’s already bright political future after the revolution? Or is the democratic future possible only because the sun shines? This climatological determinism is part of Griffith’s pathetic fallacy.

It was during World War I that meteorology became a truly predictive science. Battling on multiple fronts and bombing from above, all participating nations soon came to realize that air currents and rain, cold fronts and storms not only were the remnants of the weather and war
that had rained on other people (as was the case during the Napoleonic
wars) but also could be read for the conditions of weather and visibility
to come. Essential to geo-military strategy, weather prediction, explains
Robert Marc Friedman, underwent a “conceptual change” from a “two-
dimensional geometrical model . . . based on kinematics of the wind
flow” to "three dimensional models of physical weather-carrying sys-
tems in the atmosphere” that could account precisely for the movement
of storm fronts and air currents for flight and gunnery, as well as small-
scale atmospheric patterns closer to the ground for gas attacks.60 Where
other sciences such as chemistry applied directly to munitions, mod-
ern meteorology rationalized world war by mapping weather in space
and time and, in the process, codifying and regularizing the experience
of weather (or the description of that experience) across regional and
cultural differences.61 If Romantic war symptomatizes and humanizes
weather, modern weather also systematizes and increasingly deperson-
alizes global war.

The poison gas attacks exemplify the new meteorological sensibility. The
Germans were able to kill and impair the enemy from a safe distance by pos-
sessing reliable foreknowledge of the air currents at Ypres. Too much wind
would dissipate the fog to ineffectual levels of air saturation. A change in wind
direction, and the Germans would be asphyxiating themselves. Atmoterrorism
is a highly localized, topographical phenomenon, which is viable as a weapon
only when the attacker has mastered the weather system and climatic norms
of the battleground. Keaton’s climatic antics are similarly local, delimited,
but only possible when the forecast for the day’s shoot is predictably clear
and calm. In fact, because Steamboat anchors its stunts in carefully produced
wind and rain, “fair weather” becomes, in this film, a meteorological event and
not simply a nonremarkable default that the storm interrupts. That is—and
this is essential to Keaton’s sensibility—there is no “background” or “given”
weather in this film, unless it is literally a painted backdrop. All wind and rain,
sun and calm need to be read as specifically produced. Modernist weather
in the age of its mechanical reproducibility dispenses with norms, or it sug-
gests that fabricated unpredictability is itself “the new normal.” In Keaton’s
weather-minded cinema, there is no climate against which storms and other
intemperate variances arise; there is only weather.

It is worth noting that slapstick came into its own around 1915 when
it evolved from pie-in-the-face burlesque theater to ever more elaborate
large studio stunts and what I will call plein air comedy in such films as
Ambrose’s Nasty Temper (1915) and Fatty and Mabel Adrift (1916). As Rob
King points out, though these early films have nothing narratively to do
with war, their stunts were inspired by military technology including
airships, scuba technology, and submarines (all of which, we should note, presume forms of air design) and the creation of sets and later locations large and controlled enough to accommodate cinematic world-making and -unmaking. Audiences became as interested in the spectacle of the stunts as they were in the techniques of their productions. Fatty Arbuckle, Keaton’s mentor, made his name at Keystone Studios, where slapstick magic was guarded as top-secret information. A 1917 Photoplay cartoon represents the studio as a heavily fortified citadel, armed against the spies from lesser film producers: “Keystone’s tricks,” writes King, “are equivalent to state secrets in a time of war.” It is no coincidence that Keaton describes his soldiering in France during World War I as a series of gags and funny mishaps in foul weather that began when he was issued a uniform and shoes several sizes too big: “I was not amused to find slapstick flowing over into my new life in the Army.” Fortunately, his misadventures on the vaudeville stage and later on the film set were far more dangerous than war. His only field wounds were temporary hearing loss and a nasty sinus infection contracted while spending night after night on the draughty floors of French mills and stables. For Keaton, World War I had none of the airborne threats of bombs or poison gas. His Great War was the effortful routine of sleeping in barns and slogging through France’s sodden countryside in a downpour in clown-size shoes. An almost too poetic touch, his infantry division was nicknamed “The Sunshine Division.”

**FUNNY WEATHER AND ENVIRONMENTAL COMEDY**

Tyrus Miller explains that late modernist laughter exploded from the trenches of World War I as a prophylactic affect that stiffened the subject “against danger, marking that minimal spatial difference between conscious life and the pure extensivity of dead nature: a difference that preserves the subject, however diminished, in situations of adversity.” Laughter automatically and defensively (and sometimes against a subject’s will) erupts when encountering another body riddled with shrapnel or deformed by poison gas. It also describes a deadening response to the imperiled self. Hardened laughter thus is a form of playing dead to survive. Or as Miller, quoting Adorno and Horkheimer, remarks, “by adaptation to death, life pays the toll of its continued existence.” This is not a “sense of humor,” as Miller later explains, but an anesthetic response to modern desubjectification that the Great War presaged. The “dead nature” to which Miller refers is the mute inanimate death world that encases the etiolated, but still vital subject of war. In Keaton’s work “dead nature” resonates
more as the simulated environment that forms both the background and foreground of his admittedly deadpan and entirely exteriorized performance. But what is so funny about Keaton’s weather? What are the features of modernist weather that provoke modernist laughter?

