

**Sound from Start to Finish:
Professional Style and Practice in Modern Hollywood Sound Production**

by

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Abstract

This dissertation addresses changes in modern Hollywood sound practices by exploring how the art and craft of sound production are tied to current institutional demands, commercial expectations, stylistic norms, and technological options. It does so by examining how sound editors, mixers, designers, Foley artists, engineers, and recordists in the “sound chain” go about the job of creating sound for film from the earliest stages of pre-production to the final mix in post-production. This project offers a comprehensive investigation of the major roles in the sound chain, each one examining different practitioners and their various working styles, task structures, and aesthetic goals.

In addressing the social organization of the contemporary sound industry, this study considers a triumvirate of interrelated factors that have essentially reshaped the professional task structures of sound practitioners and the aesthetic character of films produced in the last two decades. First, the transition from analog editing and mixing machines to digital platforms such as Pro Tools in the 1990s and 2000s had a profound effect on labor practices, workflow, and the social organization of sound practitioners and the stylistic textures of modern sound tracks. Second, the freelance structure of the sound industry has forced many practitioners to redefine their professional identities to better reflect their status as “artists” and “designers” of sound. Third, this study examines how digital workflow and the social structure of the industry have impacted the aesthetic demands of sound tracks.

By examining the professional and creative constraints and possibilities faced by modern sound professionals, this study foregrounds the social, occupational, and aesthetic factors that continue to shape this facet of the Hollywood production complex. Sound practitioners draw on a range of conventional techniques and innovative strategies to contribute something original and fresh to the well-worn traditions of classical Hollywood storytelling. Crucially, this project adopts an interdisciplinary approach that incorporates theories of symbolic interaction and film poetics in addition to original field and archival research.

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CHAPTER ONE

Introduction: The Art of Sound Craft

Clarity. You have to hear all the words. You can't have clarity with lots of sound. We're looking for subtlety more than we're looking to pound you over the head. The picture—the story—will tell you what to do. Less is best. Motion pictures are not reality. The best thing you can do is be sparing. If I see someone walking down the street, I know I need traffic, but I don't need a car effect for every one I see.

– Richard Portman¹

The sentiments expressed by Portman are not uncommon among sound practitioners in Hollywood. Although Portman is a re-recording mixer, his views support a larger point about modern Hollywood sound style and practice. On one side, the desire for clear and uncluttered dialog points to the centrality of speech common to most Hollywood sound tracks. The goal of clear, intelligible dialog is a well-worn convention of sound recording, editing, and mixing that continues to find favor among most contemporary sound professionals. On the other side, his comments can be understood as a matter of group style: sound professionals share a set of constituted aesthetic goals and technical means by which to achieve those goals.

Indeed, the social organization of Hollywood sound production requires an elaborate system of cooperation, collaboration, and shared identities through which decisions are made and problems are solved. Among the many norms of the Hollywood sound track, the goal of a clean and clear dialog track is not an abstract issue, but one that

is faced every day by sound professionals at all levels of production. That Portman conforms to past practices does not necessarily mean that this group style is free from contradiction. While conventions provide artists with common practices and a bounded set of options, they do not specify what Howard S. Becker has called “an inviolate set of rules everyone must refer to in settling questions of what to do.”² In practical terms, the creative decisions made by the likes of Portman and other sound practitioners are largely based on finding solutions to both ordinary and thorny problems.

In Portman’s case, the goal of a clear and uncluttered sound track reveals a tension in how specific decisions are made. While he may strive to create a subtle and sparse track, a director may want a rougher and more over-the-top track. Creative decisions and artistic choices are expressions of craft traditions as much as they are rooted in the flexible and spontaneous world of aesthetic innovation. Most obviously, we must first consider how sound professionals navigate this territory if we wish to understand the institutional demands and aesthetic functions of modern sound practices.

This dissertation is about how sound practitioners go about the job of creating sound for film from the earliest stages of pre-production to the final mix in post-production. I hope to show how the study of the art and craft of sound production is intimately tied to current institutional demands, commercial expectations, stylistic norms, and technological options by detailing the aesthetics of sound craft during the current era of Hollywood cinema. By investigating the creative and administrative decisions that ultimately influence the textures of Hollywood sound tracks, I propose that we can productively explain the dynamics of sound production by investigating the logics of practice that ultimately determine the sound of modern films.

The problem remains of how to conceptualize the professional identities and decision-making strategies of sound professionals, and the resultant aesthetic functions of contemporary sound tracks. In large measure, this project attempts to create a space within academic film sound studies that investigates how questions of style and practice can be productively answered by examining the working methods, institutional demands, craft norms, and social organization of sound professionals in the modern Hollywood production complex.

Studies of classical and contemporary film sound practices have been approached from several compelling avenues. Questions of industrial organization and conventional practices have been the subject of broader questions of cultural ideology, and discourses on the representational functions of the audiovisual apparatus.³ In other cases, psychoanalytic and cultural readings of sound practices have tried to explain issues of sound style as being symptomatic of broader ideological aims that seek to efface the work involved in the construction of the sound track.⁴

At the same time, other studies of sound practices have attempted to engage with more fine-grained features of the sound track by turning to specific functions of different elements of the sound track. Studies that explore the constitutive effects of film dialog, voice, sound effects, and Foley across different genres have provided focused accounts on the historical trajectories of sound craft, and the broader theoretical implications of these sound elements.⁵ Still other accounts of contemporary sound production that have incorporated interviews with practitioners have deepened our understanding of certain elements of the sound chain.⁶

Considerations of sound practices have also focused on questions of sound authorship, with some studies emphasizing the role of the sound auteur in creating the overall “sound” of a film.⁷ These treatments of film sound look to either the film director or the “sound designer” as the author of the sound track in an attempt to find stylistic signatures and commonalities across a set of films.

However, while both large- and small-scale studies of film sound production practices have accounted for some of the institutional dynamics, social organization, technological options, and professional identities of sound practitioners, this project hopes to deepen the discourse with a detailed consideration of how creative decisions and choices, technical means, and notions of professional identity help to shape the aesthetic contours of modern Hollywood sound tracks. By doing so, this project will revisit some of the key historical and theoretical debates in film sound studies with a fresh set of ears.

Rick Altman was among the first scholars to recognize the need for a “heterogeneous” approach to the study of film sound that moves beyond basic text-based criticism and overdetermined modes of interpretation. Instead, he writes, “As soon as we move away from film as a single, homogenous phenomenon, we become aware of the heterogeneous chain of objects and spaces which serve as a vehicle for sound.”⁸ What Altman calls for is a way of studying the production and exhibition of cinema sound that focuses on how social factors, industrial practices, and aesthetic conventions can shape the contours of the sound track.

Few investigations of modern film sound practices have probed the intricate network of professional organizations, labor unions and professional hierarchies, studio facilities, and boutique sound shops to gain a better understanding of how the post-

divestment era of Hollywood filmmaking has influenced the professional identities of Los Angeles-based sound editors, mixers, designers, Foley artists, and recordists. Combining archival research with film analysis, and field interviews, this project addresses how contemporary notions of sound style and practice are bound up with issues of professional identity, digital technology, industrial reorganization, and artistic decision-making.

To properly address how sound practice affects sound style and existing theories of Hollywood film sound, this dissertation looks beyond the scope of traditional sound studies to the sociological work of Howard Becker and Robert Faulkner, and the film poetic work of David Bordwell. Faulkner's explorations of the career development of Hollywood composers dovetails with Howard Becker's notion of "art worlds," which seeks to examine how networks of cooperation, shared conventions, and occupational ideologies shape the production of art works and the careers of art makers.⁹ Faulkner's interest in the productivity, position, and occupational task structures of composers in the post-war Hollywood film industry reveals a freelance work structure that shares many characteristics with the modern sound industry. Relying on interviews with composers, industry data, and *in situ* observations, Faulkner's method proposes a way of understanding the complexities of the film industry that aims to reconstruct the professional realities, constraints, and possibilities of working within the Hollywood film industry.

Similarly, David Bordwell's poetics of cinema investigates how technological, creative, and industrial constraints and possibilities of feature filmmaking can shape the artistic decisions and choices of filmmakers and craft professionals.¹⁰ Essentially,

Bordwell contends that filmmakers and craft practitioners are beset by creative, administrative, and technical problems that must be solved using conventional or innovative logics. To understand why certain decisions are made, it is important to investigate those circumstances and examine what those decisions illustrate about industrial and aesthetic norms. More often than not, this means examining the working methods, writings, and thoughts of filmmakers. Combining film analysis with archival and observational research, Bordwell's poetics attempts to reconstruct an historical moment in hopes of explaining the trajectory of stylistic practices within a particular industry, genre, or set of films.

Taken together, these two approaches possess the foundational means by which an account of the contemporary sound industry and its practitioners can be written. In extending film sound studies beyond the zones of traditional sound theory, this account of modern sound practice is about how professional identities, task structures, and industry concerns contribute to our understanding of sound conventions, functions, and style.

On a certain level, this project can also be read as a contribution to the emerging field of industry studies, which considers the notion of "production as a culture."¹¹ As Vicki Mayer, Miranda J. Banks, and John Thornton Caldwell note, production studies aims to understand "how media producers make culture, and, in the process, make themselves into particular kinds of workers in modern, mediated societies."¹² By incorporating a cross-disciplinary framework, production studies have explored the social, political, and policy textures of media work and the place of the practitioner within various media industries, including the Hollywood film and television industries.¹³ However, few, if any, industry studies have sought to account for the ways in which the creative decisions

of film practitioners and their working methods ultimately come to shape the contours of film style. Even though we may be able to describe the professional networks of practitioners and the economic systems in which they participate, it is also important to consider how those networks and systems of collaboration constitute the building blocks of an art form's formal properties. In this sense, the value of a poetic framework, influenced by the occupational and social dynamics of the interactionist method, is that it provides a way to access these connections between notions of formal style and artistic process.

The Sound of Modern Hollywood

In the following pages I seek to answer several questions: How have industrial conditions, technological changes, and stylistic norms shaped the sound of modern Hollywood films and influenced the professional composition of the Hollywood sound community? How has the transition to digital editing and mixing platforms affected labor practices, aesthetic norms and conventions within the production and post-production sound community? These questions have not been addressed by film sound scholarship in a way that accounts for the stylistic and occupational character of the entire sound chain. In some sense, then, the research program adopted here attempts to connect aspects of film style with the social and organizational processes of craft practice. Indeed, this model of analysis assumes an intrinsic link between industrial concerns, social organization, and the aesthetic constitution of the sound track.

In many ways, the current era (1990 to the present) of Hollywood filmmaking presents a critical intersection by which to address these questions. In addressing the formal and social organization of the contemporary “sound industry,” this project considers a triumvirate of interrelated factors that have essentially reshaped the professional task structures of sound practitioners and the aesthetic character of films produced in the era of digital editing and mixing tools. These three themes represent the basic conclusions of this project.

First, the transition from analog editing and mixing machines such as the Moviola to digital platforms in the 1990s and 2000s had a profound effect on the social organization of sound practitioners and the stylistic textures of modern sound tracks. Computer-based editing platforms led to an overall intensification of craft practices in the way that sound editors could access, cut, and mix raw files with greater speed and efficiency. The non-linear and random-access nature of hard-disk editing platforms also meant that practitioners could audition more files and experiment with more combinations of sounds in digitized sound libraries without having to unspool and synchronize a piece of magnetic film. Consequently, the widespread adoption of electronic workflow led to the assumption that “digital” meant “faster.” Indeed, the transition to digital workflow forced sound practitioners to reconfigure and augment certain aspects of their occupational task structures and ways of going about their creative work. On an institutional level, the pervasive use of electronic editing and mixing platforms forced the major Hollywood sound unions to confront what labor leaders considered to be a “blurring” between the distinctive roles of editors and mixers.

Second, the professional organization of the Hollywood sound industry underwent a period of intense social change, which began with the 1948 Paramount decision that effectively divested the major film studios from of their exhibition arms. By the 1960s, many studios were forced to sell off major divisions of their operations, including post-production facilities and personnel. Throughout the 1970s and 1980s, the sound industry – including most editors, Foley professionals, and mixers – became freelance workers. Independent sound editorial and mixing facilities began to spring up around the Los Angeles area, and sound practitioners were forced to create distinct professional identities for themselves in an industry that had become largely freelance. By the 1990s, sound professionals who were once considered mere technicians in the studio era were calling themselves “artists” and “designers.”

Third, the formal characteristics of sound tracks in the era of digital workflow reverberate with a clear sense of aesthetic innovation, creativity, intensification of practices and techniques, and technical polish. Sound practitioners draw on a range of conventional techniques and innovative strategies to contribute something original and fresh to the well-worn traditions of classical storytelling. Indeed, the conventions and techniques that dominate this period tell us something about the stability and change of sound practices today, as well as how these dynamics have evolved from the classical era of Hollywood filmmaking. Specifically, while sound practitioners continue to base many of their creative decisions on the belief that style is subordinated to story intelligibility, this does not mean that they are not artists who work within certain conventional frameworks and art-making practices.

Taken together, these three aspects of sound production provide the foundation on which the modern sound industry operates, and constitute the building blocks of sound style in contemporary films. The influence of technology, social organization, and creative decision-making on the modern Hollywood sound production complex is fundamental to the form, function, and style of the sound industry and its art-making practices. In many ways, the cultivation of professional identities within production and post-production sound practices was exacerbated and concretized by the transition to electronic workflow, which, in turn, contributed to the ways in which sound professionals continue to make decisions about their work, and organize the creative aspects of sound production.

“The Sound Chain” and Chapter Outline

At the center of this account of sound practice is the Hollywood “sound chain,” the network of production and post-production editors, mixers, artists, recordists, technicians, and craftspeople that comprise the Los Angeles-based sound industry (see Appendix A). The social organization of the sound chain follows a fundamental and fairly rigid hierarchy of economic and artistic control. The production company is positioned at the top of the chain, since it normally provides economic funding to the film project. The director is mainly responsible for the creative direction of the sound track. The production mixer, who is usually hired by the director, records and mixes on-set dialog. After principal photography has wrapped, the production mixer delivers the recordings to the post-production sound crew, headed by the supervising sound editor. As

a liaison to the director, the supervising sound editor is largely responsible for the major creative and administrative decisions in the actual production of the sound track, organizes the major elements of sound editorial (dialog editing, ADR, and Foley) and re-recording mixing (dialog, music, and effects mixers), and oversees each of these departments to ensure stylistic consistency and flow.

