Introduction

Audio Motion: Animating (Film) Sound

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Animation has become the design element and medium of choice in a multitude of contemporary cultural practices, from installations to online media. As a film form, animation increasingly engages with expressive tools and techniques, whether as drawn components or three-dimensional modelled or computer-generated imagery (CGI). Popular appreciation for animation is manifest in audience and critical response to animation feature films. As importantly, animation feature films today offer a major challenge to live action in terms of box-office performance and profits, especially in the powerful US entertainment industry. This book spotlights animation as an audio-visual film form but positions the focus on its audio elements.

The discipline of film studies has recently begun to acknowledge the importance of animation and there has been a corresponding increase in animation publications. Film-music research has also flourished, with numerous books and journals, study programmes, conferences, network forums, and research outcomes evolving in the last decade. Yet relatively little attention has been given to a link between these two fields, that is, the deployment of sound and music in animation film. This book bridges these worlds and explores the shared terrain of animation-film sound as one that constitutes a unique and distinctive field of film and film-music studies.

Drawn to Sound's sustained attention to music and sound does not attempt to displace the visual but rather to highlight the equally crucial role that sound plays in our experience of (animation) films. The book emphasizes how sound is a central component of animation that initiates, assists and extends its critical expressive tools. Sound – including music – operates with motion, storytelling and space. Even at its most functional, sound enables animation film to leap out of the screen and engage the viewer's imagination. Cumulatively, the chapters demonstrate the rich sonic resources to be gathered from a study of animation films. This introduction defines the research territory and contextualizes the films discussed by outlining the project's framework, background literature, and significant precursors.

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Project brief

Drawn to Sound specifically concentrates on feature films released in the post-World War II period. Each chapter offers a detailed critical analysis of a single film or group of films, as well as contributing to a thematic subgroup (outlined below) and the volume as a whole. The collection adds to the few animation-film sound studies that exist by offering a series of 'field studies' that cumulatively suggest a procedural approach for further development. As such, *Drawn to Sound* generates groundwork for the construction of broader theories and provides an overarching, inclusive and interdisciplinary direction for future investigations. The chapters explore their sonic subjects from a variety of research angles and employ different analytical tools derived from media and art history, music, and cultural studies.

Insofar as animation techniques and visual outcomes are markedly different between individual studios and producers, analysis of the sound cannot be restricted to a single approach, and the chapters in this book propose a range of perspectives, showing how music and sound in animation film cannot be overly generalized (and thereby challenging the notion of animation as a 'genre'). Animation music methods range from those that use old-style heavily synchronized music, to animated dramas using music somewhat like live-action film, to comedies in which the music contributes to the gag, and musicals in which songs and musical themes are woven into the score as an overall music track. Music also operates as sonic affect, and sounds for animation include 'atmospheres' and sound FX, dialogue and vocal performance, and the overall sound design.

The specific focus on feature films in this series restricts the studies to music and sound in extended forms. *Drawn to Sound* has adopted Edera and Halas's definition of 'feature' as commencing at a minimum of 50 minutes duration (1977: 12), although most films discussed run to the more usual feature length of 80 to 90 minutes. As several chapters show, sonically adventurous feature films by studios, specific writers/ directors, or auteurs often developed from a portfolio of short film forms that initiated a significant emphasis on sound and music (see, for example, Janet Halfyard's reference to Tim Burton's innovative shorts produced prior to his features). A consideration of feature-film soundtracks positions the studies in the context of the growing field of screen-sound scholarship (rather than being marginalized by formats such as experimental, music video, documentary or other short forms; see Elsey and Kelly, 2002).

The analyses in this anthology refer to films released in the 1940s (e.g., Halas and Batchelor's *Handling Ships*, 1944–45) through to the first decade of the new millennium (e.g., George Miller's *Happy Feet*, 2006), by which time animation feature production had greatly expanded. This fifty-year timeframe links the studies to newer technologies available for sound and music and reflects a significant period of transition as animation production moved into the digital era. Alongside computer-generated animation image techniques, sound has increasingly been recorded, mixed and mastered in digital forms, occasioning changes in the production process for animation film as an audio-visual product. In addition, sound fidelity and spatiality for both cinema and

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home consumption has increased audience awareness and expectations of sonicity, a move that was exploited as early as 1940 by the Disney studio with the stereo sound system developed for *Fantasia*. Film animation has become a fundamental locus of research into digital film and media theory (see especially Manovich, 2001, 2002).

While the majority of chapters in this volume predominantly focus on music, several also explore the aural architecture of the overall soundtrack. Daniel Goldmark's discussion of *Les Triplettes de Belleville* (Sylvain Chomet, 2003; released as *The Triplets of Belleville* in the USA, and *Belleville Rendez-Vous* in the UK), for example, shows how sound not only communicates wihout dialogue but also powerfully conveys place and period. Jon Fitzgerald and Philip Hayward's analysis of the performed 'voices' of the appliances in *The Brave Little Toaster* (Jerry Lees, 1987) identifies that these songs are tightly integrated into the narrative and dialogue. Sonic components such as sound design and dialogue for animation are, in this regard, worthy subjects for publications in their own right (extending the work of, for example, Lawson and Persons, 2004).

In *Drawn to Sound*, the term 'sound' is used to denote both music and non-musical sound (and all aspects of this) and 'soundtrack' refers to the overall sonic elements accompanying the image track (rather than merely a recorded soundtrack CD released in conjunction with the film that has a more or less direct relation to the film release soundtrack). A discussion of such terms highlights a problem for analysis of sound and music in animation (as for film, and other screen forms, per se), that is, the semantic tools available for this task. However, as Beauchamp notes, just as "the audience will notice poor sound design even though most cannot articulate what was lacking" (2005: 17), unfamiliarity with terms and terminology should not detract from animation-sound studies. Indeed, this offers a significant challenge to the field.

