7 :: **Animation, in Theory**

SUZANNE BUCHAN

Most of us today are aware of the many ways that animation has infiltrated our visual culture. For scholars and the public, exposure and access to commercial and especially independent animation film — through broadcast television, online archives, artist and studio websites, and new media platforms — have dramatically increased. While animation studies has been active for more than fifty years, film studies is only beginning to deeply engage with a cinematic form that has more to do with sculpture, algorithms, or painting than with the genres of narrative cinema. As a film studies scholar who specializes in animation and experimental film and digital media, I have examined film theory texts over the years for gaps and queries that seemed to address animation — or not. These trawled fragments formed the origins of *animation: an interdisciplinary journal*, published since 2006. This chapter traces the intellectual genesis of the journal, locating it in a historical and theoretical framework that, with some exceptions, spans the 1970s to the mid-2000s. In doing so, I take the long view — without Plato there would be no Gilles Deleuze, without Émile Cohl no *Wall-E*, and, in my view, without Jean Mitry, Heinrich von Kleist, Noël Carroll, and Stanley Cavell no animation theory. I reflect on past achievements but also write to appeal to future researchers and makers of animation to be sensitive to the historical continuum of authorship and creating in the (mainly digital) striving ahead. I will not address writing about commercial canons or digital animation (Disney, Aardman, Pixar, and others) and will focus on some theoretical writings. This doesn't mean that others are less important; the selection is based on queries and positions that are relevant to my premise of "animation, in theory" that entails a skeptical but proactive attitude to theorizing animation.

Animation Studies: The Long View

My discussion here of some past developments in animation studies does not suggest this is the only way to survey this legacy.[1] Early writing on animation was composed of a dispersed and international authorship from various disciplines, professions, and national or cultural contexts, published in festival catalogues and specialist screening supplements, with little or no reference to film theory. Some of these writings set the tone and direction for later research, forming an eclectic primary-knowledge base. Scholars working on animation often did so as a tangent to their disciplines, more often than not cultural studies, languages and literature, or art history, frequently providing historical and contextual information; but there were few research-specific or theoretical book-length publications on animation. The 1990s was a period of expansion of animation practice programs at universities and art schools, accompanied by a rash of animation publications: historical, national, and stylistic surveys; general introductions, and overviews of production systems, specific eras and studios, and individual filmmakers. Animation film also enjoyed critical attention in experimental film theory. Some scholars explored aesthetic implications of techniques other than planar (painted and drawn) animation, intersections with the avant-garde, and experimentation in animation by fine-art practitioners. The industrious scholar will also find a range of articles relating to animation film in the *FIAF Index to Film Periodicals*, and will also look for keywords in the indexes of nonfilm publications.

Authors increasingly explored the vast richness of animation film using frameworks of critical theory, semiotics, postcolonialism, and gender studies. These were and are frequently published as chapters in thematic or theoretical anthologies in film, media, and cultural studies, often as the "animation" chapter, and often working with established (and tired) canons. Sometimes it is the case that, in admirably trying to do too much, authors achieve the opposite effect. Gone awry, it can result in writings that skim colonialism, queer theory, feminism, cognitive theory, and spectatorship within a single chapter or article, and without much evidence of these being applied to animated film.

Others engaged more specifically with structuralism, realism, semiotics, psychoanalysis, national cinemas, and with postmodernism, not least because of the potential in animation for parody and merging high and low art. In the last decade, book-length publications and collections with film's theoretical subareas such as formalism, critical theory, appa-

ratus, and spectatorship are on the increase, and an observable phenomenon is a strengthened interdisciplinarity in these writings. This could be expanded: there are dozens of theoretical book-length publications on animation in French, German, Japanese, Korean, Chinese, and Russian. When texts by Christian Metz, the Cahiers group, Mitry, and Deleuze were made available in the academic lingua franca, their impact on developments in cinema theory were significant. Similarly, English translations of writings outside the Anglo and Euro intellectual landscape (of publishing) that introduce new approaches to animation would provide a new impetus and enrich academic communities with works that communicate through other cultural lenses and intellectual traditions.