Although the sound track is under the direction of the supervising sound editor and director, each component of the sound chain is characterized by its own task structures, occupational ideologies, and technical tools. Crucially, every member of the sound chain must negotiate their own professional and artistic sensibilities with the goals of the supervising sound editor, director, and production company. In this way, sound practitioners participate in a social dynamic where jurisdictional struggles and compromises are daily occurrences. Practitioners engage with filmmakers in freelancer-client relationships that structure much of the sound industry. Artistic decisions are sometimes made at the behest of a director or sound supervisor, but more often than not the modern sound professional is called on to provide distinctive, individualized solutions to a host of stylistic problems. In other cases, craft union regulations and labor rules have cemented the hierarchies among professionals and the ways in which sound editors and mixers participate in sound production.

This dissertation takes as its point of departure the myriad technological, organizational, and creative problems faced by each major role in the sound chain. The solutions to these problems point up the different occupational mandates, creative decision-making strategies, professional identities, and shared styles of current sound practitioners. Chapter 2 provides the theoretical background of the methodology that

frames this project. Of particular importance to my methodological framework are the studies of craft norms and conventions in art practices by film scholar David Bordwell, and sociologists Howard Becker and Robert Faulkner. Bordwell's problem/solution research program on the poetics of cinema is considered alongside Becker and Faulkner's sociological analyses of social organization and symbolic interaction in art practices as a way to productively interpret and frame a study of craft norms, social organization, and style within the sound community.

Chapter 3 addresses the composition of the Hollywood sound industry since the divestment period and focuses on the emergence of independent post-production sound facilities in Los Angeles and the reintroduction of major studio post-production services in the 1990s. The notion of the "flexibly specialized" or freelance sound practitioner, as outlined by Susan Christopherson and Michael Storper, is central to the understanding of the social organization of sound professionals. This chapter also considers the economic, aesthetic, and community value of sound effects libraries in the era of the freelance sound professional.¹⁴

Chapter 4 is principally concerned with the history of electronic editing and mixing platforms in Hollywood and their relationship to key industry practices and technical standards. The second part of the chapter focuses on the widespread adoption of the Pro Tools platform, and sets in relief its role in streamlining the use of electronic editing and mixing hardware and software among sound practitioners at every level of the sound chain. This analysis is framed by the assumption that technology and social practices cannot be separated. Drawing on the work of Trevor J. Pinch and Wiebe E.

Bijker, the chapter explores how the Pro Tools platform ascended to a position of market and industry dominance based on the company's social interaction with practitioners.¹⁵

Chapters 5 through 10 explore the major roles in the sound chain with a particular focus on the ways in which sound technology, the social organization of the freelancer system, the hierarchies of sound production, and the demands of classical filmmaking influence the creative and artistic decision-making properties of their work. Chapter 5 explores the work of production, or “location,” mixing with an emphasis on the creative and social constraints experienced by mixers who are often forced to sacrifice personal style to suit the demands of the photography unit, actors, and other filmmakers. The second half of the chapter considers the historical and theoretical importance of “live” voice recording to modern production mixers with a case study of Heath Ledger’s vocal performance in *The Dark Knight* (2008). While it is often argued that Hollywood sound tracks subordinate style to story in order to emphasize intelligibility, an investigation of *The Dark Knight* reveals how the production sound crew balanced dialog intelligibility with more expressive sound techniques.

Chapter 6 follows with a consideration of dialog editing and ADR, or Automated Dialog Replacement. The chapter explores the delicate social dynamic faced by ADR supervisors who must work with actors to re-record dialog with the same performance value and sound quality as the original on-set recording. At the same time, the technical means of dialog editing in the digital age, and the artistic notion of “revoicing” are also discussed. A case study of dialog replacement in *The Wolfman* (2010) illustrates the fine-grained, even surgical, precision of digital dialog editing.

Chapter 7 provides a broad history of the art and craft of Foley performance, and traces the role from the studio era to the present with an emphasis on how electronic editing and mixing in concert with the emergent freelance industry necessitated the transition from “Foley walker,” which was widely considered a technical craft, to “Foley artist,” which emphasizes the performative characteristics of the craft. A number of film case studies illustrate the changing status of Foley and emphasize its status as a “heightened” and intensified effect in films.

Chapter 8 focuses on the evolution of the “sound designer.” In addressing the sometimes convoluted and often controversial history of this role, I outline three interconnected definitions of the designation, all of which are currently in use by sound professionals who consider themselves “sound designers.” My aim here is to detail the contingencies and organizational structure of sound effects editing and supervision within the context of the over-determined “sound designer” designation. The second half of the chapter explores the creative and administrative functions of sound editing and “design” with a particular emphasis on the sound design of *Rambo* (2008) and *Halloween 2* (2009).

Chapter 9 discusses the changes in the roles of sound editors and re-recording mixers with the advent of electronic editing and mixing machines, such as Pro Tools. Specifically, it addresses the changing complexion of the industry’s leading sound labor unions, Local 695 and Local 700 of Los Angeles, in relation to the emergent freelance labor system in Hollywood.

Finally, chapter 10 considers the ways in which re-recording mixers bring all of the sound materials together – sound effects, Foley, ADR, dialog, and music – for the

final mix. Considerable emphasis is placed on the means by which mixers make creative choices in order to create a “balanced,” “seamless,” and “unified” final track. In navigating the final mix, re-recording mixers must also interact with other filmmakers (directors, producers, sound supervisors, composers) to ensure that everyone’s creative needs are being met. The chapter closes with a case study of the sound mix of *The Bourne Ultimatum* (2007) in relation to David Bordwell’s concept of “intensified continuity.”

Having outlined my research goals and distinguished this work from the existing literature, I now turn to a brief consideration of what this thesis is not about. Given the importance of music to the history of film sound, it may seem like a glaring omission that I have chosen not to examine the role of music and the composer as part of the Hollywood sound chain. The reasons for this decision are twofold. First, despite the relative shortage of material on voice recording and sound effects, there are several very good studies of film music that explore its form and function within classical and contemporary Hollywood narratives.¹⁶ Second, and perhaps more fundamentally, the world of sound editing and mixing is professionally distinct from the world of film music composition and editing. Even though music must invariably share a space on the sound track with dialog and effects, composers and other sound practitioners infrequently collaborate with each other. Music composition, recording, and editing typically does not fall under the purview of the supervising sound editor and, unlike the recordings produced by the location mixer, the music doesn’t have much direct impact on the subsequent stages of audio post-production, at least not until the final re-recording sessions. In this sense, music is produced in a parallel, semi-autonomous realm, in

different studios, and under different aesthetic guidelines. Instead, this project considers these aspects of music production when it actually becomes a practical concern to the supervisor and the re-recording mixers. In this sense, I examine the *effect* of music as a formal device, and as a jurisdictional element within the construction of a sound mix.

In addition, this dissertation does not investigate the perceptual and psychoacoustic properties of modern film sound technology, particularly the histories of modern multichannel “surround sound.” My own consideration of sound technology and its relationship to craft practice is limited to the adoption of digital editing and mixing platforms, which arguably had a greater impact on the social organization of modern Hollywood sound professionals. Interestingly, the novelty of multichannel processes such as Dolby Digital 5.1 and their perceptual effects have received extensive commentary in academic film studies, which has, in some sense, obscured other developments in film sound technology such as the use of non-linear digital audio workstations.¹⁷

Finally, I have limited my research to sound practitioners in Southern California and films distributed by Hollywood studios. Despite the presence of major sound production facilities across the United States of America and Canada, my decision to narrow the scope to these concerns came organically to the process. I began this project with an interest in a number of films that ultimately led to me to their creators who, by and large, work and reside in the “industry,” which continues to operate in and around the greater Los Angeles area. From these initial meetings my scope widened to include more films and practitioner involvement, which came as a result of both pursuing elusive contacts and chance introductions to filmmakers. Also falling outside the scope of this project is a consideration of sound style from a regional perspective: for instance, the

differences between sound techniques in San Francisco and Los Angeles, or mixing strategies in New York and Toronto. I suspect, however, that these stylistic differences amount to subtle shifts in practice given the consistent standards of practice across the spectrum of commercial filmmaking. Nevertheless, sound style and practice in other regional and national contexts is a subject worth further study.

In sum, this dissertation is about the process and organizational structure of sound production. It is about the creation of professional identities, technological workflow, and the social relationships between practitioners and filmmakers. It is also about the stylistic conventions and aesthetic functions of contemporary Hollywood sound tracks.

This is sound from start to finish.¹⁸

Notes

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- ¹ John Michael Weaver, "Master Re-Recording Mixer: Richard Portman," *Mix* (September 1995): 28.
- ² Howard S. Becker, "Art as Collective Action," *American Sociological Review* 39.6 (December 1974): 771.
- ³ See Mary Ann Doane, "Ideology and the Practice of Sound Editing and Mixing," in Elisabeth Weis and John Belton, eds. *Film Sound: Theory and Practice*. New York: Columbia University Press, 1985: 54-62.
- ⁴ See Kaja Silverman, *The Acoustic Mirror: The Female Voice in Psychoanalysis and Cinema* (Bloomington: Indiana University Press, 1988).
- ⁵ See Sarah Kozloff, *Overhearing Film Dialogue* (Berkeley: University of California Press, 2000); Gianluca Sergi, "In Defence of Vulgarity: The Place of Sound Effects in the Cinema," *Scope: An Online Journal of Film and TV Studies* (June 2006): [<http://www.scope.nottingham.ac.uk/article.php?issue=5&id=129>]. Accessed 1 March 2011; Vanessa Theme Ament, *The Foley Grail: The Art of Performing Sound for Film, Games, and Animation*. (Burlington, MA: Focal Press, 2009).
- ⁶ See Vincent LoBrutto, *Sound-on-Film: Interviews with Creators of Film Sound* (Westport, Connecticut: Praeger, 1994); See also Nicholas Pasquariello, *Sounds of Movies: Interviews with Creators of Feature Film Sound Tracks* (San Francisco: Port Bridge Books, 1996).
- ⁷ See Elisabeth Weis, *The Silent Scream: Alfred Hitchcock's Sound Track* (East Brunswick, NJ: Fairleigh Dickinson University Press, 1982); See also Andrea Truppin, "And Then There Was Sound: The Films of Andrei Tarkovsky," in Rick Altman, ed., *Sound Theory, Sound Practice* (New York: BFI, 1992): 235-248.
- ⁸ Rick Altman, "General Introduction: Cinema as Event," in Rick Altman, ed., *Sound Theory, Sound Practice* (New York: BFI, 1992): 6-7.
- ⁹ Becker's "art worlds" concept stems from the "social worlds" concept set in practice by a group of sociologists at the University of Chicago in the first half of the twentieth century. The "Chicago School," as it came to be known, studied social structures in cities and communities by using qualitative methodologies such as ethnographic observation. See Martin Bulmer, *The Chicago School of Sociology: Institutionalization, Diversity and the Rise of Sociological Research* (Chicago: University of Chicago Press, 1984). See also Robert Faulkner, "Swimming with Sharks: Occupational Mandate and the Film Composer in Hollywood," *Qualitative Sociology* 1.2 (1970): 99-129. See also Howard S. Becker, "Art as Collective Action," *American Sociological Review* 39.6 (December 1974): 767-776.

¹⁰ David Bordwell, *On the History of Film Style* (Cambridge: Harvard University Press, 1997). See also David Bordwell, *Poetics of Cinema* (New York: Routledge, 2008).

¹¹ Vicki Mayer, Miranda J. Banks, and John Thornton Caldwell, *Production Studies: Cultural Studies of Media Industries* (New York: Routledge, 2009).

¹² *Ibid.*, 2.

¹³ See, for example, Vicki Mayer, *Below the Line: Producers and Production Studies in the New Television Economy* (Durham, NC: Duke University Press, 2011); Elizabeth Traube, *Dreaming Identities: Class, Gender, and Generation in 1980s Hollywood Movies* (New York: Westview Press, 1992); John Thornton Caldwell, *Televisuality: Style, Crisis, and Authority in American Television* (New Brunswick, NJ: Rutgers University Press, 1995); and Horace Newcomb and Robert S. Alley, *The Producer's Medium: Conversations with Creators of American TV* (New York: Oxford University Press, 1985).

¹⁴ Susan Christopherson and Michael Storper, "The Effects of Flexible Specialization on Industrial Politics and the Labor Market: The Motion Picture Industry," *Industrial & Labor Relations Review* 42.3 (1989): 331-348.

¹⁵ Trevor J. Pinch and Wiebe E. Bijker, "The Social Construction of Scientific Facts and Artifacts: Or How the Sociology of Science and the Science of Technology Might Benefit Each Other," in Wiebe E. Bijker, Thomas P. Hughes, and Trevor J. Pinch, eds., *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology* (Cambridge, MA: MIT Press, 1987): 17-50.

¹⁶ See, for instance, Kathryn Kalinak, *Settling the Score: Music and the Classical Hollywood Film* (Wisconsin: University of Wisconsin Press, 1992); Claudia Gorbman, *Unheard Melodies: Narrative Film Music* (Bloomington: Indiana University Press, 1987); K.J. Donnelly, *Film and Television Music: The Spectre of Sound* (London: British Film Institute, 2008); Jeff Smith, *The Sounds of Commerce -- Marketing Popular Film Music* (New York: Columbia University Press, 1998); Fred Karlin, *On the Track: A Guide to Contemporary Film Scoring*, 2nd Edition (New York: Routledge, 2004).

¹⁷ See especially Mark Kerins, *Beyond Dolby (Stereo): Cinema in the Digital Sound Age* (Bloomington: Indiana University Press, 2010).

¹⁸ In a bit of homage, the title of this dissertation was inspired by a collection of essays edited by Howard Becker, Robert Faulkner, and Barbara Kirshenblatt-Gimblett that examines how art works take shape and the creative choices that constitute art-making processes. See *Art from Start to Finish: Jazz, Painting, Writing, and Other Improvisations*, (Chicago: University of Chicago Press, 2006).

CHAPTER TWO

Methodology: Sound Problems, Sound Solutions

A distinguished sociological tradition holds that art is social in character, this being a specific instance of the more general proposition that knowledge and cultural products are social in character or have a social base.