The publicity for Steamboat Bill, Jr. pitches the comic and high entertainment value of the storm’s destructive force: “Gales of Laughter! What spectacular tornado action—dynamic and awesome one moment, laugh-echoing the next! What a wow!”67 The alternation between awe and laughter, comedy and horror is more funny than melodramatic because, as one promotional feature explains, the weather bears no cosmological grudge and destroys with no particular purpose beyond amusement. “River Junction perished not because it was wicked, but because the world must be entertained, and in this case the entertainment is a tornado as funny as it is awesome.”68 This causality is in contrast to the conventions of the disaster film, such as John Ford’s The Hurricane (1937), in which weather becomes a force of divine justice against the hubris of human law and ambition. Set on a fictional Polynesian island under French colonial rule, the film focuses on the tribulations of the native islander Terangi (John Hall), who is unjustly imprisoned in Tunisia and then, after his escape, hunted on his home island by the cold and unwavering French governor. Terangi’s certain capture is thwarted by the thrilling hurricane. As the governor stubbornly sets sail in pursuit, the good doctor (Thomas Mitchell) warns him of the storm’s moral power. “When you feel the might of the sea and the wind maybe you’ll discover that there’s something greater in this world that the French criminal code! . . . Yeah, Terangi is out there. Go chase him! Then hear God howl and laugh at you.” When the hurricane hits with impressive force and decimates the entire island community including most of its inhabitants, we are led to the conclusion that God himself condemns the colonial world order and produces an apocalyptic storm to make this point. But there is something about the storm itself that maintains the narrative’s dramatic tenor.

The publicity for The Hurricane explains that the storm, attributed to a vengeful God in the film, was in fact the work of men. The fictional island community, including the sizable lagoon, was created on two and half acres of the United Artists back lot, once it became clear that mounting a hurricane on the Samoan island of Tutuila would be too costly and involve a considerable “weather gamble.” Water tanks, hydroelectric pumps, carefully engineered spillways, and twelve fans powered by 8-cylinder Liberty airplane motors (each capable of lashing out a 90-mile-an-hour gale) created fifty-foot tidal waves and pelting rain strong enough to demolish the elaborate set and to genuinely batter the actors.69 Samoan natives, cast as extras to lend the
film an authentic touch, testified to the authenticity of this engineered storm—or so the publicity goes. Compared to “their experience with the real thing,” this hurricane “was as bad as any that they had seen.” According to the press book, they were so convinced by the special effects that their terror in the film was not “acting” but a rational response to the very real deluge of water in the studio under the director’s control. Even the primary cast members are no longer in character per se, but trying to hit their marks against the elements. Thus had Goldwyn, Ford, and hurricane designer James Basevi “duplicated nature’s furies without exacting nature’s toll of life” in the nondiegetic space of the studio.\textsuperscript{70} New York Times film critic Frank Nugent marveled at the storm’s total appeal to the senses. “It is a hurricane to fill your eyes with spindrift, to beat at your ears with its thunder, to clutch at your heart and send your diaphragm vaulting over your floating rib into the region just south of your tonsils.”\textsuperscript{71} The storm was so convincing and seamlessly presented that those acting in the film (or so we’re told), as well as those watching in the theater, were mystified by its mimetic power. “I suppose most of it was done with mirrors,” muses Nugent. “Inside stories have whispered of miniatures. . . . If this is make-believe, nature must make the best of it; she has been played to perfection.”\textsuperscript{72} That the storm is synthetic does not in any way diminish its force. The United Artists press book recommends that producer Samuel Goldwyn be enshrined in Samoa “as the chief of their gallery of local gods, with the appropriate name, He-Who-Makes-Hurricanes-Better-Than-the-Gods.”\textsuperscript{73} In contrast to both The Hurricane and Griffith’s storms, Keaton’s tornado is funny because it is random and unexpected, spectacular but survivable. In fact, Keaton inverts the weather realism of the dominant paradigm. His storm is obviously anthropogenic, but it is not necessarily, or is only incidentally, anthropocentric. This is this basis of his environmental comedy and what makes him such a fascinating director of the Anthropocene.