The "Problem" of Animation

Much like the term *experimental film*, *animation* is an imprecise, fuzzy catchall that heaps an enormous and historically far-reaching, artistically diverse body of work into one pot. In 1997 Philip Denslow made a point that is still valid: that a single definition is incomplete and "that no matter what definition you choose, it faces challenges from new developments in the technology used to produce and distribute animation."[2] He goes on to explain how studio ideology, production hierarchy, union contracts, special effects hybridization, and independent film affect the definition of animation. Denslow's discussion leads to a topic that Christian Metz also mentions in this context: "The rubric of special effects will obviously form, for the semiologist, a heteroclitical group. Jean-Louis Comolli is quite right in remarking that the notions of technicians—who sometimes have a *professional*, and therefore corporate, personality—cannot automatically be considered as theoretical concepts. Each case must be examined separately."[3] One method to describe what animation *is* within the diversity of cinema is to treat animation as a heteroclitical group of films (ultimately, an animation filmmaker working alone is a technician in complete control of the image), and to examine each film as an individual case.

In a search for a unifying definition, Maureen Furniss reviews a number of proposals made by filmmakers and theorists, and she concludes that a "lot of energy was spent to reach this point, but little has been achieved."[4] Furniss then proposes a continuum between mimesis and abstraction: "A continuum works with similarities to position items in relation to one another, while a definition seeks difference, to separate

items in some way. Using a continuum, one can discuss a broad range of materials without qualifying the extent to which each example belongs to a precisely defined category called 'animation.'"[5] Furniss widens the scope of animation to include the diverse overlaps between animation and live action, but in my view her definition remains too broad and without a differentiation between items. Noël Carroll comments on criticism are helpful here: he regards central activities of criticizing artworks to be "description, classification, contextualization, elucidation, interpretation, and analysis,"[6] and he emphasizes artistic evaluation as the *primus inter pares* central to the critic's role.[7] To undertake this kind of critical work, each technique requires its own unique description, classification, and a set of suitable and applicable formal parameters that would allow analysis based on distinctive aesthetic qualities and technical properties of artistic media. For example, a material taxonomy (oil painting, collage, sculpture, watercolor, etchings, drawing, etc.) differentiates the technical definitions of planar animation, clay animation, painting on glass, object animation, and so forth. These qualities not only affect production; they also have profound ramifications for the critic's (and viewer's) experience and interpretation of the work.

In the introduction to *The Illusion of Life* (1991), Alan Cholodenko addresses animation as an object of theoretical inquiry: "In terms of scholarship, animation is the least theorized area of film. In neglecting animation, film theorists—when they have thought about it at all— have regarded animation as either the 'step-child' of cinema or as not belonging to the cinema at all, belonging rather to the graphic arts."[8] At the time of publication, few readers would have paused at this statement—the anthology was, after all, a major contribution to animation studies at the time. Yet Cholodenko's concern that animation not be regarded as part of cinema ends with a revealing assumption that when we talk about animation, we usually mean graphic animation (planar 2D drawn, cel, or digital). The published collection and other lectures listed in the book's overview of "The Illusion of Life" conference[9] focused almost exclusively on planar and computer animation. This reveals how graphic animation did and still does dominate the understanding of what animation is. Writing on cinema made before 1906, Tom Gunning observes: "The history of early cinema, like the history of the cinema generally, has been written and theorized under the hegemony of narrative films."[10] Similarly, the hegemony in theorizing animation primarily through graphic and cel techniques determines canons and influences topics in the quickening of animation theories.

In the two decades since Cholodenko's publication, much has changed to improve the low profile of animation in cinema theory, but at a price for predigital and nongraphic animation. In 2001 Lev Manovich made a now well-known polemical assertion for cinema as a particular case of animation, provocatively proposing that we need to reverse the traditional hierarchy and position digital animation as the general, higher-order category for the cinema.[11] The notion of animation as the paradigm for all cinematic production, and for the study of its ontology overall, is an assertion that film studies has begun to seriously challenge or support. But again, we must pause. Manovich's argument is based on the premise of cinema as digital, and on graphic cinema, and he doesn't account for animation that uses manifold other techniques like object or puppet animation. Alla Gadassik argues, "[Manovich] admires animation's hand-crafted tradition, and yet his vision of digital cinema does not foreground the constructed character of the early animated image. . . . In this network of digital technologies, the hand of the animator is seen as an antiquated curiosity, which has been rendered obsolete by faster, more powerful machines."[12] What is largely missing in this debate is an approach to animation films that elaborates on the solid work that has been achieved regarding history, techniques, and aesthetics. Animation is, after all, a cinematic form that can be analyzed through almost all formal and stylistic cinematic parameters and theorized using many film studies approaches. In a critical discussion of what he calls the two constructions of British and American cultural studies, Stuart Hall remarks: "In Britain, we are always aware of institutionalization as a moment of profound danger."[13] The "danger" of institutionalizing animation "theory" in a hegemony of graphic animation, digital or otherwise, within film theory is the risk of neglecting other techniques and their analyses when developing specific questions pertinent to individual films. This omission could also thwart opportunities to discover new and innovative ways of theorizing animation that don't nominally fit in the formal, stylistic, and theoretical frameworks of film studies.