– Howard S. Becker¹

The poetics of any artistic medium studies the finished work as a result of a process of construction—a process that includes a craft component (such as rules of thumb), the more general principles according to which the work is composed, and its functions, effects, and uses. Any inquiry into the fundamental principles by which artifacts in any representational medium are constructed, and the effects that flow from those principles, can fall within the domain of poetics.

– David Bordwell²

Steering a middle course between the study of social organization and craft practice calls for a novel heuristic that addresses how creative decisions ultimately shape the functions of sound conventions. This account of sound style and practice is broadly informed by a poetics of cinema, a research program based on the work of David Bordwell.³ In the narrowest sense, film poetics aims to produce a flexible but reliable understanding of film form by studying the constructional nature of cinema's principles and effects. In effect, the poetician studies the means-ends processes that comprise craft processes and the making of an artwork. Chief among these concerns are the historical and analytical functions and purposes of cinematic norms and conventions. The domain of poetics is, according to Bordwell, "any inquiry into the fundamental principles by

which artifacts in any representational medium are constructed, and the effects that flow from these principles.” Most important, this research framework is highly flexible since Hollywood craft norms, patterns, principles, and functions are historically variable. Studying the standards and principles of film form allows the poetician to develop historically contingent models of analysis that produce tangible snapshots of an industry, genre, or stylistic trend in commercial filmmaking.

This model largely follows from the historical approach of David Bordwell, Janet Staiger, and Kristin Thompson’s influential volume, *The Classical Hollywood Cinema: Film Style and Mode of Production to 1960*.⁴ In their effort to define the foundational aspects of classical Hollywood style, the authors outline a methodological framework that seeks to organize the key aspects of the Hollywood mode of production in its golden age. As formulated by these authors, the classical paradigm can be organized into a study of three abstract levels, which are constitutive of the stylistic norms that bind the structure together. Classical Hollywood can be studied as a set of devices, which comprise the technical elements of the filmmaking process; as systems of time, space, and narrative logic, whereupon devices find their functions; and as the relation of those systems to each other. The totality of classical style, while historically contingent and open to change, can be characterized not by a single level, but by all three levels.

Within the classical paradigm, narrative tends to be the dominant system. Technical devices often perform functions that support narrative demands.⁵ The devices can be motivated in a number of ways. A device can be compositionally motivated by the demands of the narrative, realistically motivated to ensure verisimilitude, or conventionally motivated by the demands of a genre. Devices can also be artistically

motivated, which might not advance the narrative but draw attention to the artfulness of the work. Although classical Hollywood cinema sustained a historically bounded set of norms that served narrative clarity and comprehension, technical devices have tended to change over time. All of which suggests that Hollywood films are bound by a flexible set of codes and conventions that provide consistent aesthetic options for filmmakers. As with any aesthetic system, the classical paradigm is open to change and revision; however, technical devices remain the most flexible to change since narrative comprehension and compositional unity are foundational aspects of the Hollywood model.

Likewise, the distinctiveness of modern Hollywood style is familiar to historians. Critics have suggested that the decline of studio filmmaking in the 1960s led to innovative formal patterns that “intensified” and “fragmented” the narrative-driven paradigm of the classical era.⁶ Characterized by the breakdown of coherent plot development and character psychology, the “post-classical” cinema arguably favors disjointed action, spectacular set pieces, and fragmented storytelling that embody the “blockbuster” film. Richard Maltby and Ian Craven, for example, suggest that the modern Hollywood aesthetic is “too opportunistic to prize coherence, organic unity, or even the absence of contradiction among its primary virtues.”⁷ However, others have suggested that faster, slightly discontinuous editing has become more fashionable not because Hollywood has altered its narrative fabric but because of more fine-grained changes in film style.

Kristin Thompson points out that “most commentators have too quickly equated all of Hollywood cinema with its blockbusters. Most films are made in any given year are

medium-budget comedies, romances, action pictures, and children's fare."⁸ To this list we can add low- and medium-budget horror films, thrillers, prestige and art-house fare, and the occasional musical. Modern Hollywood cinema, Thompson continues, "still centers around a well-structured, carefully motivated series of events that the spectator can comprehend relatively easily." André Bazin's assessment of the classical system coalesces with Thompson's view in this now famous statement: "The American cinema is a classical art, but why not then admire in it what is most admirable, i.e., not only the talent of this or that film-maker, but the genius of the system, the richness of its ever-vigorous tradition, and its fertility when it comes into contact with new elements."⁹ It is precisely these "new elements" of sound style that interest me here. In this sense, this dissertation is a contribution to the historical tradition of modern Hollywood's commitment to the principles of the classical paradigm.

To the chagrin of some film historians, a number of critics have argued that in the post-war era the basic economic system that supports the Hollywood mode of production has not shifted dramatically. Jim Hillier notes, "In spite of all the changes that have taken place, Hollywood in the late 1980s and early 1990s does not look all that different from the Hollywood of the previous forty years."¹⁰ This assessment echoes Douglas Gomery's earlier conclusion that "New Hollywood" bears more than a passing resemblance, economically speaking, to "Old Hollywood."¹¹ Major studios continue to underwrite and distribute the bulk of film releases even as smaller studios and distribution outlets pepper the Hollywood landscape. The "continuity thesis" is shared by Murray Smith, who argues:

From this point of view, historians of the 'New' or post-classical Hollywood, while correctly recognizing new

phases or trends in product differentiation, are not warranted in positing a break with classicism. Indeed, the very regularity with which declarations of new epochs have been made, the sheer number of 'New Hollywoods' that one finds posited over the course of film history, recommends this more sober view: if things are always 'new,' nothing is ever really new. There *is* a constant process of adjustment and adaptation to new circumstances but this is an adaptation made on the basis of certain underlying and constant goals: the maximizing of profits through the production of classical narrative films. Rather than looking for a fundamental break between classicism and a putative post-classicism, we would do better to look for smaller-scale changes and shifts, at both the institutional and aesthetic levels.¹²

It is not so much, then, that the formal parameters and institutional structures of Hollywood have not changed, but they have done so on a more nuanced, fine-grained level. While admittedly less romantic than an epochal shift in filmmaking practice, the continuity thesis espoused by Bordwell, Staiger, and Thompson as well as Gomery, Hillier, and Smith, among others, provides the backdrop for an ever-evolving system that retains a strong set of core principles.

The formal complexity of the continuity model has been the subject of numerous scholarly studies that focus on the visual components of Hollywood cinema, namely picture editing, color, and compositional techniques such as framing and lighting.¹³ Turning the poetic approach on its ear, this dissertation offers a detailed account of how specific functions have been assigned to the modern sound track within the system of modern filmmaking. While digital sound practices may not have dramatically shifted the audiovisual framework of the classical paradigm, its technical capacity most certainly contains the disruptive potential to augment the systems of classical style. The technical novelties of digital sound, including discrete surround channels and a wide dynamic

range, have encouraged artists and technicians to experiment with the representational aspects of the sound track. At the same time, many filmmakers are sensitive to the sensory power of sound, and work to temper such disruptive capabilities. In part, this project takes up the continuation of the classical paradigm within modern sound production by revealing how issues of social organization, labor relations, and professional development within the sound industry influence the aesthetic structure of sound tracks.

Indeed, the aesthetic history of modern sound technique is dependent on the poetic framework since it describes how film artists “work within the zones of choice and control offered by their circumstances.”¹⁴ In a certain sense, this constitutes what Leonard Meyer has called “stylistic analysis,” which seeks to describe the aesthetic features of an artwork and, most crucially, the institutional constraints that guide and limit the choices available to artists.¹⁵ It may seem obvious to suggest that filmmakers engage in a continuous process of decision-making throughout the production and post-production period, but few scholarly accounts of the audiovisual style of Hollywood cinema have actually investigated closely the relationship between these decisions and their functional effects in the final film. Sound professionals, like other Hollywood craftspeople, inherit a set of stylistic practices, known as conventions, which represent a set of bounded alternatives from which to choose.

Choosing among these options allows the filmmaker to solve creative problems in an expedient manner. One of the advantages of exploring the decision-making protocols of the sound industry is that we can begin to graph the craft tradition of stylistic practices by studying how filmmakers tackle particularly thorny issues or the most routine of

creative decisions. For example, a Foley artist is tasked with the challenge of creating novel sounds for particular sonic moments. For *The Wolfman*, the Foley crew was told to prepare something new for some requisite bone crunches and limb snaps. One of the film's Foley artists explains the dilemma:

So we have had to come up with alternatives that are also organic. We tried bok choy, rhubarb, fennel. My new favorite bone crushing/breaking/snapping sound is an uncooked piece of lasagna wrapped in a wet chamois cloth. We also tried popping seaweed and popping bubble wrap. It's been really challenging because celery sounds pretty good.

The studio's request for a fresh alternative to celery challenged the Foley team to find new ways of representing some very familiar sounds. Most certainly, the studio hoped to distinguish the film from others like it, and new Foley techniques were deemed necessary to accomplish this differentiation. At the same time, the Foley team sought to distinguish themselves professionally by creating and innovating new or novel sounds for different film projects. "Innovation," E.H. Gombrich argues, "often springs from an artist's urge to be different, to compete with others..."¹⁶ In spite of the divergent rationale for creative choices in sound production, the basic commitment to a set of stylistic norms and principles suggests that Hollywood sound professionals participate in a shared style.

The problem-based account of stylistic practice leaves room for the individual artist's contribution to the finished film by tracing his or her creative method through the artistic process. Our Foley artist is obviously bound to certain traditions of her craft, so she can turn to a solution that has worked in the past, relying on the replication of particular devices. But she can also reject the tenets of tradition and forge a new solution to the age-old problem of bone crunches. The task of the Foley artist – to provide custom

sound effects to accompany a visual action – may not change, but the problem-solving schemas and methods for performing and recording particular effects can certainly shift stylistic practices at the level of production.

To this end, there are multiple solutions to a given problem; it is up to the individual artist to choose from among a range of alternatives or reject one practical standard in favor of an original one. Faced with dozens of similar dilemmas on a daily basis, short schedules, and vague suggestions from studio notes, sound professionals solve these creative problems by turning to a set of stylistic possibilities that David Bordwell has termed: replication, revision, synthesis, and rejection.¹⁷ Thus, the solution to use lasagna noodles and a chamois cloth is built on the *revision* of a well-worn technique of using celery sticks to denote a bone snap. While not entirely groundbreaking, we must bear in mind that mainstream filmmaking practices uphold a fairly conservative attitude towards technological and stylistic innovation, prompting Tom Kenny to note, “By and large, filmmaking is a traditional craft run by traditional methods.”¹⁸ Likewise, the Foley artist’s dilemma is not one that will uproot the system but rather one that will supplement it through lateral shifts in practice.

Indeed, flexibility through bounded variation characterizes a default account of Hollywood audiovisual practice.¹⁹ As new elements are introduced to the system, they are systematically reconfigured to fit into the already-existing production paradigm. Moreover, film sound professionals also seek to distinguish themselves from their colleagues by cultivating individual working styles and approaches to sound editing and mixing work. Sound professionals routinely straddle a very fine line between stylistic and professional innovation, and conventional choices.

However, the film-poetic perspective is not without its own limitations. To study aspects of film style is to participate in the reconstruction of a moment in history. Working inductively, the student of style examines a broad swath of finished films in search of common traits and an evolution of craft norms. What regularities and irregularities do the films possess? This often necessitates working backwards, trying to reconstruct the problem-solution dilemma from trade documents, articles, published interviews and other forms of evidence from the production process. The search for evidence of purpose can be extremely difficult given the general paucity of published material on the filmmaking process. Even as Hollywood production techniques have become more transparent in recent years with online content (podcasts; video interviews; filmmaker websites) and home video “making-of” supplements spotlighting the creative process, these outlets are usually reserved for only the most high profile projects, leaving out dozens of ordinary but equally important films.²⁰ What is more, the poetic research program does not fully account for the social organization of film professionals, and how systems of “art making” are structured by cooperative contexts, shared conventions, and competing professional identities.

Symbolic Interaction, “Art Worlds,” and the “Social Construction of Film Style”

Writing about the artistic process, one becomes immersed in a micro-level of analysis that resembles what sociologist Robert Merton has described as “middle range” research. Middle level research is a way of making connections between art and practice, among other discourses, by exploring “theories that lie between the minor but necessary

working hypotheses that evolve in abundance during day-to-day research and the all-inclusive systematic efforts to develop a unified theory that will explain all the observed uniformities of social behavior, social organization and social change.”²¹ One such method that neatly dovetails with the film-poetic framework is the empirical research tradition known as symbolic interaction.²² Much more than a theoretical position, symbolic interaction recognizes the important methodological possibilities of fieldwork, whereby social and artistic meaning is contained in the process of interaction. The interactionist tradition takes the empirical world as its problematic and aims to penetrate the social organization of its subjects by envisioning a “social world” dynamic to describe a production system comprised of shared identities and collective purpose.²³ Attempting to account for the processes and practices, the object of interactionist research, according Howard Becker, is to understand that “any human event can be studied as the result of the people involved...continually adjusting what they do in the light of what others do.”

In line with this perspective, interactionist work by the likes of Becker and other members of the Chicago School explores task structures and occupational structures, and attempts to define the conceptual character of a career or industry.²⁴ This constitutes the “social world” concept, which aims to unite the collective identities of a particular community. Becker has said that human decision-making accounts for the decisions and directions of any social world: “at every step of every unfolding event, something else *might* happen.”²⁵ However dull or undramatic the processes, the most interesting craft practices often occur in the most routine of conditions and ordinary of films. Becker’s own studies of “art worlds” have shown that art practice requires a high level of

cooperation among specialized groups.²⁶ It is precisely the “art worlds” concept and its relationship to artistic conventions, shared practices, and professional identities that interests me most here.

Within art worlds, community membership is often founded on the common practices that link interdependent practices, which, according to Becker, constitute a set of shared conventions. In particular, artistic conventions provide the artist with a standardized set of practices to which he or she can refer when deciding how to solve an aspect of the work.