Analysing animation (film)

It is appropriate to introduce this book with a few points about its title. 'Drawn to sound' refers to the animation process of an image track constructed in relation to a soundtrack as well as to the perceptual and analytical emphasis on sound in this volume. 'Animation film music and sonicity' acknowledges both the identification of cinema forms as well as the interrelation between music and sound. I have borrowed the term 'sonicity' from science, where it refers to the transmission of power by periodical forces and movements. This sense has been mobilized by researchers and artists aligned with the World Soundscape Project (see Stanza and Kandola, online[1]). As the project's ultimate aim is "to find solutions for an ecologically balanced soundscape where the relationship between the human community and its sonic environment is in harmony",[2] it is apposite for the discussion of sound in animation, in which the idealized creation of a world, its inhabitants and their activities is a *shared* project of sound and image.

In its most inclusive definition, animation is a way of representing motion. Scholarly studies of animation have concerned themselves with this notion in terms of whether animation is "drawings-that-move" or "movements-that-are-drawn" (Cholodenko,

1991: 18). These discussions centre on the image track, and adding sound to this debate contributes a further dimension of movement in space and time. Like the light waves that realize images, sound reaches our ears as waves that are inherently 'in motion'. Sound fills space through time and is difficult to contain. Furthermore, sound arrives in our ears as packages of elements. Indeed, for the 'sonic universe' of animation, Leslie observes:

> All noises take their place on the soundtrack and get their turn. A violin phrase is no better than a cracking walnut or a squelching kitten body. The art lies in the arrangement of materials, from wherever they stem. (2002: 28)

Added to this, for the viewer/listener the contoured and mastered sound on an animation film is heard in conjunction with the other sounds in a space – mobile phones and popcorn-crunching noises in the cinema, the sounds of domesticity as we view a DVD at home. Sound cannot be freeze-framed in the same way that images can be presented on the page, despite the best efforts of musicologists to capture dynamic elements by notating melodies and arrangements. Sound is constant movement. The inspirational Canadian animator and researcher Norman McLaren observed the animator's role in creating action that is "outside the vocabulary offered by its mainstream counterpart" (paraphrased by Wells, 2002: 6) and dependent on what occurs *between* the frames. Sound also moves around stereo space and transitions across scenes, frames and juxtapositions. It provides its own segues, foreshadowings and momentum for narrative, 'gag points' to highlight the animator's hand, and 'personality'. The title of this introduction – 'Audio Motion' – acknowledges these traits. As the notion of 'animating' suggests, this book is an attempt both to breathe life into analyses about sound in animation studies, as well as to reflect those debates within sound studies (and film studies) that can be employed, exploited and extended for and by animation film research.

Animation *film* is an audio-visual form of creating and staging motion that is linked to specific distribution and exhibition contexts. As such, animation film bridges many genres and appears in different forms, from the scratched, calligraphic and paper cutout experiments from many different countries over a hundred years, to 'clay' animation and stop-motion figures, drawn cel animation and anime,[3] recent computer-generated imagery (CGI) from major studios, and hybrid forms incorporating live-action characters and/or backgrounds. The variety of film styles included under 'animation film' is represented in this volume, which features studies of films made using different techniques. Increasingly, live-action film incorporates aspects of animation, a recognition of which is central to *Who Framed Roger Rabbit* (Robert Zemeckis, 1988), as discussed in Neil Lerner's chapter. Indeed, the blurring of boundaries between live action and animation has led to Mark Langer's discussion of the "end of animation history", meaning the end of "a historical period where theorists and practitioners commonly

conceived of animation as a distinct form of image generation defined by its opposition to live-action cinema".[4]

A re-examination of animation in this regard can shed light on its ability to order the world depicted in film in a different way – one that both references (and simulates) 'reality' and yet surpasses it, presenting scenarios that we recognize as simultaneously other and the same. Animation scholarship has focused on how writers and film-makers as diverse as Sergei Eisenstein (see Leyda, 1988), Walter Benjamin,[5] and Taihei Imamura (1992) have been fascinated by animation's potential to radically refigure the human (and animal) body and its activities.[6] Indeed, as Alan Cholodenko (1991) explores, film per se can be defined as a form of animation. It is this level of abstraction that offers a particularly malleable and potent form for *sonic* exploration, given the way sound exploits motion, time and space. Leslie notes how Robert Field's early analysis of Disney's output appreciated "the cerebral nature of animation" (Leslie, 2002: 30).

Recently, scholars such as Lev Manovich (2001), Joanna Bouldin (2001), Esther Leslie (2002) and others have used animation to reframe arguments in classical film theory regarding cinematic representation, as well as to provide a counter-history of the cinema that is not based in photographic indexicality. As Cholodenko discusses, "animation as film and animation as idea" (1991: 24) enable an engagement with both the significance of animation forms and its contribution to theories of authorship, genre and other analytical forms. Nevertheless, animation has been relatively marginalized in film scholarship, as well as relatively under-examined in film-sound research (with some notable exceptions, as discussed below).

Animation's marginalization in film scholarship may be due to the history of short animation film formats that in part reflect the cost and effort required for construction of each frame. Despite CGI innovations, animation is still costly and induces wariness in film investors.[7] However, Cohen *et al.* (2009) guesstimate[8] that "animation may now represent up to 25 per cent of the world's audio-visual market … in both commercial and independent film contexts" (337). It is therefore timely to examine animation, given the box-office successes of animation features (from US blockbusters such as *Shrek,* 2001, and *Shrek II,* 2004, to the transnational work of Studio Ghibli), the number of productions, and their recognition in terms of Academy and other awards.[9]