Microanalysis and Methods

In film studies, animation was a tangential object for research and teaching for many years, but this is changing. As universities become mass-educating "multiversities," they are forced to respond to market demand, and the number of animation programs is rising, as animation is now pervasive on other platforms than cinema screens, for example in

apps, games, the web, and advertising. While much of film theory could be instrumentalized for theorizing animation to enhance curricula — cognitivist, queer, formalist, reception, sociocultural, feminist, semiological, immersion, narrative — many chapters and articles on animation film lack specificity, and they tend to use idiosyncratic or tired, self-perpetuating canons to prove or disprove an element of cinema theory. David Bordwell has suggested, as Alissa Quart points out, that "the true business of film scholars is to account for craft of filmmaking and the experience of film viewing — and not to cull examples from the movies in order to illustrate sweeping theories of the human psyche or society."[14] This is as true for animation as it is for film studies. I have found *micro-analysis* (a term used in the sciences for analysis of minute quantities of materials) to be a useful bottom-up method to initially unpack the craft and construction of an animation film in a way that elegantly fits with film studies methods. By describing formal cinematic parameters in detail (shot length, image composition, lighting, camera movement, point of view and angle, lenses, music, sound, transitions), it is then possible to work with this stylistic information and use film theory to develop sustained discussions about the experiential complexity of a single animated film, sequence, or scene.[15] In planar animation, visual parameters are rendered through artistic techniques, exceptions being perspective created using multiplane setups and transitions, and puppet and object animation that is shot in miniature stage sets, which in most cases uses the same equipment and principles as live-action filmmaking.[16] Such microanalyses can serve as methodological models for theorizing about other animation films and augmenting animated film criticism and theory, mitigating what Paul Coates describes as the isolating effect of writing without comparison.[17] A method I have found especially useful in tandem with microanalysis is the philosophical and practical method that Carroll calls "piecemeal theorizing," a process of "breaking down some of the presiding questions of the Theory into more manageable questions, for example, about the comprehension of point-of-view editing, instead of global questions about something vaguely called suture. As compelling answers are developed to small-scale, delimited questions, we may be in a position to think about whether these answers can be unified in a more comprehensive theoretical framework."[18] Because animation as yet has no comprehensive theory equivalent to what Bordwell ironically calls "SLAB Theory" (Saussure, Lacan, Althusser, Barthes), new theory will not have to defend or discern itself from dominant film theory.[19] On the other hand, animation theory must also

develop its own contexts while seeking embedment within film theory and try to avoid the heterogeneity of piecemeal theory that could mean that no unified theoretical base is formed at all.

Fragments: Useful Film Theory

The introduction of digital technologies was also a developing force in animation production, but film scholars left its precursor—predigital animation—by the wayside, and to articulate an ontology of animation—digital or otherwise—means revisiting these (celluloid) casualties. There are many film theorists who are useful for developing animation theory (Rudolf Arnheim, Béla Balázs, André Bazin, Walter Benjamin, Donald Crafton, Deleuze, Mary Ann Doane, Sergei Eisenstein, Gunning, Siegfried Kracauer, Mitry, Hugo Münsterberg, Laura Mulvey, and others), and some appear regularly in writings on animation. During studies at the University of Zurich, I began the detective work that I continue to do of scanning indexes and tables of contents of thousands of books and journals on film theory for animation-related themes, key words, filmmakers, and film titles. More often than not, what I found expressed a puzzling attitude toward animation as a cinematic form. I sensed that animation's marginalization in academia did not take into account animation's influence in private and public domains, and I began thinking about animation's aesthetic, perceptual, and ideological values, meanings and impacts. Sometimes I found a sentence, a paragraph, and rarely more, but these brief mentions of animation—or no mention at all—offer fecund territories as springboards for theorizing animation. I have used the exemplars of Cavell, Alexander Sesonske, Dudley Andrew, Mitry, Carroll, Deleuze, and Sobchack in my own writing (other scholars will have their own lists of names), and in the following (for reasons of space) I concentrate on concepts around figures and worlds.