When asked about the artistic nature of sound production, sound designer Randy Thom has conceded, “It’s a terrible tragedy that sound people tend to be thought of as technicians. We need to avoid being pigeonholed as engineers and only engineers.”²⁷ In contradistinction to the prevailing logic of some Hollywood filmmakers, most sound professionals consider themselves artists, not mere technicians and knob-turners. Although most editors and mixes perform functional tasks – adjusting volume levels, cutting a sound effect, recording a gunshot – their world is about creativity, artistic choices, and, in the case of the Foley artist, performing. These conceptions of sound track construction as art-making practices provide the necessary critical foundation on which to build a history of modern sound technique and social organization.

Perhaps not surprisingly, the poetic study of film, with its focus on a problem-based account of film style, is not intrinsically different from the sociological study of symbolic interaction and, specifically, the “art worlds” concept. The logic of conventional practices has led Howard S. Becker and Leonard Meyer to suggest in separate studies that the stylistic norms place considerable constraints on the artist.²⁸

Meyer sums up the argument as follows: “For any specific style there is a finite number of rules, but there is an infinite number of possible strategies for realizing or instantiating such rules. And for any set of rules there are probably innumerable strategies that have never been instantiated.”²⁹ A system of constraints and possibilities navigate the artist to solve problems in both conventional and innovative ways. Conventions make decisions easier when artists turn to what has worked in the past, but we should recognize that they do not make unconventional work impossible; in the film industry it often requires more work and resources.

In short, I am proposing an outline of art practice that considers the social construction of film sound style in the Hollywood sound community. The men and women of the sound industry pursue tasks and goals in a cooperative context where aesthetic experimentation and formal developments transform old conventions into new ways of solving aesthetic dilemmas. While the demands of classical style can sometimes constrain the sound professional in a way that limits choice, there is also some comfort in constraint especially in the short turnaround times that Hollywood craftspeople are given to finish a work.

From this point of view, the system of conventions within Hollywood cinema places a high degree of creative constraint on filmmakers as the methods of production have become “embodied in equipment, materials, training, available facilities and sites, systems of notation and the like, all of which must be changed if any one segment is.”³⁰ In addition to the internalized modes of production, the conventions of Hollywood style continue to serve the larger goal of clear and intelligible storytelling. Classical film sound is motivated by the desire to direct the audience’s attention to the most salient points of

the story; more often than not, dialog – the transmission of verbal information by goal-oriented characters – is the conduit for this. In other cases, music, sound effects, and even silence can organize the sound space to express story points. I am suggesting that contemporary practices emphasize the historical tradition of the classical paradigm of Hollywood image and sound construction. But I would like to propose a fine-grained distinction that supplements the work of Bordwell, Staiger, and Thompson in *The Classical Hollywood Cinema*. The authors have suggested that Hollywood practitioners used style as a means to unify the demands of classical narrative. In other words, style served a functional purpose to ensure a comprehensive and “invisible” narrative system.³¹ While modern sound conventions continue to support narrative intelligibility, my analysis will demonstrate how the professional identities and social organization of sound practitioners impinge on this notion of a classical narrative system with an intensified, heightened, and robust treatment of sound elements.

Perhaps the most thorough attempt to situate the social organization of filmmakers within an interactionist context has been Robert Faulkner’s ethnographic studies of Hollywood composers, in “Swimming with Sharks: Occupational Mandate and the Hollywood Film Composer” and *Music on Demand: Composers and Careers in the Hollywood Film Industry*.³² In his efforts to grasp the working constitution and career development of Hollywood composers in the modern era, Faulkner examines the productivity, recognition, and rewards of the Hollywood film music community with a particular focus on the distribution of work and resources for composers. The methodological upshot of Faulkner’s work is that it examines how social organization within the film industry shapes artistic process and institutional structure. Given the

complex relationship between composers and filmmakers, Faulkner distills the working methods of these practitioners in a way that sets in relief the ways in which business, art, and collaboration intersect in Hollywood.

As a group, Hollywood composers are largely composed of freelance workers of which only a very small group obtains a disproportionate share of available projects. In the current era, more visible composers and those with a proven “track record” have the advantage in securing high-profile films, since producers and directors are often interested in a choice that will minimize risk and uncertainty.³³ The relationship between freelance composers and filmmakers requires a high degree of cooperation among these specialized professionals. While the composer may have artistic license on a film project, the director or producer will often negotiate the role and function of music in the film. “Only the craft really belongs to the craftsman,” Faulkner insists. “The product belongs to someone else.”³⁴

Many of the specialized crafts of Hollywood filmmaking – set and costume design, cinematography, picture editing, and sound – are negotiated arts. As Faulkner notes, “The commercial craft is precarious: it is negotiated and re-negotiated on a situation-to-situation basis.”³⁵ The composer may treat her occupation as an artistic craft, but she is always aware of the institutional dynamics – budgets, resources, and ego – that can often supplant creative control of the musical work. Composers must satisfy the needs of the film, which may not be commensurate with their own personal musical tastes. One of Faulkner’s interview participants commented, “Film composers are not stamping out cars on an assembly line. Each project is different—different people, different values, different story—and each calls for a different musical approach.”³⁶ The

professional and artistic challenges that freelancers face with every new film project characterizes the situational and episodic logic of modern Hollywood practice.

Unlike composers, however, sound editors and mixers do not have the benefit of being considered artists in their own right. Sound production has been designated a technical craft by the Director's Guild of America and the Academy of Motion Picture Arts and Sciences, which prevents editors and mixers from receiving "above the line" artistic credit.³⁷ Sound practitioners engage in a similar transactional relationship with filmmakers. The artistic work of designing, editing, and mixing sound must satisfy the demands of the director and, in some cases, the producers and other studio executives. In this way, sound production is a collaborative art in a very specific sense. Every sound editor, Foley artist, and mixer shares the same broad conceptions of their work (conventions), but they all must vie for space on the sound track. A sound editor may cut a car chase with innovative library tracks, but the re-recording mixer buries much of that work under original Foley recordings, ADR loops, and a swelling orchestral score.

Each sonic element represents a different place in the division of labor and the division of the sound track. The mandate of a Foley artist may be quite different from the final mixer, who must balance a multitude of tracks from various sources. Supervising sound editor Randy Thom elaborates on the situational art of mixing: "In my opinion, mixing is about 80 percent people skills. It's an intense social pressure cooker that has at least as much to do with listening perceptively to people behind you as it does with listening to the sounds coming out of the speakers."³⁸ The emphasis on communication illustrates the degree to which personal taste is often sacrificed in order to satisfy the intentions of the clients: the directors, producers, and studio executives.

At the same time, sound practitioners use their own professional expertise to reassure filmmakers that their decisions and solutions can enhance the process, and even provide filmmakers with options they had not considered. Re-recording mixer Lora Hirschberg explains the dilemma of the Hollywood sound professional:

I think that we're all – everybody who is in the creative pieces of filmmaking – hired for our taste. We're not technicians in that way. So I do get all my jobs based on my taste ... And there are times when I'm hired to work on a film that I personally would not be able to contribute to because it's something that's outside the realm of my taste. I try very hard to interpret what everybody else wants, but I feel that the successful times that I've worked with people are when they are asking for my creative taste.

Hirschberg's attitude towards personal taste reflects Faulkner's assessment of occupations whose task structures are tied to clients, which demands a certain amount of control from the various groups involved. Indeed, the filmmaker/composer dynamic is anchored by dueling tastes and the "potential antagonism and tension" that surfaces when one party's directive comes into conflict with another.³⁹

Faulkner's research on the career development of composers doesn't account for the relationship between the stylistic function of film music and the social organization of composers. This is not an oversight on Faulkner's part; it is simply not part of his research project. My interest in form and function within the institutional world of sound production will lead me to reconfigure Faulkner's social dynamic in a way that accounts for the artistic work that is ultimately produced. For example, while Faulkner describes the relationship between director and composer as being motivated by an "organizational dependency," I am more interested in deepening the interactionist framework by linking

processes of creative communication and occupational mandate with the aesthetic functions of sound practice.

Indeed, the art worlds of composers and sound professionals are remarkably similar, yet also very different. Composers, like other freelancers in the industry, pursue their craft in an attempt to achieve career influence and advantage. Similarly, freelancing sound practitioners work to build relationships with clients with whom they have worked before in an attempt to secure employment opportunities and maintain long-lasting creative partnerships. Unlike composers, however, sound professionals belong to major craft unions, which work to define and stabilize the workflow and pay scale of the Hollywood sound community. While composers continue to receive “artistic” standing in the industry with above-the-line billing, sound professionals are widely noted as technical craftspeople, not creative artists.

Pursuing this research task, then, it is important to proceed by investigation in this effort to draw attention to how sound professionals make sense of their work, and how their decisions and professional development ultimately shapes the stylistic contours of modern Hollywood sound tracks. The value of symbolic interaction and the “art worlds” concept to this research program rests with the inductive rationale proposed by the commitment to social observation and field investigation. For the most part, interactionist work by the likes of Faulkner and Becker has attempted to show how the occupational and community structures of individual and team-based art practices (in theatre, painting, dance, music, and film) inform the content of art works. In much the same way that Hortense Powdermaker hypothesized that Hollywood’s institutional system in the 1940s influenced the content and meaning of its films, the present volume seeks to observe the

contemporary social institution of sound production as a way of understanding how basic creative decisions determine the aesthetic paradigm of sound style.⁴⁰

Put another way, this research program attempts to make sense of the complex institutional network of Hollywood sound production by considering the relationship between artistic process and film style. I am suggesting that the scrutiny of stylistic stability and change may benefit from an investigation of current practices in the laboratory, as it were, of sound production: the soundstages, editing bays, mixing stages, Foley rooms, and in the field where original recordings are made.

Some of the materials on which this study is based were obtained from *in situ* observations with Hollywood sound practitioners between December 2009 and December 2010. The choice of locations was determined by the generosity of the participants who arranged for free and open access to otherwise restricted studio facilities, film footage at various stages of completion, and private discussions about ongoing projects. In addition to field notes, which accounted for descriptions of activities and notable conversations, extensive interviews were conducted in person and by telephone with nearly 40 professionals.

Additionally, a significant amount of archival materials were collected from trade publications, publicity kits, union newsletters, and correspondences between filmmakers. The goal was to use the archival material, film analyses, and original interview material to be able to construct a more vivid picture of contemporary sound production practices and the creative decisions that permeate practitioners' work. Unless otherwise indicated by a citation, the contributions from sound practitioners that fill these pages are the result of my extensive interviews and conversations with them.⁴¹

Given that the expansive field of sound production in the American film industry reaches from coast to coast, the decision was made to narrow the focus to professionals working in Southern California, where the bulk of major studios and production facilities continue to operate. Likewise, the criterion for choosing observational participants was guided by their career success in the sound community. Many of the research participants are award-winning Los Angeles-based editors, mixers, designers, and Foley artists who have worked in a variety of genres and at different budget scales. While some participants are veterans of their craft, others are newer to the field. Some have achieved a level of success that affords them the ability to pick and choose projects with careful consideration, while others are eager to try anything once and work as much as possible.

A large part of the discussions with sound professionals involved dealing with their relationships with filmmakers and other members of the sound community, questions of personal style, particular work assignments, and the conditions of their work in the modern Hollywood production complex. I was particularly interested in details about their careers, and their working relationships with other sound practitioners, directors, producers, and studios. This led to discussions of particular film projects, professional associations, group style, and sound technologies. As Howard Becker, Robert Faulkner, and Barbara Kirshenblatt-Gimblett note, “Observing work situations, we learn what pressures and problems workers are responding to, how the materials they work with help or resist their efforts, what other involved in the process did.”⁴²

A concerted effort was made to provide a cross-section of the Hollywood sound community using the resources available to me at the time. This study emphasizes what I

call the “sound chain,” the organizational workflow of Hollywood sound production. In particular, I closely examine the roles of the following practitioners: production mixer, supervising sound editor, sound designer, sound editor, Foley artist and mixer, ADR supervisor, and re-recording mixer. In order to account for the complex social and aesthetic dynamics of the production process, my work therefore depends critically on the characterization and responsibilities of the major positions within this sound chain. Against the backdrop of large motion picture productions, dozens of sound professionals work in varying capacities to create a comprehensible and unified track. It will become clear that my interest in sound production hinges on the ways in which these filmmakers apply specialized knowledge and divergent skills to the common goal of producing an original sound track.

In addition to issues of aesthetics and sound style, the social construction of style is also contingent on an understanding of social organization and structure within the Hollywood sound industry. Part of what constitutes artistic practice is based on the occupational mandates, ideologies, and task structures of sound professionals. In other words, I investigate the ways in which the sound industry organizes itself around ideologies of practice and social relationships with other members of the sound chain. In turn, these mandates and task structures invariably shape the form and function of the Hollywood sound track.⁴³

Of course, the validity of such findings cannot be demonstrated solely by an explanation from field notes and interviews. Not everyone is available for observation, nor is it possible to interview long-deceased filmmakers about their craft choices. And so to accomplish this element of the project, I turned to the archives. In general, an analysis

has been made of my empirical observations and descriptions of social phenomena.

This was accomplished by testing observations against existing trade press materials. I complemented my field research with an analysis of professional discourse that has been documented in the pages of *Editors Guild Magazine*, *Mix*, *Variety*, and an assortment of other Hollywood trade publications.

At the same time, close descriptive analysis of particular films can also reveal the value of a particular sonic function or trend in broader audiovisual terms: how the decision affects other sonic and visual elements. Consequently, the analysis of groups of films along with trade discourse was carried out before and after the observational process in order to provide a set of questions and assumptions that could be tested at the site of production. In fact, great care was taken to follow as many leads as possible during the observational stage, which resulted in the addition of films and other sound professionals to this study. At some level, this research became a spider's web of films and filmmakers whose connections to other films and filmmakers concretized for me the concept of "shared style" in Hollywood cinema.

Not every editor, mixer, or recordist thinks the same way about the functions of sound or the use of particular conventions. The style of modern Hollywood sound is loosely tied together by shared ideologies and task structures, but there are managed differences that certainly assist in individualizing filmmakers from one another. In the specialized world of sound production, most sound practitioners must distinguish themselves from the competition. In the same way that practitioners play with conventions to distinguish themselves from other professionals, they also do so to avoid stylistic repetition. As Kirstin Thompson argues, "The frequent changes that artists

introduce into their new works over time reflect attempts to avoid automatization...”⁴⁴

Since each film presents its own set of narrative and aesthetic goals and problems, sound editors and mixers cannot always rely on what has worked for past projects.