In his 2007 volume of essays, Cholodenko notes that there has been a remarkable increase in scholarly attention coinciding with "a quantum increase, expansion and diversification in animation production, distribution, exhibition and consumption around the world" (2007: 15). According to US box-office statistics,[10] sixteen of the all-time highest US box-office performers produced between 1992 and 2008 were animation features, and the same number of animation features are also in the Top 50 films in worldwide box-office performance statistics (although these are less reliable data). Notably, these figures do not take into account the lucrative DVD sales and rental incomes that accrue to animation feature films, nor the number of feature films that make significant use of digital and/or animation effects. So far from animation film being an

outmoded format, it has achieved new prominence. In addition, the interest in soundtrack releases is relevant to this book. Alongside marketing strategies for live-action films, animation films have assisted their promotion and profits through CD soundtracks. As early as ten years ago, Essex (1998) noted that in 1990 fewer than twenty soundtracks appeared on the *Billboard* album chart but this figure had jumped to more than 50 by 1998. Interestingly, in that year, a month before DreamWorks launched their animated feature *The Prince of Egypt* (Brenda Chapman, Steve Hickner, Simon Wells), three separate soundtracks for the film were released in pop, country and inspirational formats.[11] Beyond the US market, Aki Yamasaki's chapter in this book provides an analysis of the way soundtracks relate to the film products released by the Japanese animation industry.

Animation film's connection with less culturally valued genres and formats has contributed to its critical marginalization. Such formats include children's and family-oriented films, slapstick comedy (especially TV cartoons), educational and propaganda films. These associations with (often) low-resolution forms have impacted on the scholarly attention to *sound*, given that, particularly in the last thirty years, industry demands for fast turnaround have resulted in somewhat formulaic sound and music – soundtracks that are frequently deemed unworthy of sustained study. Industrial formats like television cartoons are generally little researched in terms of their sonic components due to the dismissive attitude to computer-generated music (rather than original, live recorded or orchestral scores) and to soundtracks that include pre-recorded and/or library music. Nevertheless, deeper analysis of cartoons and animation films suggests they continue to be sites for musical and sonic experimentation and innovation. Roy Prendergast (1977), paraphrasing composer Ingolf Dahl's observations, notes that cartoon music in the 1940s and 1950s differed from the common use of popular music and folk tunes in the 1930s in its "sustained use of twentieth-century musical language" (in contrast to the use of these musical idioms in live-action dramatic feature films). Prendergast argues that this arises from the "incessant and lively motion" in animation, representing "a kind of dance" (*ibid.*: 190) that complemented the often balletic neoclassic works of composers such as Stravinsky and Milhaud. Prendergast argues that "music can give definition to screen action and it can invest the drawn characters with personality" (*ibid.*). This tentative argument is reinforced and enhanced in studies of more recent cartoons (as discussed below) and films. In his chapter, Philip Hayward's discussion of the action-charged dancing and singing penguins in *Happy Feet* shows various ways that this is performed in the contemporary animation film industry.

Animation film's audio

Critical literature addressing sound and music in animation film is surprisingly scarce despite the fact that, as audio-visual texts, the audio is often notably crucial to the narrative and the film's emotional impact. Sound can enhance the perceptual elements of the animation. As Beauchamp claims, "sound facilitates and accelerates the audience's

ability to develop meaning and commit the scene to visual memory" (2005: 18). For these reasons alone, it is relevant to explore animation-film sound in the context of music and sound studies as well as in media, film and cultural studies. As audio-visual text that is entirely constructed (that is, in addition to animation's constructed *visual* locations, there are no existing on-location recorded *sounds* as in live action), animation is demanding of music and the films are often musically saturated. Linked to this, the sound is often overtly synchronized to the on-screen action. While at Disney, Carl Stalling composed from bar sheets, a notated blueprint of the music, dialogue and animation timing that enabled precise synchronization of soundtrack and action. This systematized approach to scoring was a significant industry innovation. The songs for on-screen performance were composed first so that mouth movements could be timed to them, a practice (known as mickey-mousing) that is still employed in both animation and film musicals (including music videos) today.[12]

Early animators, especially in the USA in the synchronized-sound era, understood the connection between image and sound. As Leslie (and others) note, for example, Walt Disney and the Fleischer brothers depicted noise-making events, objects and activities not just as part of the narrative, but as the storyline itself. Following in the footsteps of experimental film-makers such as Walter Ruttmann,[13] Norman McLaren also experimented with a form of "animated sound" (see McLaren, 1995; and Russett, 2004). Wells contends that McLaren's work was particularly significant for the nexus of sound and image in animation because he explored "sound itself, the imagery of movement and dance" (2002: 12). Such sound experiments with animation show how it can meld from one entity to another and that image and sound can synthesize. As Halas and Manvell argued (1959: 81):

> The animator is responsible for the vision, the control of the total medium, including sound as well as sight. He [sic] *must* think *sound as well as picture. He is only half an animator if his skill is limited to drawing.* (emphasis in original)

Paul Wells, in his chapter, describes how John Halas applied these ideas about sound and music in features produced by the British Halas & Batchelor studio. More recently, Beauchamp (perhaps too emphatically) claimed that "many experienced animators credit sound with contributing as much as 70% of the success of a project" (2005: 17). While experimental approaches were explored as part of the avant-garde (notably by Len Lye, Oscar Fischinger, and others), Beauchamp focuses largely on animators who engaged in experimentation and innovation in commercial industrial settings. Yet sound scholarship in the main has not caught up with these initiatives.