In the final section of Cavell's *The World Viewed: Reflections on the Ontology of Film* (1979), there are more than thirty mentions of cartoons. In a debate with Sesonske, Cavell describes cartoons: "[They are] a region of film which seems to satisfy my concerns with understanding the special powers of film but which explicitly has nothing to do with projections of the real world—the region of animated cartoons. If this region of film counters my insistence upon the projection of reality as essential to the medium of movies, then it counters it completely."[20] While Sesonske raises a number of ontological ideas about cartoons, he ad-

dresses a key concept of worlds: "There is *a* world we experience here, but not *the* world—a world I know and see but to which I am nevertheless not present, yet not a world past. . . . It exists only now, when I see it; yet I cannot go to where its creatures are, for there is no access to its space from ours except through vision."[21] Cavell describes Sesonske's "rebuttal" as "[a] negation or parody of something I claim for the experience of movies." One of many epistemologically tantalizing remarks that Cavell makes is this: "But on my assumption (which I should no doubt have made explicit) that cartoons are not movies, these remarks about their conditions of existence constitute some explanation about *why* they are not."[22] Though he makes some concessions, for Cavell cartoons completely counter his insistence on the projection of reality as essential to the medium of movies. In other words, Cavell seems to consider cartoons (again, a symptomatic omission of other animation techniques) as not belonging to the domain of his conception of cinema, and he puts forth that maybe we can't consider them as films at all.[23] Sesonske's hypotheses on how animation differs from reality are especially interesting: he points out that Cavell omits that projection enables the illusion of movement and the experience of these drawings as a "reality" particular to the "region" of animation. We need to develop a more precise definition, an ontology, of what Sesonske means by "*a* world."

This led me to Andrew's phenomenological questioning in 1978 of the concept of cinematic worlds: "What exists beyond the [film] text and what kind of description can be adequate to it? Here we encounter the exciting and dangerous term 'world.' A film elaborates a world which it is the critic's job to flesh out or respond to. But what is this cinematic world?"[24] Animation can visually represent endless possible worlds, each of them often unique and often with little or no relation to the phenomenal world that surrounds us. I found a way to understand these worlds, and a method to describe them, through Deleuze: "A work of art always entails the creation of new spaces and times (it's not a question of recounting a story in a well-determined space and time; rather, it is the rhythms, the lighting, and the space-times themselves that must become the true characters). . . . A work of art is a new syntax, one that is much more important than vocabulary and that excavates a foreign language in language."[25] Many animation films create visual equivalents to neologisms in the particular animated space-times—the worlds—that are the true characters of the films, and theorists need to develop a new syntax in the stylistic and critical language used to describe these works.

Animation evokes many diverse phenomena in its reception that

have little to do with our experience "in the world." Andrew's formulations on the usefulness of experiential, phenomenological approaches to cinema and "the constitution of a cinematic world" can help to develop a framework that takes into account the spectator's lived experience of animated films, of animated worlds that might not exist in the natural world, but that have a very real existence in projection for the viewer.[26] Sobchack sees the appeal of phenomenology in "its potential for opening up and destabilizing language in the very process of its description of the phenomena of experience."[27] Opening up and destabilizing may also lead us toward a new theoretical syntax, but this must be done via a "well-made language." More than sixty years ago, Étienne Souriau wrote of the challenges facing the French filmology movement that, according to David Rodowick, "approached the cinema from the outside, carrying out research on cinematographic facts through the domains of psychology, psychiatry, aesthetics, sociology, and biology."[28] Souriau writes: "Since filmology is a science, it must be and must want to be one. And if a science is not, in the famous words of [Étienne Bonnot de] Condillac, simply a 'well-made language,' then it clearly requires one as its precondition."[29] One of the so-called problems that the theorizing of animation needs to resolve is the definition of a well-made language—comparative and interdisciplinary criticism is implicit in this.

These animated worlds are populated by animated figures that also pose ontological puzzles; writing within film studies on animation often discusses animated figures with the same terms and descriptors as for human actors. Although Mitry refers minimally to animation films in his profound aesthetic and psychological analysis of cinema—it may be for him that the animated image is, simply, a cinematic image—here I will use his writing on figures as an example for how concepts in film theory not specific to animation can be used to theorize about animation. Mitry discusses relationships between the literary author's personality that "is always evident in his characters" and the cinema, which "presents only actions. Though the characters are the creation of the filmmaker, at least they are there, present and active, 'in the flesh.' Dissociated from creative imagination, they seem to have an independent, exclusive existence which is objective and no longer merely conceptual."[30] The animated figure is not "dissociated from creative imagination"; it embodies just this, in that the figure's existence and character are defined entirely by the conceptual, stylistic, and technical processes of its design, construction, and animation.