Keaton originally wrote Steamboat as a flood comedy to debut only months after the waters of the Great Mississippi Flood had finally receded. The publicity department at Joseph Schenck’s studio claimed that the floods were too frequent and deadly for laughs and thus an inappropriate subject for Keaton’s next film. “That’s funny,” said Keaton, “since it seems to me that Chaplin during World War I made a picture called Shoulder Arms, which was the biggest money-maker he’d made at that time. You can’t get a bigger disaster than that, and yet he made his biggest laughing picture out of it.”\textsuperscript{74} Following from Keaton’s analogy, the comedy of war is a precedent for the catastrophe of weather even as weather’s destruction is made intelligible by comparison to war. And, of course, Shoulder Arms features a grimly funny flood scene in the trenches. Unable to persuade the studio and its sense of
actuarial entertainments, Keaton decided to simulate a cyclone. The studio agreed to the revised calamity despite that cyclones and hurricanes killed four times more people in the United States than floods, as Keaton later pointed out. In 1926, two years before *Steamboat’s* release, Southern California was hit by a megastorm that, over the course of two days, generated five hugely destructive tornadoes, several mini cyclones, and deadly lightning strikes. Tornadoes demolished communities up and down the coast, while winds and unruly water currents sent fishing barges violently onto shore. Lightning struck the Union Oil tank farm in San Luis Obispo, igniting the largest and hottest oil fire in US history up to that time. Mike Davis explains in his book on Los Angeles disasters (in a chapter appropriately titled “Our Secret Kansas”) that Californians are more bemused than frightened by tornadoes, celebrating them “as not only the most violent but also the quirkiest windstorms in nature. Their capricious behavior—taking the cradle but leaving the baby safe—constitutes an entire genre of American folklore.” Perhaps for this reason, California’s tornado epidemic (Los Angeles is hit by tornadoes twice as often as Oklahoma City) remains “culturally invisible,” or latent and concealed. Sounding this cultural disposition, the studio press book for Ford’s *The Hurricane* declares that the tropical hurricane, utterly lacking in humor, is “a complete villain” due to its relentless and lethal power. “There is no compromise, no preparation or prevention for the hurricane. Earthquakes, floods and fires may be beaten, or even stopped, but the hurricane refuses to accept man as the lord of creation.” A cyclone—described in this same feature article as the hurricane’s “inland cousin”—is “a comedian, more noted for its freakish pranks than for the amount of damage which it inflicts.”

Humorless weather, like world war, is totalizing and complete, both in its destruction and, in film, as apprehended through special effects. Funny weather—mischievous and unpredictable—is also partial, its illusion incomplete. In its cinematic simulation, it reveals the gaps between pro-filic and fictional conditions and thus has something in common with comic acting. James Naremore writes that the comic actor “disrupts coherence at every level of the performance, deriving laughter not only from the foolish inconsistency of the characters but from a split between actor and role.” When executing gags, Keaton is simultaneously the character he plays and the deadpan comedian stunt man, and often, the director of the fictional action. What Naremore refers to as an “alienated style” of comic performance pushes slapstick to the brink of “radical deconstruction.”
By its very nature, comedy undermines our involvement with the characters, barely maintaining a dramatic illusion. It might depict violent or deadly action, but it does so in a way that invites us to observe plot machinery as machinery. Every comic actor is therefore something of a deconstructionist, calling attention to the way we manufacture our socialized selves.80

Similarly, comic weather barely maintains its impression. This is de-totalizing artificiality in the service of undermining the givenness of the environment. The effect is comic and climatic alienation.

This formulation begins to explain our response to other forms of simulation. Alfred Hitchcock’s Spellbound (1945), for example, loses its suspenseful momentum when Gregory Peck and Ingrid Bergman ski down a mountainside that is obviously rear-projected. Long shots of stunt doubles flying down a snowy run are intercut with medium shots of our actors who calmly kneel bend in front of a wind machine while the background flies by. We note the incongruity of depth cues in these closer views and the disparity between background speed and foregrounded bodily stasis. Bergman’s horror at the deathly precipice at the end of the run is incommensurate with her obvious safety in a rear-projected world. This is an example of climatic camp, a moment of “failed seriousness” as Susan Sontag would call it, which occurs when the artifice of melodramatic weather breaks.81 Bergman is fearful of a nonpresent danger because she inhabits the “glaring implausibility” of what Laura Mulvey identifies as rear projection’s “clumsy sublime.” This composite aesthetic, in which foregrounds are spatially and temporally at odds with their backgrounds, tends to “immobilize” the actor “paradoxically at the very moment in the film when there is a fictional high point of speed, mobility, or dramatic incident,” a caesura that exposes the effects of celluloid manipulation and turns acting into a “self-conscious, vulnerable, and transparent” performance.82 Keaton’s character, by contrast, is imperiled when he is forced to respond to phenomenally real, physically proximate danger from which he, by slapstick convention, will safely emerge. Keaton achieves comedy and not camp because, in placing himself within a dangerous microenvironment and framed by authenticating long shots, he demonstrates that the effects of the weather are real even if they are simulated at their source and purposefully inconsistent in their manifestations. Indeed, because it does not ask us to take the threat or its consequences too seriously in the diegesis—because it does not court failed seriousness—Keaton’s film better conveys the real horror of his pro-filmic endangerment in ways that give us some confidence in our own adaptability.83
Even for today’s audiences, slapstick may thus be the appropriate antidote to environmental sensationalism on which we fixate in inclement moments. Marta Sturken writes that our contemporary storm fetishism and obsession with forecasts explain the success of the Weather Channel: “In the story of the weather and survival of dramatic natural disasters, the viewers of weather media are asked to reassure themselves that they can survive the everyday difficulties of life as they know it,” even as they witness the failure of others from the safety of home. With melodramatic absorption, we helplessly watch other people’s weather, which arrives so suddenly, forcefully, and lethally that we shudder at the frailty of human life and our powerlessness over violent storms. But there is a difference and differently registered purpose in laughing at survival in what Steamboat’s publicity materials earlier called a “synthetic holocaust.”