The lack of emphasis on sound in animation literature is due to several factors relating to animation production and aesthetics. A considerable proportion of animation output and, therefore, research and writing has derived from design and graphics centres rather than film schools.[14] As a result, the connection with sound as part of

an audio-visual screen product has been peripheral. Also, much animation output has been produced by auteur directors or high-profile studios and little credit has been given to production personnel, including composers and sound designers. In many cases, sound and music have been designated as a post-production activity that is out-sourced and underfunded (a problem shared with live-action films). In addition, the contribution by sound personnel is deemed marginal to the director's 'vision' for the film and, as Hanna notes, "the medium remains occulocentric" (2008: 33). In his chapter on the music track for *Yellow Submarine* (George Dunning, 1968), Ian Inglis discusses how the film exemplifies this by being primarily devised by the musical director George Martin, who drew on existing songs by the Beatles, with little creative input on the part of the group. Animation literature tends to concentrate on visual aesthetics and style while marginalizing the form's reliance on dialogue and/or sound effects and sound design, much of which is closely aligned with the image track (sometimes to the point of being overly literal or functional, for example, in creating or highlighting gags at comic moments).[15] Where location sound is absent, music can be particularly impor-tant for functional reasons, such as continuity and flow, narrative purposes or aesthetic contribution. Warner Bros. directors like Chuck Jones (and even Tex Avery, as Steve Allen, 2009, argues) created cartoons that were highly musically oriented and featured characters with little dialogue, such as Road Runner and Coyote, thereby enabling music to effectively 'speak for' the central protagonists and highlight the action. Exactly how this occurs is worthy of exploration in terms of animation-film-sound research. Some analytical tools can be found in the modest literature currently available.

Selected scholarly literature on animation sound

Literature on animation music and sound is dispersed across a range of scholarly texts, industry guides, and 'craft and technique' information. One important work that recog-nizes the role of sound in animation and the value of its analysis is a volume (not yet translated into English) edited by Italian animation scholar, Giannalberto Bendazzi, together with Manuele Cecconello and Guido Michelone, titled *Coloriture: Voci, rumori, musiche nel cinema d'animazione* (Colourings: Voices, Noises, Music in Ani-mation Cinema), which was published in 1995. It includes theoretical overviews, generic approaches to music (e.g., uses of popular, 'classical', jazz and dance music), profiles of specific animators and composers, as well as case studies of specific films or cartoon animation forms. In addition, appendices offer insights into other sonic components and processes such as dialogue dubbing, effects and synaesthesia.[16] The broad brief of this book – covering short- and long-form films and various musical genres – is globally far-reaching, and its mix of research paradigms demonstrates the wealth of opportunities available for exploration in the field.

A major contribution to bringing sound 'up in the mix' was the 2002 anthology, *The Cartoon Music Book*, edited by Daniel Goldmark and Yuval Taylor. This attempts to identify various approaches to animation-music analysis, and therefore offers a useful

model for more extended analyses. The volume demonstrates the rich history of 'cartoon music' with excerpts of writing by seminal early cartoon and film composers alongside interviews with contemporary composers, analyses of particular US programmes, a discussion of the role of soundtrack merchandise and, significantly, an informative bibliography of books, articles and 'mentions' of animation music and composers.

Several animation books include chapters on sound and music, although these are often functional and descriptive of the process, adopting a 'craft'-based approach along the lines of many animation production volumes and online resources such as Animation World Network. Often more descriptive accounts are available in general film-music guides for composers; for example, Richard Davis (1999) includes a chapter on animation in which he emphasizes the different approaches to music in television animation series, feature-length animation musicals and dramas.[17] A more relevant volume covering sound design as a broad field is Robin Beauchamp's informative production book, *Designing Sound for Animation* (2005), which effectively signposts conceptual topics and details technical and production aspects of animation music and sound. Teaching sound design at the Savannah College of Art and Design, Beauchamp also works as a music editor and sound designer for independent animators, and as a freelance composer and arranger on commercial projects, and this background informs his book.

Published in the same year (2005), Daniel Goldmark's PhD thesis-based book, *Tunes for 'Toons: Music and the Hollywood Cartoon*, analyses the relation and operation of music to cartoons in the early synch-sound period, often characterized as the Golden Age of US studio animation prior to the arrival of television. This book reflects Goldmark's experience as an archivist and librarian at Spümcø International animation company and in the music industry with Rhino Entertainment in Los Angeles. Cartoons, argues Goldmark, have a unique approach to screen scores in their use of Tin Pan Alley, folk and popular US parlour songs, excerpts of film musicals, and themes from classical, jazz and operatic works. Directing his study to those composers who helped establish the "paradigmatic sound" (2005: 7) of Hollywood cartoons, Goldmark details how during his time at Warner Brothers (1936–58) Carl Stalling employed a building-block approach to his cartoon scores, working with individual segments towards the whole, a technique that contrasted with the slow crescendos employed by Scott Bradley. In contrast to Stalling's use of published and library music, Bradley expressed disdain for popular music (especially songs with regular rhythmic pulses) and, in almost twenty-five years of composition for MGM (1934–57), prided himself on original "illustrative" (*ibid.*: 44) scoring. Bradley's music, Goldmark argues, conveys both action and emotion, that is, feelings or effects associated with a situation on screen, through the register of instruments (conveying weight), complexity and speed of melodic line (for violence) and stinger chords (suggesting pain). Stinger (or 'shock' chords) were used – often in anticipation of the action – in place of the traditional sound effects that Bradley believed had become a cartoon cliché.

While Stalling treated his cartoon compositions as merely a form of work, Bradley wanted to extend and develop cartoon music and improve the perception of it. Bradley's 1941 essay 'Cartoon Music of the Future'[18] reflected an idealized concept of the cartoon in which the storyline and music would have equal narrative significance. Towards this aim, he envisaged discarding dialogue from future cartoons, using the orchestra for tone colour and sound effects, and ultimately pre-composing scores that would direct the animation (rather than the reverse, as then currently practised).

The bricolage approach of contemporary television series like *South Park* evokes those predecessors analysed by Goldmark. While shows like *The Powerpuff Girls* may be scored to driving electronic dance beats rather than jazz combos or orchestras, modern cartoons have "a century's worth of cartoon music to draw upon" (*ibid.*: 163). The legacy of Stalling, Bradley and early cartoon composers,[19] Goldmark concludes, is that "music does more nowadays than tell stories or provide an emotional barometer" (*ibid.*: 162). *Drawn to Sound* provides analyses that support this claim.