Indeed, this dissertation will illustrate how stylistic analysis can be enriched by the social and aesthetic demands of sound production. As a method, the social construction of film sound style represents an attempt to trace a body of practices within the institutional dimensions of production. The interplay between style and practice and the questions that it raises are served well by discussing aesthetic functions and motivations with an eye on how social organization and craft practices uncover the various aesthetic and narrative demands of contemporary films. The hope is that this research program, which combines archival research, in-depth interviews and with sound professionals, industrial observations, and film analysis, can be used to spotlight the craft of Hollywood sound production in its complexity.

Ultimately, this combination of film poetics and interactionist methods provided the foundation for the three interrelated themes that emerged from this research: the creative and professional effects of computer-based editing and mixing platforms on the sound community, the development of a freelance workforce within the sound community, and the aesthetic intensification of sound elements in the sound chain.

While my argument hinges on the industrial composition and stylistic methods of sound professionals, the paucity of published materials on the industrial organization of the sound chain, and the general secrecy that accompanies most high-profile films in production, imposes a serious limit on the depth of my inquiry. Thus, my conclusions,

while not final, are based on the accumulation of available empirical data gathered in the field, from industry publications, and close film analyses.

This raises the delicate issue of intention, especially given the practitioner-based focus of this study.⁴⁵ Many accounts of film style and practice have largely ignored input from filmmakers, preferring instead to draw conclusions from the film text. Indeed, there are some circles within film studies that harbor a skeptical attitude toward artistic intention, since it can neuter the interpretive capacity of academic scholars. Patrick Keating synthesizes the argument in this way: “It could be objected that intentions are ultimately irrelevant to our interpretation of a film. If the intention was successful, then we can see the results in the film. If the intention was unsuccessful, then we cannot.”⁴⁶ Consequently, when asked to explain a particular facet of their film, a director may lie or exaggerate in order to conform to the expectations of critics, scholars, and the general audience. If a critic implies that a particular shot pays homage to another filmmaker, the director may agree even if it was not intentional. At the same time, filmmakers have expressed a similar distrust toward academic authors and the degree to which “they graft meaning where there is none to be had.”⁴⁷

Given the importance of social interaction and the development of sonic devices and functions to this study, intentionality can provide a measure of instruction if it is understood as a method of *process*. Consider, once again, the Foley artist’s decision to use uncooked lasagna noodles and a wet chamois cloth to approximate the sound of a bone snap. The intention was to fabricate an altogether new sound for a very familiar action. Even if she never properly formulated the intention as an articulated goal, her decision nevertheless reflects a set of ideologies and occupational mandates that are

common among other Foley artists. In this way, intentions can reveal conventions of practice in a manner that can expand our understanding of Hollywood filmmaking at the levels of institutional discourse and practice.

Of course, no single study of current Hollywood production practice and its aesthetic systems can account for all the ways filmmakers work. There are countless variations in working styles, social relationships, and aesthetic preferences among the thousands of Hollywood practitioners that it would be an oversimplification, not to mention a deep misrepresentation, to assign an entire industry a particular working method. Even though I have found strong consistencies among the working conditions and patterns of sound practitioners, this work does not presume to catalogue every conceivable craft practice, working method, or stylistic system of the modern sound production complex. This project offers up a series of assumptions about how practitioners make sense of their work and how their decisions inform the stylistic character of their films and the structure of their community. It represents a model of analysis that allows us to consider how professional dynamics can shape the aesthetic goals of the medium. Bill Varney, a veteran re-recording mixer and former vice-president of Sound Operations at Universal, has stated:

...there are no formulas or universally accepted principles to rely on when it comes to making aesthetic choices. A student must realize that there is no single way to design a soundtrack. There are only *approaches* that work in different situations, at different times for different reasons.⁴⁸

Precisely because there are “only approaches” to sound track design, my methodological precept makes possible an examination of sonic devices, institutions, and practices in the current cinematic moment.

The key assumption of this method is that the formal devices of film sound, along with the variety of their functions, can be productively understood as a result of the social conditions of its making. Given that most Hollywood films offer various combinations of devices that serve different ends, we should avoid an approach that predetermines the meaning of certain functions. Instead, we should be sensitive to the ways in which the artistic process structures the artwork’s representations of space and time in addition to its unique formal patterns and textures.

Modern Sound Historiography

So far, I have outlined a method of analysis that attempts to bridge a divide between theory and practice and arrive at a middle-level research program where film form can be understood as an outgrowth of specific craft practices. It is important to point out, however, that this project benefits from several existing studies of sound production and style that consider such things as conventions, functions, technical devices, narrative, and the aesthetic character of modern film sound. In this section I would like to examine how these issues have been contextualized in other works, particularly those by sound practitioners Randy Thom and Walter Murch, and historians Gianluca Sergi, William Whittington, Mary Ann Doane, James Lastra, and Vincent LoBrutto. While not exhaustive, the following review represents an attempt to spotlight the major works that

have shaped my own approach to the sound track, and to specify how my own study can offer a new contribution to the historical literature.

Among the various creative divisions in the modern Hollywood system, sound professionals have made serious attempts to discuss their craft with members of their own community and to academic researchers by publishing articles on the theoretical and practical art of Hollywood sound production. Chief among the contributors have been Randy Thom and Walter Murch, who have sought to clarify the roles of sound editors and mixers in the production process and advocate for a greater understanding of sound design as an integral component to the cinematic experience.⁴⁹ The professional writings of Thom and Murch, as well as Larry Blake and Gary Rydstrom, have challenged commonly held assumptions about the role of sound in motion pictures by articulating the creative process of sound design.⁵⁰ Appearing in the pages of academic film journals and trade magazines, these sound practitioners recognize the invisible status of their work to audiences and fellow filmmakers, which has led them to describe the conceptual nature of their work and the problems and solutions that accompany their job. A natural byproduct of this discussion has been the exchange of ideas between practitioners and researchers.

Thom's 1998 essay, "Designing a Movie for Sound," provocatively suggests that filmmakers spend too little time thinking about how sound and music will function in their film. Not surprisingly, the essay has become a manifesto of sorts for the sound community and among sound scholars. Thom takes aim at filmmakers who fail to recognize the expressive qualities of sound, and how valuable a sound professional's perspective can be in the early stages of production. He writes:

What I propose is that the way for a filmmaker to take advantage of sound is not simply to make it possible to record good sound on the set, or simply to hire a talented sound designer/composer to fabricate sounds, but rather to design the film with sound in mind, to allow sound's contributions to influence creative decisions in the other crafts.⁵¹

Thom addresses the problems facing sound practitioners today by offering practical solutions to large-scale narrative, stylistic, and institutional issues. Similarly, Walter Murch has lectured and published on the psychoacoustics and philosophical qualities of film sound.⁵² Writing in the foreword to Michel Chion's book, *Audio-Vision*, he challenges the assumption that image and sound are separate domains, suggesting that "we do not *see* and *hear* a film, we *hear/see* it."⁵³ Largely influential in the film sound community, these two figures have also become prominent among film scholars for their examinations of the metaphorical, symbolic, and stylistic functions of the audio-visual apparatus. In fact, the prescient observations made by Thom and Murch about the second-tier status of sound essentially mirror the "sound matters" arguments of some contemporary sound scholars.⁵⁴

One of the most insightful accounts of modern sound practices is offered by Gianluca Sergi in *The Dolby Era: Film Sound in Contemporary Hollywood*. In its relatively short length, Sergi's monograph emphasizes the aesthetic and theoretical challenge that sound has posed to film scholars who have sought to describe the impact of sound technology and aesthetics on the cinematic experience. In his attempt to push the scholarly conversation forward, Sergi proposes a bridge between theory and practice that situates the modern sound track as a site of profound technological and aesthetic

change. In some sense, his project is one of recuperation. With modern sound practice at the heart of his study, he argues that to understand why practitioners use sound in certain ways, and how those decisions become concretized in convention, sound studies must recognize the place of sound as an equal to the image. Consequently, Sergi works from a defensive position in which he attempts to neatly summarize and categorize the myriad ways film sound has been investigated and (poorly) understood by academic film studies and, more recently, cultural studies. In this way, Sergi's project goals are different from mine, but it is still worthwhile to consider how he conceptualizes a refashioned study of film sound.

For Sergi, the Dolby era represents the recognition of sound professionals as artists and creative agents. Describing the transition from the classical to the modern era, he writes:

One of the defining features of the Dolby era has been the development of professional figures old and new. In the pre-Dolby era, sound credits were conventionally attributed to a single figure, usually a 'sound engineer.' This was customarily the head of the sound department within any given studio. ... The arrival of the new generation of sound men and women whose work in the 1970s was crucial in establishing Dolby as a creative and technical force has since then challenged the established patterns of production as well as existing views on the nature of sound work.⁵⁵

Sound editors and mixers such as Ben Burt and Walter Murch created, in Sergi's view, a political movement "in raising awareness of the creative contribution that sound people bring to a movie."⁵⁶ Although he points out that critics have tended to elevate these sound artists to auteur status, Sergi argues that sound men and women of the 1970s and 1980s were industry trailblazers for showcasing the creative autonomy and artistic value of

sound editors, recordists, and mixers. Working in a greater creative capacity than the “technicians” that preceded them, the “sound designers” of the Dolby era “can be most usefully compared to that of the production designer,” which in turn spotlights the sound practitioner as an arranger of sound objects in a physical space.⁵⁷

More than anything else, however, Sergi aims to highlight the fact that sound “is an integral part of analysis and research.”⁵⁸ This is accomplished by offering up a set of conditions for analysis that can inspire new ways of understanding sound and new methods for studying it. He points to four categories that can enhance our understanding of modern sound: orchestration, focus, contrast, and definition. All four groups begin with the belief that contemporary sound tracks are complex constructions that require practitioners to strategically place sounds in a wide sound field. Hundreds, even thousands, of individual sounds are prepared for the final mix at which time they must be married to the image in a cohesive, logical, and comprehensible fashion. If we continue the production design analogy, sound editors and mixers must dress the sound space in a way that complements the narrative action in addition to serving additional stylistic demands.

These four elements are intrinsically linked to the concept of balance. Mixers orchestrate dialog, music, effects, and silence in order to strike an appropriate sonic balance within a mix. Focus, contrast, and definition emphasize the choices that practitioners make in order to create the *right* sound for a particular moment. Perhaps a mixer will spotlight a single sound effect in order to focus attention to a particular visual element, or crowd the sound track with a shock of voices. These elements point up the endless questions with which editors and mixers are faced: What sounds should be

emphasized? How much is too much? Where should sounds be placed in the surround array? In each case, Sergi introduces a positive way of not only conceptualizing the relationship between sound and image, but also between sound and practitioner. By articulating the dynamic nature of sound, he implicitly acknowledges the decisions, problems, and solutions that define what makes it into the final mix of a film.

While he places less emphasis on the social and creative organization of sound work, Sergi's method of analysis, which is never truly tested in his own work, offers a great deal to my own project. Ultimately, my research questions are quite different. Sergi's recuperative tone suggests that he is less interested in investigating the organizational and aesthetic nuances of the sound industry than he is in isolating the value of sound analysis for film scholars. This allows Sergi the methodological space to propose a variety of inroads without testing them against observational or textual frameworks. In this sense, Sergi has cast a very wide conceptual net in hopes of building a new theory of sound design from older methods, including psychoanalytic, auteurist, and materialist positions. He offers what amounts to an instructive template that forsakes an investigation of sound style in favor of outlining new modes of listening. My own project will consider how orchestration, focus, contrast, and definition are by-products of the solutions posed by sound practitioners and borne out of their task structures and social relationships.

Another scholar who has considered the shifting aesthetics of modern film sound is William Whittington, in his book *Sound Design and Science Fiction*. As his title suggests, Whittington is concerned with the development of modern sound practices within the science fiction genre. Specifically, he is interested in investigating the rise of

“sound design” as an aesthetic, technological, and cultural concept that is most acutely associated with science fiction films such as *Star Wars* (1977) and *The Matrix* (1999). In effect, Whittington argues that modern film sound has been shaped by a myriad of aesthetic, technological, and cultural factors that coalesce with the development of the “sound designer” in Hollywood film production. He writes, “The choices that sound designers make are not simply a matter of industrial requirements. Rather, they are commingled with considerations of storytelling, genre, aesthetic impact, and personal sensibilities.”⁵⁹ In effect, Whittington considers the rise of sound design in relation to the development of the modern science fiction film, which he suggests, has historically been a site for aesthetic and technical innovation, especially in the realm of visual effects. Above all, he is intent on demonstrating the creative potential of sound design in a genre that, in his words, “activates” our understanding of cinema and sound.⁶⁰

At the heart of Whittington’s analysis is a multifaceted description of the term “sound design.” Assessing the viability of the term, Whittington identifies three interconnected meanings that offer a great deal of historical perspective to my own conception of the sound chain. First, sound design refers to the creation of special sound effects by editors and re-recordists such as Ben Burtt and Walter Murch, who, in the 1970s, essentially collapsed the roles of recordist, editor, and mixer to experiment with sound in innovative ways. Second, the term refers to the overall conceptual design of a sound track by an individual “designer” or team of sound practitioners. This involves a comprehensive mapping of the sound space, where music, voice, and effects are carefully woven into a film’s overall narrative and aesthetic fabric. Third, sound design can be tied to the multidimensional aspect of exhibition, especially with the standardization of

multichannel formats in theaters and home cinemas. The placement of sounds within a discrete multichannel environment allows for the manipulation of sounds across an array of speakers in front of and behind the audience. Together, these definitions constitute a critical framework with which Whittington studies the patterns of sound in science fiction.