For many critics, Keaton’s laughter is of a Bergsonian variety; it is a corrective response to a mechanical encrustation on human life, to the automatism and inelasticity that renders the human artificial and thing-like. The effect, writes Bergson, is that the rigid body appears “immersed and absorbed in the materiality of some mechanical occupation instead of ceaselessly reviewing its vitality by keeping in touch with a living ideal.” In a similar formulation, Noël Carroll argues that Keaton’s gags are structured by inattention, in which characters are either too preoccupied or narrowly focused to register and appropriately respond to changes in their surroundings. Comedy occurs in the interval between situational change and the character’s belated response. As a result of “deferred attention,” the character finds himself “out of synchronization with his environment.” Carroll is adamant that this asynchrony is not a contest between man and the natural world: “The environment is not chaotic: it is rule-bound and law-like in Keaton. If it were not, his success would be impossible. He can adapt because the environment is ordered. His failure at adaptation results because characters . . . employ defective habits.”

As we have seen, however, the diegetic environment in many of Keaton’s films is the source of chaos. Unordered and unpredictable, natural forces push standard cognitive habits to new and sometimes impossible limits, and the films, in turn, tutor bodies to bend with and respond to the unexpected weather elements.

There are several examples in Keaton’s work, but two films are especially apposite. In Seven Chances (1925), Keaton’s Jimmy Shannon is fleeing a swarm of tenacious brides who chase him beyond the boundaries of town and into a series of decidedly rural dangers. Jimmy manages to throw the brides off his trail when he ascends a spectacular sand dune. The abrupt change comes when Jimmy’s acrobatic somersaults down the sand bank
trigger a landslide. A trickle of rather benign rocks rapidly gives way to an avalanche of enormous boulders that appear out of nowhere. In extreme long shot, Jimmy races down the steep slope dodging massive careening rocks twice his size (see Figure 1.9). He takes refuge in a tree, only to be knocked down. He then finds shelter behind a boulder lodged in the earth, only for it to give way. Reaching the bottom of the hill, Jimmy’s reward for survival is a reunion with the bridal horde that awaits him. Momentarily caught between the rocks and the brides, Jimmy decides to escape back up the hill and face the disaster. Ascending, he now sidesteps rocks that proceed to scatter or, in some cases, squash the brides below—a marvelous feat of geo-choreography. Contra Carroll’s reading, Jimmy’s quick-witted adaptation in response to environmental pandemonium is rewarded when he is reunited with his true love before his marriage deadline expires.

It so happens that the landslide sequence was not in the original script. Keaton recounts that the first time they shot the scenes at the dunes outside of Los Angeles, his bustle dislodged a few rocks that pursued him down the hill. The audience at the test screening was delighted with what Keaton refers to as a fortuitous “accident,” but then sat in frustrated expectation of a more elaborate boulder gag. Turning erosion into environmental comedy,
Keaton ordered fifteen hundred fabricated rocks, some up to eight feet in diameter, to be delivered to the top of a High Sierra slope for the reshoot. The unpredictability of on-location shooting was thus harnessed, tamed, and artificially amplified to satisfy audience demand. Like his early cinema forebears such as Georges Méliès, who turned accidental stop-motion animation into a platform for cinematic magic, so in Keaton’s film, “a chance event is transformed into an innovation, and from there, into a system.”

The final run begins in the dunes with real rocks and shifts to the mountainous terrain with synthetic boulders. The rolling rocks, Jimmy, and the persistence of gravity provide the continuity from one location to the next.

The system of creative geography and the manufactured environment in this scene from *Seven Chances* are anticipated in the famous montage sequence from *Sherlock Jr.* (1924). The eponymous character is an aspiring detective who works as a film projectionist. After being falsely accused of theft, Sherlock falls asleep at the projector and dreams that he enters the world of the parlor mystery film he is watching. The well-known sequence comes just after Sherlock enters the projected world of the “film within the film.” Eight shots of approximately twenty seconds in length place Sherlock, through the shock of montage, in seven distinct and surprising environments. First, he is shown sitting on a garden bench. In the next shot he continues to sit, but the sudden shift to a bustling city street without a corresponding bench means that he falls into oncoming traffic. Scrambling to safety in the city, he is transported by a cut to a craggy mountain precipice from which he nearly tumbles. Having just regained his footing on the rocks, he is vaulted into a jungle between two formidable lions. He tiptoes away from the beasts and into the path of a hurtling train, and then another cut places him on a rock outcropping above a rough sea. When he dives into the water, a match-on-action has him land deep in the snow of the next locale. Leaning against a tree in the wintry wilderness, Sherlock finds himself back in the garden. With no tree to support him, he falls down right where his environmental odyssey began.