The Australian film-maker and researcher Philip Brophy has contributed to both animation and film-sound analysis. In his paper at 'Quick Draws', the 1988 Australian/International Animation Festival (subsequently published as a chapter in Cholodenko's 1991 collection *The Illusions of Life*), Brophy offered a way to "pass over the visuality of film" (1991: 71) and acknowledge the audio-visual nature of animation. Focusing on rhythm as movement in time, he characterizes animation as "*separate* images ... combined with *continuous* sound" (*ibid.*: 74), thereby highlighting how animation operates through the practical application of sound to the impression of movement (suspension of disbelief) in the image track. His flow chart of relationships between "real time and music time" (*ibid.*: 76) is applicable for animation designed for cinema or for the small screen, whether television, music video,[20] online or computer games. Brophy also emphasized the value of analysis of non-Anglophone forms, particularly anime. In his chapter for Cholodenko's follow-up book, *The Illusion of Life II: More Essays on Animation*, published in 2007, he claims that it is in anime that "radical sound-image configurations" are "liquefied as a vast reservoir of metaphysical possibilities" (2007: 206). Such a characterization informs the present book's inclusion of chapters on products stemming from the anime industry in Japan, notably Aki Yamasaki's study of music products and marketing for *Cowboy Bebop* films, and Kentaro Imada's analysis of musical elements informed by both western and Japanese musical histories evident in the Lupin III films.

Although early studies of animation attended to its global outcomes, there was a period when scholarly research tended to be nationally – or continentally – based and Anglophone-centric. Other production centres (featuring, for example, Japanese animators like Osamu Tezuka, Laiming Wan in China, etc.) were generally dissociated from those of North America and Europe. The success of *Spirited Away* (*Sen to Chihiro no kamikakushi*; Hayao Miyazaki/Kirk Wise, 2001) as a transnational product reinforced the limitation of this critical perspective. (See Kyoko Koizumi's chapter in this volume for

an analysis of the compositional approaches employed by Joe Hisaishi in his film collaborations with Hayao Miyazaki.) While the work of John Lent was important in increasing information on animation in other regional centres (see, for example, his 2001 volume *Animation in Asia and the Pacific*), as with many animation studies, sound and music barely rate a mention. One modest contribution to this international agenda is the book chapter by animation academic Michael Hill (1998). This essay discussed the musicality of feature films by European/Australian Yoram Gross, whose Australian-based animations ranged from *Dot and the Kangaroo* (1977) to the internationally successful *Blinky Bill* products (including the feature-film release in 1992). Hill's study not only attempts to show how the filmed Australian bush settings for the animated characters are brought to life by their idiosyncratic sounds but also how Guy Gross's character songs add value to narrative impact in the films.

A major contribution to animation film-music research is associated with the products of the US corporation Disney, although much of this work is uncritically euphoric and suggests corporate input to research.[21] As Wells observes, the term 'Disney' can be redefined "as a metonym for an authorially complex, hierarchical industrial process, which organizes and executes selective practices with the vocabularies of animated film" (cited from Davies and Wells, 2001, in Wells, 2002: 85). David Tietyen's *The Musical World of Walt Disney* (1990) shows how Walt's musicality inspired not only a musical orientation in the animation films up to his death in 1966 but also informed the animation style and lucrative merchandising strategies. This last aspect was explored in Michael Murray's study of fifty years of Walt Disney records (1997) and more recently in Tim Hollis and Greg Ehrbar's 2006 study. Disney's musical animation productions have evolved through several technological and compositional periods, and composer and critic Ross Care's work overviews the 'Golden Age' of studio animation (see his chapter in Goldmark and Taylor, 2002) and includes an oft-cited study (Care, 1985) of the music for *Bambi* (1942) and other composer profiles (Care, 1977). Adding to this, a considerable number of studies have concentrated on *Fantasia* (1940), thanks to its music-informed concept and address to known musical 'classics' (see, for example, published work by Taylor, 1940; Culhane, 1983, and also his examination of *Fantasia 2000*, 1999; Granata, 2002; Clague, 2004). Ultimately, the Disney corporation feature films demonstrate the central place music can inhabit in a work's emotion, narrative engagement and sonic signature. These elements are analysed in the *Drawn to Sound* chapters by Janice Esther Tulk, Jon Fitzgerald and myself.

The dispersed literature for animation-film music and sound has arisen from various scholarly and industry sources that reflect a range of disciplinary foci. However, this is reflective of animation studies more generally as well as film-music/sound studies.

Animating film sound analyses

Scholarly texts on animation film are increasing in number and range, from the seminal works published in the 1990s (see Bendazzi, 1994; Furniss, 1998; Wells, 1998; Pilling, 1999) to more recent volumes (Buchan, 2006a; Cholodenko, 2007; and others). The commitment to animation studies on the part of publishers like John Libbey has assisted this development of the field. In addition, there are now various animation research periodicals, from the *Animation Journal*, edited by leading scholar Maureen Furniss in the USA and running since 1991,[22] and the *International Journal of Comic Art*, edited, since 1999, by John Lent, through to three new journals launched in 2006: the Society for Animation Studies's online *Animation Studies*, John Libbey's *Cartoons: The International Journal of Animation*, edited by Chris Robinson (in Ottawa), and Sage's *Animation: An Interdisciplinary Journal*, edited by Suzanne Buchan (in the UK).[23] Curiously, despite their relatively recent introduction and claims to a fresh, inclusive approach (see Buchan's editorial, 2006b), these newer journals also display a 'deafness' to sound and music and largely emphasize visual and narrative aspects of the form as separate from sound and music. If not ignored, in these publications the audio analyses are mostly either confined to a passing reference under post-production or marginalized to brief mentions located through the index or endnotes.[24] Some reasons for such a paucity of address to sound and music have already been outlined. Perhaps more importantly, the neglect emanates from a dearth of analytical models from which to develop workable methods. Approaches applicable to animation film music/sound may be adopted or adapted from literature on film music.