In each of its dimensions, the concept of sound design figures prominently in the way that contemporary practitioners conceptualize their work. Sonic conventions are worked out by teams of professionals who thoughtfully and artfully “design” the sound track much the same way that painters create works on canvas. In this way, Whittington’s project goals overlap with my own. For Whittington, Hollywood sound design is a historically determined discourse, intimately tied to the demands of narrative. The perceived aesthetic unity of sound style is the result of the sound artist’s desire for balance, which is symptomatic of the aesthetic ideology that dominates classical Hollywood film practice. But at the same time, sound designers are motivated by an inner artistic desire to experiment, challenge norms, and paint with sound in ways that convey narrative information in new ways. The discourses of norms and deviations are reconciled, to some extent, in the sound design metaphor. Whittington writes, “The concept of sound design has proven mutable, metaphoric, and, at times, elusive in terms of its analysis, having transformed from an experimental stylistic movement in film form to a unique model of production and critical evaluation.”⁶¹

Despite this overlap, my project differs from Whittington’s analysis in three distinct ways. First, and most obviously, while Whittington has confined his study to the science fiction genre, I hope to offer a more comprehensive account of sound form and

practice across a variety of genres. In fact, I will show that genre classification represents a rather narrow way of exploring the codes and conventions of sound design. Most practitioners are versed in the sonic iconography of different genres, but they do not always think in terms of genre. A mixer may begin his day working on a horror film and end his day mixing a romantic comedy. Although the science fiction genre has been the site of some of the more aesthetically daring sound tracks in the past forty years, I will argue that all genres present unique challenges and opportunities to practitioners; in fact, they are less inclined to work within genre codes if it means creating a unique sonic identity for a particular film.

Second, I hope to broaden the concept of sound design by investigating the processes of sound production that account for how designers, editors, and mixers actually make sense of their work. Whereas Whittington is primarily interested in exploring the ways in which voice, music, and effects can influence issues of intimacy, identity, and authority within the narratives of seven case study films, my own project treats the film text not as the primary source of evidence, but as one piece of the artistic puzzle. In one sense, the elusive character of sound design can be clarified by examining how filmmakers envision their work, and go about the process of making decisions and constructing a comprehensible sound track. Moreover, it is also important to expand the definition of sound design to account for the different roles of designer, editor, and mixer. To collapse the various responsibilities into one term needlessly blurs the distinction of sound work among editors, designers, and mixers. As Randy Thom has noted, “The supervising sound editor or supervising sound designer is like the production designer or art director. All those jobs are about assembling material that may be useful eventually.

The mixer is analogous to the cinematographer. That job is about deciding what to focus on from moment to moment and how to filter that focus.”⁶²

Third, Whittington couches his analysis in the zones of classical and contemporary sound theory, which has the effect of offsetting the social and practical implications of sound design in the industry. While it is important to acknowledge how theory can set in relief the dynamics of sound design, it is equally significant to recognize the institutional characteristics of film production that often fall outside the purview of theory. Whittington bypasses a strictly stylistic investigation of function and convention in favor of addressing how contemporary practices are not served by traditional sound theory. He writes:

For the most part, traditional sound theory does not envision the complex production capabilities of the modern dubbing stage, or the use of multichannel sound formats, but rather focuses on realism and all too often the ‘need’ for sound.⁶³

In some sense, Whittington is outlining a theory of modern sound practice that supports the ways in which contemporary film theory has classified the sound track. He elaborates:

In contemporary Hollywood cinema, production considerations for film sound construction are as intricate as they are vast, ranging from microphone positioning, which can infuse a recording with codes of intimacy or isolation, to re-recording, which can focus or emphasize a sound through filtering and volume manipulation. These factors are important because they provide the architecture for sculpting a sound.⁶⁴

This argument follows from similar claims made by John Belton, Mary Ann Doane, and James Lastra. What ties the work of these theorists together is their treatment of film

sound as a constructed event. The final form of any Hollywood sound track is composed of hundreds of individual sonic elements that are combined to resemble an original event.

The layered approach creates the illusion of an original recording without actually capturing the profilmic event live. John Belton elaborates:

The sound track does not duplicate the world set before it; it realizes an imaginary world, endowing the space and objects within the story space another dimension that complements their temporal and spatial existence as *representations*.⁶⁵

It is fitting, then, that sound mixers refer to the initial stage of sound post-production as “the first assembly.” That is when all the sounds from various departments – Foley, field recording, on-set recording, ADR – are brought together to be mixed. Consequently, the bounds of sound theory remain relatively fixed. As Whittington ably demonstrates in his own analysis, contemporary theorists have isolated the processes of production from actual practice. Working within these parameters, Whittington does not extend the conversation as much as he supplements the narrow conception of sound recording and representation with fresher case studies.

However, the importance of modern sound theory to my own study cannot be underestimated. The work of Mary Ann Doane is especially influential, even though she too conceives of sound production as an undifferentiated process. In her seminal article, “Ideology and the Practice of Sound Editing and Mixing,” Doane argues that classical Hollywood sound practices attempted to naturalize the perceived image/sound track disjuncture by emphasizing synchronization, fullness, and continuous flow. Drawing on the work of Jean-Louis Comolli, Doane suggests that Hollywood sound editing and

mixing participates in a process of technical effacement that supports the bourgeois notion that sound and image are guarantors of reality. To accomplish this, sound engineers worked to create an illusion of presence that smoothes out the rough edges of the manufactured track.⁶⁶

Despite the persuasiveness of Doane's argument, her theoretical model tends to abstract decision-making on the premise that filmmakers uniformly hide the process of a film's constructed nature. James Lastra addresses this argument in his own book-length study of classical sound practices, *Sound Technology and the American Cinema: Perception, Representation, Modernity*. As the subtitle indicates, Lastra conceives of early sound practices as obeying a highly representational model of sound space, whereby sound is narratively prioritized: reverberation and background sounds are minimized so dialog or other narratively motivated elements can dominate the track.⁶⁷ Lastra shows how sound engineers manipulated sound space in order to conform to the visual strategies of Hollywood cinematography and editing. Like Doane, he argues that engineers were largely motivated by the representational demands of the classical paradigm that privileged compositional unity and story comprehension. He writes, "The Hollywood mode of representation ensured its dominion much more subtly and pervasively by encouraging individuals and groups to accommodate themselves to and finally internalize its own historical norms in the guise of their own scientifically and aesthetically derived necessities or standards."⁶⁸ After some debate and experimentation, early sound engineers, culled largely from the phonograph industry, instituted a system of reproduction and representation that privileged an "ideal auditor," which had the net effect of hierarchizing sound elements: "it became the norm *not* to match visual and

acoustic ‘scale,’ *not* to locate the microphone with the camera, *not* to respect the acoustics of the space of production, and *not* to offer a perceptually based ‘coherent point of audition’ with which the spectator could identify.”⁶⁹ In this way, Hollywood engineers internalized some of the representational functions of the classical paradigm that resulted in a sound track that was constructed out of bits of different sound elements rather than one that represented an original, perspectival recording.

Although both Doane and Lastra investigate the functional specificity of classical Hollywood sound practices by reviewing technical papers in the *Journal of the Society for Motion Picture and Television Engineers*, they are more concerned with an evaluation of sound technology as a consequence of modernity rather than its everyday use by filmmakers. This is particularly evident in the way both authors circumvent a discussion of artistic process in favor of an overly generalized account of how cultural and perceptual ideology shapes the representational nature of film sound. Raymond Williams has offered a similar criticism of this kind of ideological analysis in cultural criticism:

One thing that is evident in some of the best Marxist cultural analysis is that it is very much more at home in what one might call *epochal* questions than in what one has to call *historical* questions. That is to say, it is usually very much better at distinguishing the large features of different epochs of society, as commonly between feudal and bourgeois, than at distinguishing between different phases of bourgeois society, and different moments within those phases...⁷⁰

Notwithstanding the trailblazing features of these two theoretical works, I hope, by exploring issues of aesthetic function and social organization to achieve a more comprehensive understanding of contemporary style and occupational ideology within

this profession. In my view, we gain an operational understanding of the sound industry by considering the social relationships and working styles of sound professionals at the level of practice.

My attempt to redress the balance between sound theory and practice has been influenced by various ethnographic studies of filmmakers and sound professionals in Hollywood and the adjacent music industry, including Vincent LoBrutto's interview compendium, *Sound-on-Film: Interviews with Creators of Film Sound*.⁷¹ However, LoBrutto's work is not anchored by a broad research program but tries instead to "allow those who work in film sound to speak in their own voices."⁷² The net effect of this work is that it reveals much about the mechanics of film sound creation without the benefit of a rigorous historical framework that can effectively contextualize the form and function of modern Hollywood sound track construction.

All of these works have contributed to an understanding of film sound as an element of craft practice, but none have provided an adequate snapshot of the contemporary landscape of sound production and style within Hollywood filmmaking. Addressing the conditions of artistic practice as a narrative that shapes particular elements of film style can offer a particularly novel way of redressing the balance between sound theory and practice. My hope is that this dissertation can make an original contribution to the history of social organization and craft practice within the modern Hollywood sound industry. If nothing else, this project collects valuable testimonies from contemporary sound professionals on the nature of their work in commercial filmmaking.

With the methodological groundwork laid out here, I hope to provide a valuable approach to the study of the intersections between sound style and practice in the

contemporary Hollywood sound chain. The strengths of the poetic and interactionist approach allow, at the very least, for a more nuanced and comprehensive understanding of the social and aesthetic character of the industry in question. To study the social organization, occupational structures, and stylistic preferences of the sound community is an essential component to understanding the aesthetic conventions, stylistic processes, and workflow structures of the modern Hollywood sound industry.

Notes

¹ Howard S. Becker, "Art as Collective Action," *American Sociological Review* 39.6 (December 1974): 767.

² David Bordwell, *Poetics of Cinema* (New York: Routledge, 2008): 12.

³ The most comprehensive account of Bordwell's research program can be found in the eponymous introductory essay in *Poetics of Cinema* (New York: Routledge, 2008): 11-55. For a more wide-ranging and theoretical discussion of film style and practice, see Bordwell's *Making Meaning: Inference and Rhetoric in the Interpretation of Cinema* (Cambridge, Harvard University Press, 1984). See also Bordwell's *On the History of Film Style* (Cambridge: Harvard University Press, 1997); *Planet Hong Kong: Popular Cinema and the Art of Entertainment* (Cambridge: Harvard University Press, 2000); *Figures Traced in Light* (Los Angeles: University of California Press, 2005); and *The Way Hollywood Tells It: Story and Style in Modern Movies* (Los Angeles: University of California Press, 2006).

⁴ David Bordwell, Janet Staiger, and Kristin Thompson, *The Classical Hollywood Cinema: Film Style and Mode of Production to 1960* (London: Routledge and Kegan Paul; New York: Columbia University Press, 1985).

⁵ Technical devices can include filmmaking tools such as camera angles, lighting strategies, lens options, staging, color, and sound.

⁶ See Peter Krämer, "Post-Classical Hollywood" in John Hill and Pamela C. Gibson, eds., *The Oxford Guide to Film Studies* (Oxford: Oxford University Press, 1998): 296. See also Justin Wyatt, *High Concept: Movies and Marketing in Hollywood* (Austin: University of Texas Press, 1994).

⁷ Richard Maltby and Ian Craven, *Hollywood Cinema* (Cambridge, Mass: Blackwell, 1995): 35.

⁸ Kristin Thompson, *Storytelling in the New Hollywood: Understanding Classical Narrative Technique* (Cambridge: Harvard University Press, 1999): 347-348.

⁹ André Bazin, "La Politique des Auteurs," in Peter Graham, ed., *The New Wave* (New York: Doubleday: 137.

¹⁰ Jim Hillier, *The New Hollywood* (New York: Continuum, 1994): 18.

¹¹ Douglas Gomery, "The American Film Industry in the 1970s: Stasis in the 'New Hollywood,'" *Wide Angle* 5.4 (1983): 52-54.

¹² Murray Smith, "Theses on the Philosophy of Hollywood History," in Steve Neale and Murray Smith, eds., *Contemporary Hollywood Cinema* (London: Routledge, 1998): 14.

¹³ See, for instance, Scott Higgins, *Harnessing the Technicolor Rainbow* (Austin: University of Texas Press, 2007); Charles O'Brien, *Cinema's Conversion to Sound: Technology and Film Style in France and the U.S.* (Bloomington: Indiana University Press, 2005); Patrick Keating, *Hollywood Lighting from the Silent Era to Film Noir* (New York: Columbia University Press, 2009); Jeremy Butler, *Television Style* (London: Routledge, 2009); Warren Buckland, *Directed by Steven Spielberg: Poetics of the Contemporary Hollywood Blockbuster* (New York: Continuum, 2006).

¹⁴ Bordwell, *Poetics of Cinema*: 53.

¹⁵ Leonard B. Meyer, "Toward a Theory of Style," in Berel Lang, ed., *The Concept of Style: Revised and Expanded Edition* (Ithaca: Cornell University Press, 1987 [1978]): 31.

¹⁶ Quoted in David Bordwell, *On the History of Film Style*: 150.

¹⁷ Bordwell, *On the History of Film Style*: 154.

¹⁸ Tom Kenny, "Audio Technologies for Film: Part One: Production Sound," *Mix* (January 1993): 141.

¹⁹ I borrow this term from David Bordwell. See his introductory essay in *Poetics of Cinema*: 11-55.

²⁰ See David Poland's DP/30 website (<http://moviecitynews.com/dp30/>) that offers 30-minute video interviews with American filmmakers at all levels of production, and SoundWorks Collection, which offers video interviews with creators of film sound (<http://soundworkscollection.com/>). Accessed: 1 Mar. 2011.

²¹ Robert Merton, *Social Theory and Social Structures* (New York: Macmillan, 1968): 39.

²² An introduction to the sociological tradition can be found in Howard S. Becker and Michal M. McCall, eds., *Symbolic Interaction and Cultural Studies* (Chicago: University of Chicago Press, 1990). See also Charles Kadushin, "Networks and Circles in the Production of Culture," *American Behavioral Scientist* 19 (July 1976): 769-784; Edward R. Kealy, *The Real Rock Revolution: Sound Mixers, Social Inequality, and the Aesthetics of Popular Music Production*, Ph.D. dissertation, Northwestern University (1974).

²³ Bruno Latour and Steve Woolgar, *Laboratory Life: The Social Construction of Scientific Facts* (London: Sage Publications, 1979). See also Samuel Gilmore, "Art Worlds: Developing the Interactionist Approach to Social Organization" in Howard S.

Becker and Michal M. McCall, eds., *Symbolic Interaction and Cultural Studies* (Chicago: University of Chicago Press, 1990): 148-178.

²⁴ The literature on occupations and social structure is wide and diverse, but a good starting point is Richard H. Hall, *Occupations and the Social Structure*, Second Edition (Englewood Cliffs, NJ: Prentice-Hall, 1969), and Paul D. Montagna, *Occupations and Society* (New York: Wiley, 1977).

²⁵ Becker and McCall, "Introduction," *Symbolic Interaction and Cultural Studies*: 6. Emphasis in original.