Mitry makes an observation about actors that is thought-provoking

for animated figures. "However basic [the actor's] psychology, it is always 'located.' The characters are drawn according to circumstance and their development always depends on an effectively 'experienced' reality. They are human beings 'in the world'; they act and are acted upon." The scare quotes Mitry uses throughout these passages are meant to incite curiosity: if Mitry means that the character's psychology is located in the living actor, then the psychology of an animated figure is located in the filmmaker whose personality and psychology are transmuted into the character, "ascribing to it [the filmmaker's] thoughts and emotions."[31] The character's psychology is read by the audience using codes of behavior and gesture. Another concept from Mitry that is promising for animation that uses abstract, nonanthropomorphized figures is his proposal that "one might say that *any object presented in moving images gains a meaning* (a collection of significations) *it does not have 'in reality,' that is, as a real presence.*"[32] A related insight into the viewer's engagement is Christine N. Brinckmann's exploration of empathy in abstract forms in the Absolute films of Walter Ruttmann and Viking Eggeling. Brinckmann describes how movement creates alliances and choreographies between the figures, and she then queries the audience's engagement: "In light of such cinematic processes the temptation is there, both to identify the moving forms and to animate them with characteristics and intentions."[33]

A defining feature of many animation films is that figures are often composed of a combination of physically incompatible elements, and in projection they and the spaces they are in can visually defy physical, optical, and natural laws of gravity, electromagnetism, perspective, and entropy (an obvious example is Chuck Jones's 1953 *Duck Amuck*). While we can say the same for live-action films that employ profilmic special effects (I am not considering digital or in-camera effects) to create impossible figures, worlds, and events, these retain an indexicality that represents the physical world and the materials that the effects are created in and of. Carroll's "A Note on Film Metaphor" elegantly and effectively takes on this conundrum. Referring to a range of examples, from Fritz Lang's *Metropolis* (1927) to Popeye cartoons, Carroll introduces two terms with great potential for describing animated figures and worlds, and the remainder of his text elaborates on conditions that explain how and why we engage with what we see on screen.[34] The first term is *physical noncompossibility*: "It is not physically compossible with the universe as we know it that muscles be anvils, that people be cassette recorders or that spies be foxes."[35] Carroll discusses drawn animation, but his con-

cepts also work for a range of techniques that animate objects and matter from the phenomenal, physical world—disparate elements that can be fused together in composite figures. He then explains why we understand this noncompossibility by introducing another incisive term, *homospatiality* (elements copresent in the same figure). Homospatiality is a prerequisite for what he describes as visual metaphors, as it "provides the means to link disparate categories in visual metaphors in ways that are functionally equivalent to the ways that disparate categories are linked grammatically in verbal metaphors."[36] Carroll suggests that "metaphors interanimate the relations between classes or categories."[37] As one of many possible categories of a taxonomy and ontology of animated figures, noncompossibility interanimates between disciplines and categories of fine arts and commodity culture and disciplines of film theory, philosophy of perception, and literary theory.

Animation, in Theory

Perhaps it is time to ask some questions. The first is: what is the problem of animation that it requires a theory? I see a partial answer in Deleuze's remarks that "the encounter between two disciplines doesn't take place when one begins to reflect on the other, but when one discipline realizes that it has to resolve, for itself and by its own means, a problem similar to one confronted by the other."[38] The discipline of animation studies is riddled with what amounts to an avoidance of resolving the problem of animation within the larger scope of film studies. It has been informed in part by discourses that weakly lean on cinema theory and are driven by the legacy of an innate difference between live action and animation film that animation studies has tried to solve. Deleuze goes on to suggest that "the same tremors occur on totally different terrains. The only true criticism is comparative (and bad film criticism closes in on the cinema like its own ghetto) because any work in a field is itself imbricated within other fields."[39] The marginalization of animation studies is often referred to by its own authors as a "ghetto"—and it is pertinent to consider Deleuze's idea that the ghetto of bad criticism is due to it not being comparative. Historically, many animation studies texts do not use the critical, comparative approaches that Deleuze suggests are necessary to solve the problem, just as film studies often does not take key queries about properties of animation into account. This may help us to understand animation scholarship's slow integration into film studies.

A second question is: why the recent interest in animation "theory"?