Screen sound – especially music – research has rapidly expanded in the last few years, with several publishers' catalogues featuring books, three mid-2000s journals (*The Soundtrack*; *Music, Sound and the Moving Image*; and, online, *Music and the Moving Image*) adding to established periodicals such as *The Film Music Journal*, *Film Score Monthly* and *Soundtrack*, and several conferences hosted by institutions in the USA and UK.[25] Some music journals[26] offer useful profiles of composers and add to industry contributions – such as interviews with sound designers – in publications like *Mix* or *Audio Technology*. There is now a significant body of work available around film music and several 'schools' offering analytical models. Music-in-film scholarship located in music faculties is often based on a largely musicological approach that treats film music as somewhat removed from the film image track and mostly focuses on original music composed specifically for the film text under examination. Interdisciplinary film-music scholarship enables analysis of all (or more) of the components of the music track, including pre-recorded songs, which increasingly feature in film soundtracks (and CD releases). Popular music studies have contributed to this perspective, although often by hearing the songs without the soundtrack (and without address to animation film – see, for example, Powrie and Stilwell, 2006). Another analytical school that significantly arose from popular-music studies considers the broader industrial context of the music

track in relation to the marketing and distribution of the film (see Smith, 1998), and this is acknowledged and extended in the studies by Yamasaki, Fitzgerald, Peter Morris and Rebecca Coyle in this volume. A further analytical model considers the production process for the music and soundtrack in relation to the personnel involved and their operational method. This approach demonstrates that, certainly in the major studio productions, there is rarely ownership of the music by a single named composer but instead the music track (including all of its components) is the product of several (often many) creators working as composer, orchestrator, sound designer, music editor, music supervisor, mixers and others. This is a useful model for animation film, given the variable production processes employed for each film project.[27]

Overall, along the same lines as the marginalization of animated film in film studies programmes, film-music/sound research has rarely attended to animation soundtracks. While it is notoriously difficult to generalize about animation film, the form has different requirements of sound and music from live-action film. Indeed, it is important that the analytical approach is applicable to the film music usage. For example, an issue that has particularly intrigued animation-sound scholars is that of 'funny music', that is, the ways that music and sound are used for humour (see Mera, 2002) and this is outlined in the chapter by Morris and Coyle in this volume. Goldmark's *Tunes for 'Toons* (2005) shows an awareness of the analytical approaches of film-music scholars, drawing on neologisms and concepts originated by Claudia Gorbman (1987), Michel Chion (1994), Krin Gabbard (1996) and Jeff Smith (1998), and he attempts to differentiate the unique properties of animation music. Many film-music terms, Goldmark argues, are inapplicable to cartoon music given that music is "far more integral to the construction of cartoons" (2005: 4). As Paul Wells notes in his chapter in this volume, current debates occurring within film-music studies cannot necessarily be applied to animation film (for example, concerning diegetic/nondiegetic, source/underscore, etc.). In addition, there is often a high proportion of music included in an animation film, whether original or adapted. The Aardman DreamWorks feature *Wallace & Gromit: The Curse of the Were-Rabbit*, for instance, included 72 minutes of music for the 80-minute film.

It is inappropriate, however, to argue that everything about sound and music in animation film is different from live action. Indeed, Stephen Deutsch argues that recent US-made CGI feature films "so thoroughly emulate the structural and narrative worlds of live-action films, that the scores owe far less to the gestures of cartoon music and sound than they do to feature film soundtrack production practices" (2008: 98). In addition, while animators may be "responsible for … a highly detailed process of *creating* a world rather than merely *inhabiting* one" (Wells, 2002: 26), this may not be a new situation for music personnel who have devised a sound location to convey a science-fiction or otherwise 'other-worldly' location. Furthermore, all voices are generated as recordings of actors, regardless of how those voice recordings may be manipulated later, and synched to animated drawings rather than to live-action performances (in ADR or real time). Animation excels in enabling creatures and objects to

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gain a 'voice' or sound signature released from 'realism', whether they be the spiders and maggots in Tim Burton's films or the mutating houses and creatures in Hayao Miyazaki's films. The chapters in this book therefore contribute to these debates within film-sound studies as well as to the dispersed and wide-ranging volume of animation studies.

Themes and framework of this book

The structure of *Drawn to Sound* relates to ways of dealing with music – as composed, adapted, used as/with sounds, and in relation to the industry. As a result, the chapters are grouped under section headings comprising scoring approaches, intertextual music tracks, sound design and sonicity, and industrial contexts. While highlighting the variety of approaches available for analysing animation-film music and sound, these broad categories are, of course, porous and accommodate overlapping issues and interweaving lines of argument.

Moving beyond a phenomenological approach, *Drawn to Sound* also extends debates about socio-political dimensions in animation films. Animation has a long history of engaging with social and political issues in abstracted ways not commonly exploited in conventional film-making (and not without controversy – see Cohen, 1997). In this sense, animation film has often both challenged and reinforced institutional structures: discourses surrounding race, ethnicity and sexuality, among others, have often found a space in animation that would have been silenced or censored in mainstream film-making. These concepts can be significantly carried in soundtracks, as the chapters by Tulk, Lerner, and Fitzgerald and Hayward demonstrate. Tulk, for instance, draws on focus-group discussions of the musical themes in *Brother Bear* (Aaron Blaise and Robert Walker, 2003) to analyse the plundering of indigenous and other 'world' musical motifs.

While providing input to animation-sound studies, *Drawn to Sound* does not aspire to being a definitive text, but rather offers both studies of specific films and analytical models. The films discussed are not the only – or even necessarily the most significant – films that might be analysed. Neither are the models the only ones available for use in analysis of animation-film music and sound. The films examined and methods employed have been determined by the availability of authors engaged in scholarly research and writing within the brief of this book (that is, post-World War II animated feature-film music and sound), and those scholars come from complementary research backgrounds, including sociology, music, cultural studies, media and film disciplines. This highlights how music and sound in animation does not need to be hived off from other areas of analysis but can be core to film, animation and music explorations, as well as a significant domain, trigger or medium for interdisciplinary studies.