²⁶ See Howard S. Becker, "Art as Collective Action," *American Sociology Review* 39.6 (December 1974): 767-776; Becker, "The Culture and Career of the Dance Musician," in Charles Nanry, ed., *American Music* (New Brunswick, NJ: Transaction, 1972): 65-98.

²⁷ Randy Thom, "Meet the Winners" Question/Answer event sponsored by the Cinema Audio Society on the occasion of Thom receiving the Society's Career Achievement award. February 28, 2010.

²⁸ Howard S. Becker, "Art as Collective Action": 772; Leonard Meyer, "Toward a Theory of Style": 21.

²⁹ Leonard B. Meyer, *Style and Music: Theory, History, and Ideology* (Chicago: University of Chicago Press, 1989): 20.

³⁰ Becker, "Art as Collective Action": 772.

³¹ On the "continuity thesis," see Murray Smith, "Theses on the Philosophy of Hollywood History," and Elizabeth Cowie, "Storytelling: Classical Hollywood and Classical Narrative," both in Steve Neale and Murray Smith, eds., *Contemporary Hollywood Cinema* (London: Routledge, 1998): 3-20; 178-190.

³² Robert Faulkner, "Swimming with Sharks: Occupational Mandate and the Film Composer in Hollywood," *Qualitative Sociology* 1.2 (1970): 99-129; Robert Faulkner, *Music on Demand: Composers and Careers in the Hollywood Film Industry* (New Brunswick, NJ: Transaction, 2008 [1983]). See also Robert Faulkner, *Hollywood Studio Musicians: Their Work and Careers in the Recording Industry* (Chicago: Aline-Atherton, 1971).

³³ A composer's track record is usually determined by the critical and box-office success of their film projects.

³⁴ Faulkner, "Swimming with Sharks": 129.

³⁵ *Ibid.*: 125.

³⁶ Faulkner, *Music on Demand*: 122.

³⁷ Sound professionals receive “below the line” status, which usually means their screen credit appears in the end title crawl as opposed to a film’s main opening titles.

³⁸ Quoted in Fluhr, “Randy Thom: A Master of the Craft”: 17.

³⁹ Faulkner, “Swimming with Sharks”: 100.

⁴⁰ Hortense Powdermaker, *Hollywood: The Dream Factory* (Boston: Little, Brown and Company, 1950).

⁴¹ Appendix B provides a list of the practitioners interviewed and consulted for this dissertation.

⁴² Howard S. Becker, Robert R. Faulkner, and Barbara Kirschenblatt-Gimblett, eds., “Editors’ Introduction: Art from Start to Finish,” *Art from Start to Finish: Jazz, Painting, Writing, and Other Improvisations* (Chicago: University of Chicago Press, 2006): 12.

⁴³ Throughout this dissertation I use the term “mandate” in a manner that describes the ways in which professionals organize and think about their work. My appropriation of the term derives from Everett C. Hughes’ conceptualization of occupational identity and professional practice. See Everett C. Hughes, *The Sociological Eye* (New Brunswick, N.J.: Transaction, 1984 [1971]): 283-297.

⁴⁴ Kristin Thompson, *Breaking the Glass Armor: Neoformalist Film Analysis* (Princeton, NJ: Princeton University Press, 1988): 11.

⁴⁵ A useful source for the study of intention in art is Michael Baxandall, *Patterns of Intention: On the Historical Explanation of Pictures* (New Haven: Yale University Press, 1988).

⁴⁶ Patrick Keating, *The Rhetoric of Light: Discourse and Practice in Hollywood Cinematography, 1931-1940*, Ph.D. dissertation, University of Wisconsin, Madison (2004): 11.

⁴⁷ Larry Blake, “Reading Film Sound,” *Mix* (March 2003): 84.

⁴⁸ John Michael Weaver, “Studying the Art of Soundtrack Design,” *Mix* (July 1991): 34.

⁴⁹ A collection of essays written by Randy Thom and Walter Murch appear at Sven E. Carlsson’s www.filmsound.org website. See [<http://www.filmsound.org/murch/murch.htm>] and [<http://www.filmsound.org/randythom/>]. Accessed 1 Mar. 2011.

⁵⁰ Of these authors' many writings, the following represents a very small sampling of their work: Randy Thom, "Designing a Movie for Sound." *Soundscape: The School of Sound Lectures 1998-2001* (London: Wallflower Press, 2003): 121-137; Walter Murch, "Dense Clarity/Clear Density," Transom.org: a showcase and workshop for new public radio [http://transom.org/?page_id=7006]. Accessed March 1, 2011; Walter Murch, *In the Blink of an Eye*, 2nd Edition (Los Angeles: Silman-James Press, 2001 [1995]); Gary Rydstrom, "Addendum: The Use of Surrounds in Saving Private Ryan" in Tomlinson Holman, *5.1 Surround Sound: Up and Running*, Second Edition (Amsterdam: Focal Press, 2008): 195-200; Larry Blake, *Film Sound Today: An Anthology of Articles from Recording Engineer/Producer* (Hollywood: Reveille Press, 1984).

⁵¹ Thom, "Designing a Movie for Sound": 123.

⁵² See, for example, Michael Ondaatje, *The Conversations: Walter Murch and the Art of Editing Film* (Toronto: Vintage Canada, 2002); Walter Murch, "Touch of Silence," in Larry Sider, ed., *Soundscape: The School of Sound Lectures 1998-2001* (London: Wallflower Press, 2003): 83-102; Walter Murch, "Sound Design: The Dancing Shadow," in John Boorman and Walter Donohue, eds., *Projections 4: Film-makers on Film-making* (New York: Faber and Faber, 2002): 237-251.

⁵³ Walter Murch, "Foreword" of Michel Chion, *Audio-Vision: Sound on Screen* (New York: Columbia University Press, 1994): xxi. Emphasis in original.

⁵⁴ See Mark Kerins, *Beyond Dolby (Stereo): Cinema in the Digital Sound Age* (Bloomington: Indiana University Press, 2010); Gianluca Sergi, *The Dolby Era* (Manchester: Manchester University Press, 2004).

⁵⁵ Sergi, *The Dolby Era*: 117.

⁵⁶ Ibid.: 118.

⁵⁷ Ibid.: 145.

⁵⁸ Ibid.: 117.

⁵⁹ William Whittington, *Sound Design and Science Fiction* (Austin: University of Texas Press, 2007): 4.

⁶⁰ Ibid.: 3.

⁶¹ Ibid.: 1.

⁶² Quoted in David Fluhr, "Randy Thom: A Master of the Craft," *CAS Quarterly* (Winter 2010): 17.

⁶³ Whittington: 8.

⁶⁴ Ibid.: 96.

⁶⁵ John Belton, "Technology and Aesthetics of Film Sound." In Elisabeth Weis and John Belton, eds. *Film Sound: Theory and Practice*. New York: Columbia University Press, 1985: 66. Emphasis in original.

⁶⁶ Mary Ann Doane, "Ideology and the Practice of Sound Editing and Mixing," in Elisabeth Weis and John Belton, eds., *Film Sound: Theory and Practice* (New York: Columbia University Press, 1985): 57.

⁶⁷ An article-length version of essentially the same argument appears in James Lasta, "Reading, Writing, Representing Sound," in Rick Altman, ed., *Sound Theory/Sound Practice* (New York: Routledge, 1992): 65-86.

⁶⁸ James Lastra, *Sound Technology and the American Cinema: Perception, Representation, Modernity* (New York: Columbia University Press, 2000): 180.

⁶⁹ Ibid.: 188.

⁷⁰ Raymond Williams, *Problems in Materialism and Culture* (London: New Left Books, 1980): 38. Emphasis in original.

⁷¹ See Vincent LoBrutto, *Sound-on-Film: Interviews with Creators of Film Sound* (Westport, Connecticut: Praeger, 1994). Other ethnographic studies of production cultures that influenced this project include: Thomas Porcello "'Tails Out': Social Phenomenology and the Ethnographic Representation of Technology in Music Making," *Ethnomusicology* 42.3 (Autumn 1998): 485-510; John Thorton Caldwell, *Production Culture: Industrial Reflexivity and Critical Practice in Film and Television* (Durham: Duke University Press, 2009); and Trevor Pinch's *Analog Days: The Invention and Influence of the Moog Synthesizer* (Cambridge: Harvard University Press, 2004). Importantly, my own model does not follow from Porcello, Caldwell or Pinch. Their work mostly provided me with additional ways to contextualize socially determined, observational research.

⁷² LoBrutto: 4.

CHAPTER THREE

The Sound Industry: Flexible Specialization, Studio Reintegration, and Recurrent Transactions

In purely geographic terms, Hollywood proper is a relatively small district lying just to the northwest of downtown Los Angeles. It was in this district that the motion picture industry was initially concentrated in pre-World War II days. Today, the motion picture industry and its appendages spill over and well beyond this original core, stretching out to Santa Monica in the west and into the San Fernando Valley to the north and northwest. This geographic area is the stage over which the main features of Hollywood as a productive milieu are laid out. At the same time, greater Hollywood, the place, is not simply a passive receptacle of economic and cultural activity, but is a critical source of successful system performance.

– Allen Scott¹

Film sound in the 1990s and 2000s represented one component of a much larger system of stability and change within the American film industry. In the wake of a series of destabilizing events (House Un-American Activities Committee [HUAC], the Paramount decision, the rise of television, the replacement of the Production Code by the Motion Picture Association of America [MPAA] ratings system, etc.), the Hollywood studio system underwent an economic and institutional transformation that extended from the 1950s through the 1990s. The social and economic upheavals of the 1950s produced what David Cook has called “deep structural alterations in the way films were conceived, produced, and distributed.”² By the late sixties, the impending cash crisis resulting from a drop in international box-office revenues and decades of overproduction led the studios to

seek outside financing from multi-national companies interested in diversifying their own holdings. These global conglomerates viewed the motion picture business as a good investment, since the studios' shares were undervalued at the time. With better management, studio filmmaking could provide excellent returns on more conservative investments. The trend began when MCA bought a controlling interest in Universal in 1962, followed in 1966 by Gulf and Western's takeover of Paramount Pictures. The turn toward corporate ownership continued into the 1980s, 1990s, and 2000s with some studios being bought and sold several times over. Conglomeration offered cash-strapped studios a new lease on film production, and parent companies the benefits of "synergy," where the diverse holdings of a company (recording, publishing, and merchandising) can be used to market the same commodity.³

There is no doubt that conglomeration resuscitated the major studios' ability to continue to produce films, but it also reconfigured key aspects of the mode of production. Charles Bludhorn's vow to "clean house" at Paramount started a chain reaction among the studios that ultimately shifted how majors functioned in the new climate. Quoted in a 1970 *Life* magazine cover story about the ailing movie business, Bludhorn criticized the management system of the film industry at that time, insisting, "Hollywood is not Fort Knox."⁴ Studios could not afford to maintain the massive overhead that once characterized their operation. In a very short time, Bludhorn aimed to strip Paramount of all non-essential departments and assets. The historic Paramount back lot was sold, actors were cut from payroll, and the studio's vast pre-production and post-production facilities were gutted and sold for parts. The pictorial spread in *Life* included images of the studio's costume and prop department sitting dormant, hundreds of weapons, uniforms,

dressess, and other production materials in a virtual scrapheap. Stanley Jaffe, the company's Chief Operating Officer, noted at the time, "We want to cut down this company until we have an organization that can support 12 to 15 pictures a year."⁵ In all, Jaffe reduced the company payroll from hundreds of employees to a mere twenty-five. Other studios soon followed suit, slashing budgets and eliminating craft departments in a bid to create a leaner production system.

Almost from their inception, the major Hollywood studios were characterized for assuming control of nearly every aspect of film production. At the height of the studio era, most films were written, prepped, shot, edited, and scored within the walls of the major studios. Aside from the soundstages and back lots that took up a sizeable portion of studio space, the majors employed hundreds of craftspeople, artisans, musicians, technicians, and engineers in various departments: costumes, props, lighting, makeup, music, editorial, sound, film processing, and in some cases technological research and development. The collaborative nature of this production process, where labor and responsibilities are divided among a group of workers in a centralized environment, has been described as "serial manufacturing" by film historians who borrowed the term from Karl Marx.⁶ Serial manufacturing involves the production of an object – in our case, a film – that moves through "connected phases of development." In this way, studio craftspeople applied specialized skills to a particular aspect of a film, relying on other specialists to complete the process. By contrast, the production model proposed by Gulf and Western executives in 1966 and replicated at other studios throughout the 1970s sought to reconfigure this approach. As the move away from mass production deepened in the seventies, the majors were no longer self-contained entities, and could no longer

afford to plan a large slate of projects in advance. The industrial shift that turned the major studios into occasional financiers and full-time distributors effectively limited a studio's involvement with a film project, leaving independent producers, talent agents, writers, and directors to shepherd a film through the various stages of development.

Despite seismic changes to the corporate organization of the film industry and the switch to fewer, more specialized film projects, the structural hierarchy of the Hollywood mode of production has remained remarkably stable. At the outset of production, filmmakers hire the production sound crew for the duration of the shoot. During pre-production or in the early stages of production, the supervising sound editor is brought on to begin work conceptualizing the sound track. The sound supervisor will also provide the filmmakers with a budget for the post sound requirements, including requests for the other members of the sound chain needed to complete the project. Among the sound supervisor's immediate network of colleagues are assistant sound effects editors, dialog editors, ADR supervisors, Foley artists, and re-recording mixers. The sound supervisor usually fills these positions unless the filmmakers have specific requests or ongoing relationships with other crew members, in which case the supervisor will cede managerial control to the producers, studio, and/or director.

As studios shifted from vertically integrated businesses to fountainheads of financial and coordination services, existing craft unions and guilds became labor pools, supplying independent producers with the practitioners, artisans, and technology required for film production. Some scholars have argued that independent facilities became "shock absorbers" for major producer/distributors, "by attracting risk capital and creative talent which the majors can then exploit through their control of distribution."⁷ Matthew

Bernstein has already shown that semi-independent production in the studio era was largely subsidized by the majors, and functioned in very much the same way as studio unit-productions.⁸ Semi-independent productions ensured that studios profited from distributing a successful film, but avoided much of the costs associated with developing a film property. Thus, the explosion of package productions in the 1970s can be traced to studio practices in the decades leading up to the ultimate collapse of vertical integration.