Hall suggests that "movements provoke theoretical moments. And historical conjunctures insist on theories: they are real moments in the evolution of theory."[40] The Chinese term for crisis (*weiji*) is formed of two characters that mean crisis and crucial point:[41] the crucial point for animation was the digital shift, a commercially motivated historical conjuncture, and this rupture caused a crisis in film studies—the loss of its material object, celluloid, and of photoindexicality—through cinematic production's increasing reliance on digital animation techniques. Already in 1998 Thomas Elsaesser suggested that "any technology that materially affects [the status of indexicality] . . . and digitisation would seem to be such a technology, thus puts in crisis deeply-held beliefs about representation and visualization, and many of the discourses—critical, scientific or aesthetic—based on, or formulated in the name of the indexical in our culture, need to be re-examined."[42] While many authors initially engaged primarily with technological marvels and popular feature-length film, responses to this so-called crisis are manifold (the second Chinese character for the term crisis understood here in the more common [mis]perception as opportunity), provoking valuable debates to move on from Manovich's polemic. There are other themes in this crisis of film studies that have the potential to embed animation in rigorous and well-developed critical disciplines. I see the digital's complex ethical relationship to realism and its aesthetic, political, and technological impacts on the moving image in a continuum with Andrew's "exciting and dangerous term 'world.'" The aesthetic representation of worlds is thematized in philosophical, cognitive, and psychoanalytic discourses with impacts on almost all areas of the humanities, and animated worlds can visualize worlds in ways that photoindexical cinema cannot.

So, in theory, what could a theory of animation look like? This is an impossible question, and I'd like to work with what Hall describes as a tension that arises for theory and culture. In this context I'm thinking about theory and the visual culture of animation—about the impossibility of getting "anything like an adequate theoretical account of culture's relations and its effects."[43] The cultural impact of animation is impossible to funnel into *a* theory of animation for a number of reasons. It is not a single profession or discipline, and academic understanding and inquiries both originate from and extend into other disciplines. We must ensure that we can extend acquired knowledge to develop "theory" without losing the dispersed wealth of existing scholarship. In my view, we need to

- consider fine-art practice in conjunction with cinematic representation using parametric description and microanalysis;
- work with paradigmatic films to develop central queries based on film theory;
- draw on interdisciplinary methodologies to contextualize the making of animation films in related practice areas;
- understand how nonhuman figures and animated worlds affect a different spectatorial experience in terms of perceptive modalities; and
- approach high-flowing generalities by a roundabout (piecemeal) route and work across multiple fronts and disciplines in dialogical exchange.

animation: an interdisciplinary journal

Peer-review journals incite, foster, and disseminate critical reflection on diversity in practice; challenge or expand existing canons; and provide a platform for exploratory hypotheses and developing theories that have not yet found their ways into themed anthologies or monographs. These journals also provide opportunities for the growing number of international PhD students to publish their innovations and contributions to new knowledge. Concepts and ideas from the film studies theorists I mentioned earlier, and from others, were fertile ground for the intellectual genesis of *animation: an interdisciplinary journal*. Its core editorial aims are closely linked with my own research into animation's relationship to moving-image practice and the epistemological question of how animation helps us know the world. Because intellectual endeavors thrive best in a constituency, this research is collaborative in nature, and is informed in part by the journal's editorial team and board. The journal aims to reveal animation's pervasive impact on other forms of time-based media expression—past, present, and future—and illuminate how these affect our lives. It also, crucially, regularly publishes writings from artists, to ensure a dialogue between practice and theory. Many of the articles originate in informal discussions with film studies scholars and other academics about how they could shift their focus askew and apply their expertise, specialisms, and research interests to explore animation, analogous to how scholars of art history, philosophy, and literature in the 1950s and 1960s explored cinema to develop film studies as a respected academic discipline. Perhaps animation studies, like film studies, will eventually have a variety of journals on diverse subgenres for developing readerships, and we need to anticipate their needs. This

would help open up the field and encourage specific research in inter-related yet unique creative areas.

Journal authors have contributed a variety of articles and themes that question and grow the field of animation theory. For instance, some authors are engaged in debates around loosening assumptions of animation's medium specificity and purist essentialism, as Andrew Darley convincingly argues in his polemic "Bones of Contention." His main topics are "inflated claims of medium superiority; essentialist and reductionist definitions of the form; exaggerated claims that animation is inherently, somehow, a more expressive or imaginative visual medium than others."[44] Darley makes some interesting correctives to this by pointing out similarities and differences and freedoms and constraints that animation shares with a diversity of media; he also effectively critiques the detrimental effect of usurping animation in the name of "Theory." Many of the journal's authors work with film theory and are developing the "well-made language" crucial to formulating queries and approaches to an intentionally wide concept of animation across platforms and media.[45] Some of these questions are direct responses to writing that doesn't overtly theorize animation much at all. Sean Cubitt's review of the anthology *The Cinema of Attractions Reloaded* (2006), which celebrates Tom Gunning's writing, engages with Gunning's seminal concepts and asks the question: "For readers of *animation: an interdisciplinary journal*, the key issue must be: what relevance do these concerns have for our field of enquiry?"[46] Over the course of his article, Cubitt answers this himself, finding relevance in animation works from early cinema to postmillennial architecture installation and generously providing topics for further research.