For Carroll this sequence critiques, in Bergsonian fashion, maladaptation and automatism, “summarizing as it does, in almost allegorical fashion, Keaton’s whole concern with unadaptability.” Yet, not only is Sherlock quick to adapt in these short shots, but also the sudden shifts all occur at just the moment he gathers himself and finds security. Because *we* watch the body (which is graphically matched from shot to shot) more closely than the surroundings, even *we* are slow to register the new location and each new set of environmental hazards. Moreover, as others have pointed out, this sequence as a whole has no narrative connection to the rest of the
film-within-the-film. Thus, rather than dwelling in narrative, this series of shots produces an aesthetic of suddenness that defies cognitive habit or causal prediction. The gag revolves around cinema’s capacity to place the same human in different habitats in chaotic succession, or what we could read as an adventure in phantasmagoric climate change. We laugh not at the character’s inability to adjust, but his uncanny capacity to survive in radically different environments. In fact, for Bergson, the artificial world and the “disguise of nature” is itself a source for humor. He notes the hilarity of the idea taken from a passage in Alphonse Daudet’s *Tartarin Sur Les Alpes* that Switzerland is actually an elaborate opera set run by stagehands who, working machines below the country’s surface, produce “waterfalls, glaciers and artificial crevasses.” “In ‘a nature that is mechanically tampered with’ we possess a thoroughly comic theme.”

**KEATON’S HOSPITALITY**

Survival in inhospitable milieus is at the center of Keaton’s masterpiece, *Our Hospitality* (1923), in which artificial weather and “natural” phenomena are not so much reflexively depicted as they are incorporated into this story of guest/host relations and inclement environments. A slapstick send-up of the Hatfield and McCoy feud—one of the longest-standing wars between neighbors in US history—the film centers on Keaton’s Willie McCay, who travels from New York back to his inherited homestead in the antebellum South. He becomes embroiled in this atavistic battle when he finds himself a dinner guest of the very family who is obliged to kill him. As the Canfield patriarch explains to his vengeful sons, Southern conviviality dictates that they may not murder a guest in their home, and for this reason hospitality provisionally interrupts war. But this war itself is interrupted by weather. The second half of the film features the Canfield strategies of eviction and Willie’s ruses of survival that are resolved only when Willie marries the Canfields’ daughter, transforming himself from an unwanted guest into a permanent resident alien at the Canfield estate.

Throughout the film, storms, flooded rivers, and craggy bluffs provide our hero with a cover from the murderous clan, even as these conditions thrust him into their midst. Thanks to a postprandial rainstorm, Willie is able to impose himself on the Canfields, knowing that once he leaves their residence they will surely shoot him. The father remarks of both the storm and his plan for Willie: “It would be the death of anyone to go outside tonight.” Thereafter, Willie’s refuge in the house is also a form of capture until he flees into a mortally raging river. In this film, the codes of
war and the conventions of hospitality are connected to unwelcoming or damaging ecologies, some of which Keaton found on location and others he constructed.

But the film is as much a reflection on the effects of nascent industrialization on the environment as it is about hospitality—for in Keaton’s work these themes are loosely but inextricably linked. Thus, a full fifteen minutes of the film is devoted to Willie’s surreal journey aboard “The Rocket”—one of the first steam-powered, wood-burning locomotives designed in 1829 that Keaton meticulously reproduced for the film. Sputtering through what one critic describes as an “alien landscape,” this fragile, ridiculous train with its popinjay passengers is at odds with the stark environment. At most points the landscape is tree filled but devoid of civilization, minus the puny train tracks; elsewhere it is so ravaged already by agriculture that we see a vast deforested field of dust—a harbinger of the dust bowl catastrophe to come. The train ride is one of many detours before Willie encounters the literal limits of the Canfields’ hospitality. Shortly after arriving in town and alerting the rival family to his presence, Willie discovers that his inherited homestead is a dilapidated, uninhabitable shack. Functionally homeless with only a suitcase, an umbrella, and a dinner invitation from the Canfields’ daughter for dinner, Willie is at the mercy of the elements. He bides his time fishing by the river at just the moment when locals explode a dam for the sake of irrigation—a lucky break, for the newly formed waterfall covers Willie just as the armed Canfield brothers pass by. Later in the famous chase sequence, Willie free-floats down the rapids that have been replenished from the evening storm. Bobbing and gasping for breath, he finally catches himself atop a plummeting waterfall thanks to a bit of driftwood and a rope he’s tied to his waist. Through a quick-witted maneuver, Willie manages to both save himself and rescue his beloved just as she crests the precipice (a nod, perhaps, to Griffith’s ice storm, but made possible through fabricated falls). The couple marries before the Canfield patriarch can get Willie in his cross-hairs. Finding the lovers embracing in his daughter’s bedroom after being blessed by the town pastor, Canfield gives up his arms, admonished by the “Love Thy Neighbor” adage hanging on the wall. Given the environmental comedy, the hospitality in the film not only describes the conventions of civility reluctantly accorded to a guest, neighbor, or son-in-law you’d like to kill (Keaton’s unwitting but equally witty response to Kant’s perpetual peace) but also characterizes human relations to an indifferent or hostile environment. In contrast to Kant, who describes the earth’s minimal hospitality and a nature that is thoughtful and caring of human development,
Keaton’s nature—already altered by the industrial revolution—has no design on or for human beings.