The films studied in *Drawn to Sound* were produced in the USA, Europe, Japan and Australia. While this indicates the global fascination with animation, it does not reflect the centres of production proportionately (especially if we take into account major centres of short-film production, particularly since the 1930s). Several films studied in

this volume derive from the Disney corporation's animation studio (e.g., *The Little Mermaid*) or through a Disney-schooled director (auteur Tim Burton) or even creative personnel in a company production from the Disney talent pool (*The Brave Little Toaster*). As previously noted, it is difficult for a book that focuses on feature-length film, with a concentration on music, to avoid a major emphasis on a corporation with such a considerable track record in this production form and audio orientation. Similarly, the Japanese industry is so influential in the contemporary period that it warrants several chapters illustrating various approaches and showing that 'the industry' does not necessarily operate monolithically. Several chapters suggest that the transnational nature of animation film and music products is as much to do with economic imperatives as with cultural globalization (or glocalisation – see Quigley, 2002). However, not all the films spotlighted in these studies were commercially successful and some chapters investigate films produced on relatively modest budgets.

Drawn to Sound is structured around four sections. In the first section, 'Scoring Animation Film', three chapters provide overviews of different musical approaches. Film and television music theorist Janet Halfyard examines Tim Burton's stop-motion animation films, *The Nightmare Before Christmas* (directed by Henry Selick, 1993) and *Corpse Bride* (2005), and argues that music and songs help to structure these films and allow horror and humour to be juxtaposed so distinctively. Animation authority Paul Wells discusses long-form films (including the now-famous *Animal Farm* [1954]) from the prolific Halas and Batchelor studio by providing a national industrial context and showing how the studio's approach to animated musical forms offered a distinct form arising from the UK in the postwar period. Kyoko Koizumi's overview of Joe Hisaishi's music for feature films produced as part of his longtime collaboration with Hayao Miyazaki identifies four broad approaches to composition. These are influenced by Miyazaki's and Hisaishi's blending of Japanese and western-themed cultural influences and contribute to the construction of narratives in a selection of the films.

The second section of *Drawn to Sound* offers four studies of 'Musical Intertextuality'. British popular-music sociologist Ian Inglis examines the music track for George Dunning's *Yellow Submarine* (1968) and shows how producer George Martin deployed three categories of music – familiar and new Beatles songs together with an original score – to create an integrated aural and visual production. Cinema and popular-music scholar Philip Hayward analyses John Powell's music and its operation with popular songs and tap-dance music in George Miller's digital animation blockbuster *Happy Feet* (2006). Music and cinema historian Neil Lerner discusses *Who Framed Roger Rabbit* (Robert Zemenckis, 1988) in terms of musical framing and its vestiges of US minstrelsy, and argues that the film's repression of race as an issue is evident in its music. Canadian ethnomusicologist Janice Esther Tulk scrutinizes the 'world musics' rendered for Disney's *Brother Bear* (Aaron Blaise and Robert Walker, 2003) and describes the manner in which the music is ambiguous in its time and cultural setting rather than being representative of specific indigenous peoples.

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The third section of *Drawn to Sound* offers three studies of 'Music and Sonicity'. US cartoon music specialist Daniel Goldmark analyses how Sylvain Chomet's musicscapes and soundscapes of two eras and two continents operate without dialogue in *Les Triplettes de Belleville*, a film that now has cult status. Sound organizes historical eras, plotlines and characterizations to effectively create spaces for nostalgia. This use of sonic affect to explore the past is also discussed in the chapter by musicologist Jon Fitzgerald and Philip Hayward on *The Brave Little Toaster* (Jerry Rees, 1987), a drawn cel animation film in which the narrative is largely carried by songs presented anthropomorphically by old-fashioned and defunct household appliances. Contemporary music theorist Kentaro Imada analyses the western-styled music in three feature films from the highly successful *Lupin III* (*Rupan sansei*) Japanese anime series. Imada draws on a socio-historical discussion of musical derivation to contextualize the case study and shows how the music in these features operates at a point of confluence between traditional Japanese stage and media sound and music and western musical accompaniment.

The last section of the volume, 'Music and Industrial Contexts', explores music in terms of animation and music industries, demonstrating how an understanding of film texts can be enriched by analysis of their production backgrounds. UK music and comedy researcher Peter Morris and I analyse the feature film that arose from a collaboration between the successful British claymation studio Aardman Animation and a Hollywood partner, namely, *Wallace & Gromit: The Curse of the Were-Rabbit* (Nick Park and Steve Box, 2005). We found that the music created by Julian Nott was informed by the studio's transition from a relatively small company to a collaboration with a major US animation producer, DreamWorks Animation SKG, and their deployment of Hans Zimmer's musical approach. In her analysis of *Cowboy Bebop* feature-film music production, Aki Yamasaki brings a media studies perspective to the music products – including soundtrack, theme song and character song releases – associated with the television series and films. Her characterization of corporate strategies for animation music in Japan shows how industry changes in the 1980s initiated new approaches to music genres and the marketing of animation CDs. In the final chapter, as a media studies researcher, I collaborated with musicologist Jon Fitzgerald to examine the extraordinary success of two Disney Corporation films in the post-Walt era: *The Little Mermaid* (1991) and *The Lion King* (1994). We argue that the overt deployment of Broadway musical-theatre approaches in the films enabled Disney to launch a new generation of animation feature-film production. These provided a fertile ground for seeding future CGI successes, such as John Lasseter's *Toy Story* (1995), that radically changed animation production.

Each section of *Drawn to Sound* offers a different perspective on animation as film, and together the chapters show not just a way of experiencing film but a textual analysis that Michael Bull and Les Back call "thinking with our ears" (2003: 2). This approach, they argue, "offers an opportunity to augment our critical imaginations, to comprehend our world and our encounters with it according to multiple registers of feeling" (*ibid.*).