Other contributions expand existing notions of animation in terms of culture, technology, ideology, and aesthetics, some from film studies and some from animation studies or other disciplines. Pan-Asian authors introduce cultural and philosophical perspectives to theorize about animation made within these cultures and for their indigenous populations. Others discover relations between animation, early cinema, and consumer culture in international contexts (a special issue was on animation, precinema, and early cinema). Artists theorize their own work (Gregory Barsamian on sculpture and perception, Dennis Dollens on biomimetic architecture, Thorsten Fleisch on chemistry and physics): such multidisciplinary animation artworks that lie outside the traditional canons of animation studies are key to encouraging discourses that center on, for instance, animation used in so-called high-

art practice, in architecture, or in the sciences. The journal also revisits and recontextualizes artists who have slipped off the radar: a special issue from July 2010, guest edited by Mark Bartlett, on Stan Vanderbeek demonstrates intersections with early computer and communication technologies and artist-thinkers. It situates his politically and poetically informed and technologically enabled texts—moving images, artworks, writings—both within and distinct from the received histories of animation from which he is often elided. One area that is recently taking on substantial theoretical form is documentary animation. In a 2011 special issue, *Making it (Un)real: Contemporary Theories and Practices in Documentary Animation* (guest edited by the filmmaker and theorist Jeffrey Skoller), authors not nominally associated with animation studies engage almost exclusively with single films or works by a single filmmaker.

Conclusion

As animation increasingly defines our visual moving image culture, the number of researchers and students of animation studies, and animation theory, is growing, and the boundaries between film theory and animation theory are diminishing. Although rarely invoked in animation studies, the notion of blending media is implicit in animation filmmaking because it has always been a collaborative part of the interdisciplinary contagion and hybridity that define so much of our visual culture, and animation is also used in many creative and scientific disciplines. From performance (Windsor McCay's "interactive" stage performances with an on-screen animated figure in *Gertie the Dinosaur* (1914) and Miwa Matreyek's *Dream of Lucid Living*) and painting (Oskar Fischinger's 1947 *Motion Painting No. 1* and Jeremy Blake's digital time-based painting) to architecture (1990s computer-aided design walk-throughs and Kas Oosterhuis's 2002 proposal for Ground Zero in New York) and electronic engineering (animated MRI images and the design and simulation of micro and nano systems), animation has always blended media. This is because while animation's predigital forms share film's photochemical base and projection processes, with few exceptions, animation is visually and materially constituted by other artistic media, including photography, theater, painting, sculpture, fine arts, graphics, and text. As practice differentiates and technologies and production methods develop, some animation is also breaking through low-art barriers to achieve high-art status and becoming an artistic partner in manufacturing and sciences. Animation's critical companion, theoretical conceptu-

alization, will also develop and differentiate, perhaps one day forming something close to an interdisciplinary theory of animation.