Gilberto Perez writes of Keaton’s cosmology in Our Hospitality that the universe is “neither for him nor against him, but simply and uncompromisingly there . . . not set up to accommodate him.” His survival comes down to an “exceedingly precarious maneuver” without charismatic intervention. And though Willie travels to the South to lay claim to his birthright, he is a resolute outsider, tasked (as are all of Keaton’s characters) with orienting himself in an unfamiliar, surreal, and often antagonistic milieu. “It’s as if the visitor dropped to this earth, unsure that our world is real, were trying to convince himself that it is by recording its strange behavior in actual earthly locations.” Far from having a proprietary claim on the earth, Keaton is “a visitor, not a native.” He never quite reaches the status of guest. Hugh Kenner (whom Perez quotes in his essay) reflected on the occasion of Keaton’s death, on the “inviolable nature” in his films, “entire systems shattering round him.” Keaton, however, “was never shattered because never quite of [this] world. . . . He coped with this earth’s systems as best he could.” “While on earth,” Perez continues, “he tried his best to do as earthlings do, and thereby made us aware of the peculiar systems by which we rule our lives.” Perez is writing here of peculiar social and legal systems in Keaton’s narratives. Yet his invocation of earthly estrangement and an inviolable and shattering nature suggests that “systems” are operative at a planetary scale, and that Keaton’s survival pivots on the fact that he is not native to Earth. In but not of the world, an alien but not a guest, propelled from one cataclysm to another, Keaton tests the limits of the earth’s hospitality. After the title of Perez’s essay, we might call Keaton a “bewildered environmentalist” whose slapstick scenarios rest on a prior alienation from the place we all call home.

The relationship between unfriendly weather and hospitality is most explicit in his 1921 short, One Week. A newlywed couple builds a prefabricated house from a kit, but they are tricked into constructing in the incorrect sequence. During their housewarming party when a storm develops, rain and strong winds spin the wobbly house like a lethal merry-go-round, forcefully evicting the hosts and guests into the mud. This is another storm quite obviously of the director’s making. Wind machines and fire hoses once again localize the precipitation on an otherwise (and off-screen) sunny day for carefully calculated slapstick effect. In the aftermath, Keaton’s character beholds his broken house, and rather than seeing the errors of construction, he presumes a problem with the weather: “I guess it’s not used to this climate.”
Such eviction narratives and environmental homelessness push the situation of slapstick comedy to the threshold of what Lauren Berlant calls “the situation tragedy”:

In a situation comedy, the subject whose world is not too destabilized by a “situation” that arises performs a slapstick maladjustment that turns out absurdly and laughably, without destroying very much. In the situation tragedy, the subject’s world is fragile beyond repair, one gesture away from losing all access to sustaining its fantasies: the situation threatens utter, abject unraveling. In the artwork or in response to other scenes, when an apprehending sensorium senses a potentially significant threat to the ordinary’s ongoing atmosphere, it sparks the rhythms of situation tragedy, with its menacing new realism.

Characterizing threat as a disturbance in the normal atmosphere, Berlant opposes slapstick resilience to the “precarity” of post-Fordist desperation, a desperation that Berlant figures temporally as “survival time,” and significantly as “the time of struggling, drowning, holding onto the ledge, treading water.” While Keaton’s genre is resolutely slapstick, his world flirts with his character’s abject unraveling in the environmental conditions of a world too destabilized. In his films humorous play gives way to risk with all of its “life-denting consequences.”

In The Boat (1921), for example, Keaton’s character constructs a houseboat in the basement of his own abode. To extract the boat, he destroys the house only to find that the vessel, initially, will not float. The film ends when Keaton’s small family is stranded in the Pacific during a sudden raging storm. The father’s efforts to plug leaks in the hull produce even bigger, unstoppable breaches until the family is forced to take refuge in the lifeboat (a tub salvaged from their home wreck). But even this repurposed bathtub gathers water and sinks. Though this short film is full of maritime gags of inattention (many of which play tricks of weather simulation), the final moments take a different affective tack, interrupting slapstick fantasy with what seems like desperate realism (Figure 1.10). Huddled in a sinking bathtub in the middle of the Pacific in the dead of night, the storm now past, the family members kiss each other goodbye and prepare to drown—until they discover that they are in shallow water. Leaving the tub, they trudge to a nearby, uninhabited strip of land and walk hand in hand into an abyssal darkness. Beginning the film as middle class, the family is now, not even a day later, homeless, destitute, and adrift. Whereas Steamboat at least leaves the main characters with an old boat (and a surviving priest to
marry the young lovers), in this earlier film the storm decimates the only shelter remaining. The “joke,” if we may call it that, is that the family does not die by drowning. But we may well ask: how will they live? Keaton’s narrative touches on the situation tragedy where the explication of weather’s latency threatens total destruction. And still, Keaton invites us to laugh.103

The image of humans floating while desperately clinging to the poststorm remains of domesticity is all too familiar to spectators of present-day hurricanes, floods, and tsunamis, just as it was in the 1920s to those who lived along the shore of the ever-flooding Mississippi. What is less familiar is the dislocation of people as a result of obviously artificial, or avowedly human-caused, catastrophic weather.