As a collection of essays, *Drawn to Sound*'s contribution to animation and film-sound studies is multifarious and aims to extend discussions about sound and music, not just in film or even in animation.

Conclusion

The studies in *Drawn to Sound* show how animation is a malleable, mutable form that requires a flexible and innovative approach to its audio component. The book's historical time period and focus on the feature-film format also indicate the areas requiring detailed and sustained scholarly research, such as short-form sound/images experiments (especially in Europe), animation film precursors such as vaudeville, star voices employed in animation, the flourishing children's television industry,[28] and the frame-by-frame operation of sound in the audio-visual text. Unlike the differentiation of approaches and splintering of methods from psychoanalysis, semiotics, production study, industry, etc. present in film studies, this book offers a convergent way of experiencing animation films (hearing *and* seeing them) as audio-visual texts, industries, corporate and auteurial cultures, and conceptual explorations.

Drawn to Sound's international perspective shows how globally pervasive animation is but also how the film industry – particularly in relation to features – is increasingly a transnational one, which is now devised via digital and online media without necessarily strong geographical connections. In analysing animation and placing sound centre stage, *Drawn to Sound* offers a counter-history of screen media, and a fresh perspective on moving-image cultural experience. Ultimately, then, engaging the ear with the eye allows appreciation of animation film as an integrated and dynamic audio-visual media form.

Notes

1. Stanza's 'Sonicity' can be found online at http://www.soundcities.com/info.html (undated). Ajmir Kandola's discussion of 'Sonic/Sonicity' work can be found on the Silent Aether site at http:www.silentaether.com/content/view/17/72/ (accessed 7 June 2007).
2. H. Kallmann, A. P. Woog and H. Westerkamp (2008), 'World Soundscape Project', in *The Canadian Encyclopedia*, Historical Foundation of Canada, http://www.thecanadianencyclopedia.com (accessed 4 July 2008).
3. The abbreviated term anime arose in the 1970s and is thought to derive from the French phrase *dessin animé*. Most often, 'anime' describes animation from Japan that has a specific colourful art style (and often adult themes). Often evolving from comic-book (manga) series, anime can appear in television series, film, games, internet sites and commercials. Once hand-drawn and rendered as 2-D, now most anime is computer-generated and can be 3-D in style
4. M. Langer (2002), 'The End of Animation History', *Society for Animation Studies*; http://asifa.net/SAS/articles/langer1.htm.

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5. In the first version of 'The Work of Art in the Age of Its Technical Reproducibility', published in 1935, as discussed in Leslie, 2002: 104–7.

6. See also Siegfried Kracauer (1960) and René Clair's work.

7. See, for example, http://www.your3dsource.com/most-expensive-3d-animated-films.html for figures on the ten highest-cost animation features.

8. Unsourced estimation.

9. The category of Best Animated Feature was introduced to the US Academy Awards in 2001 and is only awarded if eight or more animated feature films (of at least 70 minutes duration) have been theatrically released in Los Angeles in the year of the awards. Animated features have won Best Picture in the past, for example, *Beauty and the Beast* in 1991. Of course, there are specific awards for animation films, such as the Annie Awards presented by the Los Angeles branch of the International Animated Film Association. Significantly, an animation feature, John Lasseter's *Up!* opened the 2009 Cannes Film Festival.

10. http://www.boxofficemojo.com/alltime/adjusted.htm. Accessed 15 July 2008.

11. *The Prince of Egypt: Nashville* CD; *The Prince of Egypt: Inspirational* CD; and *The Prince of Egypt: Music from the Original Motion Picture Soundtrack* CD.

12. Although the term is often employed derogatively to imply lack of imagination or ingenuity on the part of the composer.

13. See discussions of his work in Kahn, 1999, and Leslie, 2002.

14. Also, more recently, IT and computer-generated imaging schools focus on animation. See the proposal by Eric Farrar at Ohio State University, 'A Method for Mapping Expressive Qualities of Music to Expressive Qualities of Animation', http://accad.osu.edu/~efarrar/thesis/proposal120602.pdf.

15. See Jeff Smith's discussion of comic allusion employed in film songs (Smith, 2001).

16. Thanks to Cristoforo Garigliano, PhD student at Macquarie University, Sydney, for his translations summarizing this volume.

17. See also various informative sections in Furniss, 2008.

18. Reproduced in an appendix in Goldmark (2005), pp. 167–8.

19. See also Goldmark's 2007 chapter that discusses cartoons from the 1920s.

20. See, for example, the work of Bill Plympton at http://www.plymptoons.com.

21. See, for example, the discussion of the title and cover image for Bell, Haas and Sells (1995).

22. See also Furniss's useful literature review (1999).

23. Other journals provide more technical discussions, for example, the *Journal of Visualisation and Computer Animation* that has been published since the late 1980s.

24. With this in mind, I guest-edited a special issue of *Animation Journal* featuring articles on sound and music, published in October 2009. The issue includes articles on television, short-form animation and feature-film productions released at various time periods.

25. Brophy coordinated three Cinesonic conferences on film sound and music, held in Melbourne in the late 1990s/early 2000s.

26. See, for example, the *Sounds Australian* periodical from the Australian Music Centre, and the *Popular Music* journal.
27. See, as a useful, industry-informed study, Jack Curtis Dubowsky's paper delivered at the Music and the Moving Image conference in New York, 2008, titled 'The Evolving Temp Score in Animation'.
28. See, for example, the overwhelming success of the British-originated series *Bob the Builder*, with its chart-hitting theme song 'Can We Fix It?' See Chieko Tsuneoka, 'Arts Abroad: A Little Puppet's Popularity Has No Strings Attached', *New York Times*, 7 August, 2001; http://query.nytimes.com/gst/fullpage.html?res= 9B04E7D6113CF934A3575BC0A9679C8B63

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