Notes

1. For reasons of space I will not include titles; there are many animation bibliographies available online and in print.
2. Denslow, "What Is Animation and Who Needs to Know?," 1.
3. Metz, "*Trucage* and the Film," 153. Metz cites Comolli, "Technique et idéologie (3)," 47.
4. Furniss, *Art in Motion* (1998), 5.
5. Furniss, *Art in Motion* (1998), 7.
6. Carroll, *On Criticism*, 13.
7. Carroll, *On Criticism*, 9.
8. Cholodenko, "Introduction," *The Illusion of Life*, 9.
9. In a note at the end of his Introduction to *The Illusion of Life*, Cholodenko writes almost all essays in the collection were presented at the Illusion of Life conference held July 14–17, 1988 (29).
10. Gunning, "The Cinema of Attraction," 64.
11. Manovich, *The Language of New Media*.
12. Gadassik, "Ghosts in the Machine," 229.
13. Hall, "Cultural Studies and Its Theoretical Legacies," 273. Hall's incisive and critical evaluation of the gestation of cultural studies from multiple disciplines and their conflicts offers some interesting correlations with the interdisciplinarity of animation studies.
14. Quart, "The Insider," 36.
15. I am indebted to Christine Noll Brinckmann for introducing me to parametric film analysis in her undergraduate "Introduction to Film Analysis" classes at the Seminar for Film Studies, University of Zurich.
16. For an analysis of this in the Quay Brothers' films, see chapters 3, 4, and 5 in Buchan, *The Quay Brothers*.
17. Coates, *The Story of the Lost Reflection*, 1.
18. Carroll, "Prospects for Film Theory," 58.
19. "What we call Theory is an abstract body of thought which came into prominence in Anglo-American film studies during the 1970s. The most famous avatar of Theory was that aggregate of doctrines derived from Lacanian psychoanalysis, Structuralist semiotics, Post-Structuralist literary theory, and variants of Althusserian Marxism." Bordwell and Carroll, *Post-theory*, xiii.
20. Cavell, *The World Viewed*, 167.
21. Cavell, *The World Viewed*, 167–68.
22. Cavell, *The World Viewed*, 168.
23. For an extended discussion of Cavell's concept of cartoons and the realism of puppet animation's use of real-world objects, see Buchan, "The Animated Spectator: Watching the Quay Brothers' 'Worlds,'" in Buchan, *Animated "Worlds,"* 17.

24. Andrew, "The Neglected Tradition of Phenomenology in Film Theory," 47.

25. Deleuze, "The Brain Is the Screen," 370.

26. Andrew, "The Neglected Tradition of Phenomenology in Film Theory," 49.

27. Sobchack, *The Address of the Eye*, xviii.

28. Rodowick, "A Care for the Claims of Theory," 31–32.

29. Souriau, "Die Struktur des filmischen Universums und das Vokabular der Filmologie," 141; my translation.

30. Mitry, *The Aesthetics and Psychology of the Cinema*, 50.

31. Mitry, *The Aesthetics and Psychology of the Cinema*, 50.

32. Mitry, *The Aesthetics and Psychology of the Cinema*, 45.

33. Brinckmann, *Die anthropomorphe Kamera und andere Schriften zur filmischen Narration*, 265; my translation.

34. As just one example for how a few theoretical sentences or concepts provide fruitful terrain for generating interdisciplinary approaches, to explain viewer comprehension and cocreative engagement with the Quay Brothers' films, I expanded on Carroll's concepts using writings from Trevor Whittock (*Metaphor and Film* [Cambridge: University of Cambridge Press, 1990]), Deleuze (*The Logic of Sense* [Logique du sens, 1969], trans. Mark Lester [London: Athlone Press, 1990]), Deleuze with Félix Guattari (*Anti-Oedipus: Capitalism and Schizophrenia*, trans. Robert Hurley, Mark Seem, and Helen R. Lane [London and New York: Continuum, 2004]), Fritz Senn (*Joyce's Dislocations: Essays on Reading as Translation*, ed. Jean Paul Riquelme [Baltimore: Johns Hopkins University Press, 1984]), and Benjamin (his poetic concept of "detritus" in "Old Forgotten Children's Books" [a translation of "Alte vergessene Kinderbucher" (1924)], *Walter Benjamin: Selected Writings*, trans. Rodney Livingstone, vol. 1 [Cambridge: Harvard University Press, 1996], 406–13). See chapter 2, "Palimpsest, Fragments, Vitalist Affinities," and chapter 4, "Metaphysical Machines," in Buchan, *The Quay Brothers*.

35. Carroll, *Theorizing the Moving Image*, 213.

36. Carroll, *Theorizing the Moving Image*, 214.

37. Carroll, *Theorizing the Moving Image*, 219.

38. Deleuze, "The Brain Is the Screen," 367.

39. Deleuze, "The Brain Is the Screen," 367.

40. Hall, "Cultural Studies and Its Theoretical Legacies," 270.

41. Victor H. Mair, "Danger + Opportunity ≠ Crisis: How a Misunderstanding about Chinese Characters Has Led Many Astray," http://www.pinyin.info/chinese/crisis.html (access date June 26, 2013).

42. Elsaesser, "Digital Cinema," 201–22.

43. Hall, "Cultural Studies and Its Theoretical Legacies," 271.

44. Darley, "Bones of Contention," 72.

45. Journal contributors and editorial board members include a number of authors from this collection (Karen Beckman, Scott Bukatman, Alan Cholodenko, Yuriko Furuhata, Thomas LaMarre, Esther Leslie, Marc Steinberg, and Tess Takahashi).

46. Cubitt, "The Cinema of Attractions," 276.