The precariousness intimated in Keaton’s comedy is front and center in Steve McQueen’s contemporary video installation *Deadpan* (1997), which silently restages the house-falling gag from *Steamboat* with all mortal seriousness and in the dead calm of a windless afternoon. With his back to the farmhouse, McQueen stands facing the camera not in bemused confusion, like Keaton, but rather with an unflinching composure in almost defiant resignation of the pratfall that awaits him. Sure enough, the facade detaches and, pivoting on its base, falls over McQueen, who survives thanks to the well-placed open window. What is fortuitous in the narrative

---

*Figure 1.10* The family prepares to drown in *The Boat* (1921).
sequencing of *Steamboat* (the storm just happens to damage the house whose falling facade just happens to not kill Will) is arbitrary but inevitable in *Deadpan*. McQueen just stands there waiting for the fall. Using several cameras to capture the singular event, McQueen edits the footage so that we see the stunt several times from different angles over the course of just over four and a half minutes: as an installation, the entire sequence plays on a loop in its exhibition setting. As one critic observes, McQueen remakes Keaton’s gag into a “compulsive” and “compelling study of purgatory.” One wonders if this willing exposure to “accidental” death—a suicide that is also a survival—distills the risks of living in modernist climates by absenting their sensational features.

Modernist weather in Keaton’s films is itself both the sign and symptom of human self-destruction that begins in the trenches at Ypres. Keaton, however, is not hardened by war—his deadpan is not “dead nature,” in Miller’s sense. He is made supple by war’s other name, weather. His body is not a stiff shell, but flexible, lively, and organic matter that bends with the wind, floats in the water, and whirls in the cyclone, always emerging ready for the next act, poised physically and intelligently to respond to the simulated world over and over again. If melodrama is the tearful response to other people’s storms, then modernist laughter at slapstick’s environmental comedy acknowledges both our vulnerability to and agency over the climates of our own making.
55. Kant quoted in Bernasconi, "Kant’s Third Thoughts on Race," 302.
57. Steffen et al., emphasize the political but also scientific necessity of differentiating between the responsibility of OECD countries and BRICS (Brazil, Russia, India, China, and South Africa), and the rest of the developing world for human-caused climate change and the effects of the Anthropocene. This is important for the sake of climate justice; it is not a generalized humanity that is causing the earth to change so radically, but the culture of a few large and influential countries. The hope is also that developing nations may avoid reproducing the resource-intensive history of the so-called first world by taking advantage of new technologies. For example, cell phone technology has eliminated the need to create extensive land-line infrastructure. “The Trajectory of the Anthropocene,” 13–14. For a history of the OECD and a list of member countries, see the OECD website: http://www.oecd.org.
59. “Should International Refugee Law Accommodate Climate Change?”
60. There is much to say on this topic. See “Should International Refugee Law Accommodate Climate Change?”, “The Environment & Climate Change”; McAdam, “Climate Change Displacement and International Law”; Kälin, “Conceptualising Climate-Induced Displacement.”
63. Zalasiewicz, Waters, Williams, et al., “When Did the Anthropocene Begin?” The authors assert: “We propose an appropriate boundary level (for the designation of a new epoch) here to be the time of the world’s first nuclear bomb explosion, on July 16th 1945 at Alamogordo, New Mexico” (p. 196).
64. Scranton, Learning to Die in the Anthropocene.
65. China is now the world’s leading producer of greenhouse gases, but the United States still enjoys the distinction of being the “largest polluter in history.” Gillis and Popovich, “The U.S. Is the Biggest Carbon Polluter in History.”
67. Ibid., 24.

CHAPTER 1
2. Trahair, The Comedy of Philosophy, 78. In dialogue with Deleuze’s five laws of the action image, Trahair argues convincingly that the Keatonian character does not meet narrative challenges through “self-transcendence” and transformation. Even after rescuing the survivors from the storm, Will has yet to master the basic sailor’s knot.
4. Bengtson, Silent Echoes, 212.
6. Ibid.
8. Schallert, “‘Steamboat Bill’ Stormy Fun Special.”
15. Hacking, The Taming of Chance, 201. See also Mary Ann Doane’s discussion of contingency and cinema in The Emergence of Cinematic Time, 10, 19.
16. Sloterdijk, Terror from the Air. For his discussion of Ypres, see pp. 9–17. The phrase “ecologized war” comes from p. 20.
19. Ibid., 100.
21. Ibid., 171.
22. Ibid., 198.
24. Scott, “Film Sets Grow Larger.”
26. The ice floe sequence in Way Down East was inspired by a similar scene from the stage play of “Uncle Tom’s Cabin.” Edison adapted this play for film in 1903. The shot of his studio-fabricated moving river of ice is included as a special feature on the Kino International DVD release of Way Down East (2008).
28. Gish quoted in Oderman, Lillian Gish, 93.
29. Ibid., 95.
30. Richard Schickel notes that stunt doubles were used for the second-unit shooting after Griffith and cameraman Billy Bitzer completed principal photography. And a few of the shots with Gish and Barthelmess were filmed in the spring using painted wood for the ice floes. D.W. Griffith: An American Life, 433–434.
31. Wagenknecht quoted in Oderman, Lillian Gish, 98.
33. “Biggest Money Picture: Sound Film Shy Big Silent Sums,” 62. Griffith’s Birth of a Nation was number one on the list, grossing $10 million in the year of its release. Variety muses that this record will not likely be equaled or surpassed.
34. “Snow before Nov. 20 Insured for $25,000,” 27.
35. “Nary Snowflake in Mamaroneck,” 45.
36. Shiel, “Classical Hollywood,” 70. He explains that unscripted shots of “natural rain cloud formations” were included in Gone with the Wind because special effects cinematographer Clarence Slifer filmed the skies on the eve of the disastrous Los Angeles rainstorm of 1938.
37. We find a similar series of gags in Keaton’s 1921 short The Playhouse. In a bedroom, a thuggish man attempts to evict the Keaton character from what we assume is his apartment. When the walls of the room are taken away, we realize
that Keaton’s hero is a stagehand. He’s not being evicted from his apartment, but reprimanded for sleeping on a set designed to replicate an apartment.


40. Miriam Hansen writes that Hollywood cinema’s “vernacular modernism” produced a “sensory-reflexive horizon of experience of modernization and modernity” that was legible to audiences all over the world. We could make a similar, though far more specific, argument about Keaton’s climatography. “Fallen Women, Rising Stars, New Horizons,” 10.

41. Carroll, *Comedy Incarnate*, 11. Carroll argues that Keaton tutors perception through what he calls the “engineer’s-eye viewpoint.” Because Keaton’s techniques exceed the demands of comedy and the hermetic world of the narrative, spectators marvel at the way things (including Keaton’s own body) fall into place.


47. Sloterdijk, *Terror from the Air*, 47.

48. Ibid., 16–18.

49. Ibid., 23.

50. For an elaboration of this term, see Wrathall, *Heidegger and Unconcealment*, 11–34.

51. Sloterdijk, *Terror from the Air*, 50.

52. Ibid., 47.

53. Ibid., 81.

54. Ibid., 81.

55. Dali quoted in ibid., 73.

56. Ibid., 84.

57. Ibid., 60.


59. Favret, *War at a Distance*, 129.

60. Friedman, *Appropriating the Weather*, 158, 106.

61. Ross, *Strange Weather*, 214–221. Ross discussed how local methods of forecasting were in tension with the US National Weather Service and the emerging global weather culture.


64. For Keaton’s account of his war experiences, see ibid., 96–104.

65. Miller, *Late Modernism*, 51.

66. Adorno and Horkheimer, quoted in ibid., 51.


72. Ibid.
76. Ibid., 161.
77. Ibid., 159.
82. Mulvey, "Clumsy Sublime," 3. This is Mulvey’s term describing the layered temporality and confusing spatiality of rear-screen projection.
83. Ken Feil argues that the intentional camp and parodic elements in such films as *Twister* (1995) undercut the narrative’s attempts at “normative sincerity.” The paradox is that the sincerity and not the intentional parody is read by critics as camp. *Dying for a Laugh*, 64–65.
86. Ibid., 21.
87. Carroll, *Comedy Incarnate*, 34.
88. Ibid, 50.
89. Ibid., 63.
91. Doane, *The Emergence of Cinematic Time*, 137.
92. For a discussion of Keaton’s exploitation of Los Angeles’s varied topography and history of urban development, see Charles Wolfe, “California Slapstick Revisited.”
93. Carroll, *Comedy Incarnate*, 49.
94. Lisa Trahair offers a similar reading of this dream sequence in which Keaton’s character adapts only to be brutally undercut by the shot change. Reading Keaton through Heidegger’s essay “The Question Concerning Technology,” Trahair argues that this sequence plays with the tension between diegetic reality and diegetic fiction, as well as a “more serious pondering of the existential crises experienced when a human is reduced to a component part of a technological apparatus he no longer controls.” “The Comedy of Technology in the Cinema of Buster Keaton,” 583.
98. Kenner, “In Memoriam: Buster Keaton,” 181, quoted in Perez, 94.
99. Ibid.
101. Ibid., 169. The figure of drowning recurs throughout her discussion of a situation tragedy. See also 178, 180.
102. Ibid., 170.
103. Other critics have noted that Keaton’s melodramatic side seems to occur when his characters leave behind urban modernity and venture into the unsettled West and less developed South. See Wolfe, “Western Unsettlement,” 299–315.
104. Gellatly, “Steve McQueen.”