In this chapter, I explore the key changes to Hollywood sound production from the end of vertical integration to the emergence of independent sound editorial and mixing facilities in the Los Angeles area in the 1970s and 1980s. More crucially, I examine the effects of studio reintegration on the independent sound industry through the 1990s and 2000s. Throughout these periods of stability and change, Hollywood sound professionals essentially become freelance practitioners, dependent on recurring relationships with filmmakers and studios for a steady and profitable career. During the last few decades, sound editors and mixers have sought to create distinct professional identities to compete in the freelance production system. One of the ways sound practitioners have distinguished themselves has been through the creation of sound effects libraries, which, in turn, grew out of the need for new effects recordings after the dissolution of major studio sound facilities. Most obviously, the breakdown of the old studio system had a profound impact on the occupational mandates and task structures of Hollywood sound professionals, and contributed to the development of a new kind of sound practitioner: the flexibly specialized professional.

Flexible Specialization and Client Dominant Work

A critical moment in this reorganization was the development of industrial districts in Southern California that supplied major studios and independent producers with an assortment of technical services on short-term contracts. Following the expulsion of some production personnel from the majors, the role of independent, specialized firms was greatly enhanced. These independent services, or “houses,” pooled talent in a myriad of fields, including set design and construction, visual effects, costumes, picture editing, film and video development and mastering, props, sound editing and mixing, and so on. Significantly, the vertically disintegrated partnerships between craft professionals, filmmakers, and business leaders have shaped the production model in Hollywood for nearly forty years. All of these sectors are symbiotically bound to each other in a form of industrial organization that Susan Christopherson and Michael Storper have called “flexible specialization.”⁹ Hollywood firms and craftspeople provide specialized services to filmmakers, studios, and independents but remain flexible to changes in workflow, professional relationships, and skills. Since the single film project is at the core of this relationship, these specialized units must ensure long-term viability by adapting to market changes, stylistic trends, and new technologies. A sound effects editor in the studio era used studio-owned equipment, and applied a set of techniques that were common among other editors at that particular studio. Now, the same sound editor may own her equipment, and be known for achieving certain unique effects through her recording and mixing techniques, which sets her apart from the competition. Conventionalization, or the ability to apply commonly used techniques, is also a valuable skill for the freelancing

practitioner, especially when dealing with a short schedule or a filmmaker looking for fashionable, augmented materials as opposed to something more innovative.

Consequently, the post-war industrial shift towards flexible specialization had a profound impact on the task structures of the Hollywood sound professional. Most crucially, the dissolution of studio sound departments meant that production mixers, boom operators, sound editors and re-recording mixers, as well as other sound technicians, became freelancers. While some sound professionals carried on in reduced capacities at major studios, most were retired by upper management. According to re-recording mixer Richard Portman, “The town became a rental house. The studio shut down, it laid off all their people, and you just rented it. All the sound people became jobbers; like running a lawn service. We lost our home, essentially.”¹⁰

Studies of craft norms in the post-studio era have shown that the technical skills of sound practitioners expanded dramatically as a result of the freelancer’s need to distinguish him or herself from others in the field.¹¹ Going independent may have meant that industry centralization was lost, but it opened the door for editors and mixers to experiment with new aesthetic techniques. Although the sound industry had begun to fragment, Jay Beck suggests that there existed a sense of camaraderie and aesthetic sharing between practitioners at different independent houses.¹² Around the same time, a number of independent equipment manufacturers began operating in the Los Angeles area as the studio equipment houses were liquidated. The development of independent sound shops and equipment manufacturers ultimately led to new relationships between sound practitioners looking for new gear and technology specialists looking to sell new products. As Beck contends, “the lack of centralization and industrial structure made it

much more difficult to disseminate new technology or information about new techniques.”¹³ The fragmentation of the work force into flexibly specialized units became more streamlined in the 1990s with the proliferation of non-linear editing and mixing consoles, which provided filmmakers with the ability to speak to each other in a technical capacity. But the technical abatements did not solve the problem of freelancer identity in this new Hollywood.

Sound practitioners participate in what Robert Faulkner calls a “client dominant” occupational environment.¹⁴ In the case of modern film production, the client is usually the director, producer, or studio in charge of the creative and financial systems of the individual film project. The creative work between filmmakers and sound professionals is highly collaborative. The filmmaker is often not sure about what they want, which leaves the sound chain in a position of creative control. In advertising his editorial and design services, one sound supervisor attempts to put filmmakers at ease by emphasizing his creative role: “In filmmaking, sound is another character of the film. My role is to help find that character. As your Sound Supervisor, I embrace the film's ideas as my own. As your Sound Designer, I bridge the gap between your imagination and technologies.”¹⁵ Since filmmakers are relatively free to hire whom they choose, the sound chain cooperates in a flexible set of creative and professional capacities.

Sound practitioners control their work by assigning particular stylistic signatures to film projects, but they are ultimately bound to the conventional logic of filmmaking practices, which may undermine certain innovative features. As Faulkner notes, “What a worker does about the problems of inappropriate demands upon a number of factors, including the alternatives at his or her disposal, his or her power to define and control the

actions of clients, and his or her power to select a clientele to work with.”¹⁶ It has also become commonplace for editors or mixers to be known for working in particular genres or having particular stylistic signatures. At the same time, freelancers must be creatively flexible to be able to work in a variety of genres, and with different filmmakers. Competition between sound editorial and mixing houses, unstable employment opportunities for freelancers, and the transition to digital workflow have contributed to the emergence of a flexibly specialized sound practitioner.

The Sound Freelancer and the “Back to the Lot” Movement

There is a loosely organized structure to the sound industry that binds together the work of these professionals. The single film project is at the core of this relationship. Sound practitioners seek access to projects in attempts to can gain exposure and future employment opportunities. Since each film is treated as a separate piece of business, members of the sound chain collectively seek to express their creative expertise and individual artistry on the material. The individual film project is also the site of professional and creative dilemmas that are driven by the unique characteristics of the production.

The ways in which these freelancers interact with filmmakers, and go about the work of creating a sound track, are not based on arbitrary decisions, but are largely inherited from the working conditions of the studio era. In particular, sound professionals have fared worse than other more “visible” crafts in the filmmaking hierarchy. To the chagrin of sound editors and mixers in Hollywood, James G. Stewart has argued that

“sound is secondary to picture,” referring to the dominant position of the image in the filmmaking process.¹⁷ Stewart’s concession is supported by the fact that the sound track is one of the final pieces to be added to a completed film. Sound editors and re-recording mixers are rarely ever involved in the shooting or editing phase of a film, and usually begin work once a rough edit has been completed by the picture editors. During shooting, the location mixer’s needs are often forsaken if a particular shot is needed, or if time does not allow the mixer to ask for a re-take because an actor’s performance was not recorded to the mixer’s satisfaction. Consequently, the sound professional works from a marginalized position where time and expense compete with the ability to be creative, and work with sound in a way that complements the conventional logic of Hollywood filmmaking.

The modern Hollywood production complex, like any other art world, is a binary environment of business risk and technical skill. To get a film made today entails “high stakes, risk, and uncertainty.”¹⁸ As Wayne Baker and Robert Faulkner attest, Hollywood film production “requires substantial investments of financial capital for properties, artists, and support personnel. And it entails high personal and career risks.”¹⁹ No one is immune from failure and institutional marginalization, known as “filmmaker jail,” nor is there a clear idea on what exactly makes a film a success or a failure. Baker and Faulkner argue, “Because search procedures for artistic problems are complex and choices among actions involve a high degree of experimentation, there must be a great deal of mutual coordination between those who supervise the transformation of ‘raw materials’ and those who provide the expertise and talent for this process.”²⁰ Thus, the role of the sound freelancer is necessarily bound up with the hierarchical business structures of the

industry, and the creative/technical aspects of the profession that value innovation and stylistic experimentation.

The career development of sound professionals in the post-divestment era has been largely shaped by the formation and consolidation of independent editorial and mixing houses in Southern California. Working out of a post facility, freelancers can assemble sound crews and develop relationships with other sound practitioners and filmmaker clients. The network of audio post-production facilities in the greater Los Angeles area has prompted many audio professionals to call this production district a steel-mill town. Dozens of independent audio, video, and production services drive the local economy the way steel production once supported so many small towns in the northeastern United States. Since the late 1970s and early 1980s, several audio production and post-production facilities have grown to become fully integrated service providers. In some cases, a facility will furnish a budget that packages and consolidates the editorial and mixing services, simplifying the post-production process for producers and ensuring a consistent result. Indeed, the largest independent facilities in Hollywood have become horizontally integrated service providers, offering a “one-stop shop” for all editorial and mixing needs.

The consolidation of independent firms is at once a matter of cost, and a means to compete with other horizontally integrated firms. Two of the largest firms in Hollywood are also among the oldest of the post-studio era, but it would be a mistake to call them truly independent. Todd-AO was formed in 1952 by independent producer Mike Todd and his two partners, Dr. Brian O’Brian of the American Optical Company and George Skouras of the Magna Theatre Corporation, with the goal of developing a widescreen

process that was similar to but more efficient than Cinerama. The result was Todd-AO Scope, a 70mm anamorphic process with 6-channel stereo sound.²¹ Throughout the sixties and seventies, the Los Angeles facility provided post-production Foley, ADR, and mixing services for feature-length and television projects. In 1986, Todd-AO acquired Glen Glenn Sound Services, which was credited with numerous technological innovations in film audio including the development of Automated Dialog Replacement (ADR) in 1964 for the *I Spy* television series.²² Since the 1986 acquisition, the company expanded its operations, adding two more mixing facilities in Burbank and Santa Monica, and accommodating over thirty salaried re-recording mixers.

By contrast, Soundelux was founded in 1982 by two sound editors, Lon Bender and Wylie Stateman, as a full-service editorial and design house. In recent years the company has expanded its sound operations into television, gaming, and theme park attractions. It is currently one of the largest centralized hubs for freelance editors and designers working in Hollywood. However, the corporate histories of these firms are as tangled as those of the major studios. Both facilities have had numerous corporate parents, including the Ascent Media Group (formerly Liberty Livewire), a publicly traded holding company specializing in creative media services. Most recently, in 2008, the Ascent Media Creative Sound Services Group spun off to become CSS Studios, a subsidiary of Discovery Communications, the American media and entertainment conglomerate. The consolidation of these two firms has created a situation where the editorial and mixing process is integrated, and sound production is streamlined. It also allows the parent company – in this case, CSS – to be involved in every facet of audio post-production.

The move towards integration among Los Angeles facilities was partly spurred by the reintroduction of film studio sound departments in the late 1980s. Richard Maltby and Tino Balio have shown in separate studies that in the 1980s and 1990s, the major studios essentially reintegrated their production, distribution, and exhibition arms.²³ Balio writes:

The merger movement of the 1980s was characterized in part by vertical integration, the desire to control the production of programming, the distribution of programming, and even the exhibition of programming. Although the trend seemed a throwback to the glorious days of the studio system, the rationale for merging was a “faith in synergy, a belief that one plus one could equal three.”²⁴

The move toward full-service audio on the back lots of the major studios began in earnest when Walt Disney Studios renovated its mixing stages and ADR and Foley rooms in 1986 to accommodate the animation division, which was preparing for a surge in output over the next few years. Sony followed suit in 1992, and in 1994 Warner Bros., Universal, Paramount, and Fox began overhauls of their audio post-production facilities. Chris Carey, a former director of post-production at Buena Vista Sound, tells *Mix*: “The decentralization of the post-production services businesses that started happening in the mid-‘70s and throughout the ‘80s—where most of the studio departments were shutting down and shrinking and so on—produced a lack of creative and financial controls in the production of films at the studios.”²⁵

The premise of the “back to the lot” strategy supported a belief on the part of the studios that independent firms had a virtual monopoly on post-production sound services. If a major studio could provide a complete package service to filmmakers – mix, Foley,

ADR, edit, design – then they could recoup the lost revenue and funnel it back into their own production system. “It’s easy to justify now because the capital investment required is readily financed by the amount of revenue we can produce,” Carey reveals.²⁶ In other words, high-profile film projects could be produced in-house with the horizontal revenue streams established by the parent companies’ focus on synergy, or cross-pollinating business strategies. By 2000, the majors employed several high-profile editors, mixers, and Foley artists who were working freelance or part of an independent operation. These professionals brought with them a wealth of experience and a client roster that promised a future of new projects. Several studios even solicited input from sound professionals to make dub stages, Foley rooms, and edit bays more “user friendly.”

What brought these professionals to the studios was twofold. The perceived economic stability of the majors was an attractive feature for some editors, mixers, and designers. The new studio complexes, with their focus on audio post-production, represented a stable environment of employment opportunities for freelancers. Instead of moving from job to job, the studios provided a salaried alternative where practitioners could work on in-house projects as well as films that originated outside of their particular studio. The other part of what brought some professionals to the studios was the prospect of working in new, state-of-the-art facilities that were on the verge of going all-digital. Michael Kohut, a veteran mixer and post-production executive at Sony, emphasizes the importance of digital workflow to the success of a competitive facility:

One of Sony Pictures Studios’ big advantages is that we have two film arms, TriStar and Columbia. So we do have the entire package here, with all the facilities, including [digital] sound mixing and editorial. We will take it right from production, through sound editorial, through re-recording and up to delivery.²⁷

In a certain sense, the digital transition at Columbia and Tri-Star was made possible by the vertically integrated structure of the parent company, Sony, with its interests in electronics and other communications platforms. It was entirely possible for cost-effective synergies to exist between hardware and software businesses under the Sony umbrella.

The merger movement was not immune to the independents, either. In an effort to remain competitive with the majors, two pioneering independent firms were absorbed by larger entities specializing in post-production services. In 1968, Echo Sound Services established itself as one of the first independent editorial houses of the post-studio era, specializing in broadcast and cable television projects. At a time when centralized production was eroding, Echo pioneered the practice of coordinating among a diverse group of independent mixing facilities to accommodate the budgetary and scheduling needs of television productions. Under the leadership of Richard L. Anderson, Mark Mangini, and Stephen Hunter Flick, Weddington Productions grew into a leading sound editorial firm in North Hollywood in the 1980s, earning two Academy Awards for sound editing for *Raiders of the Lost Ark* (1981) and *Robocop* (1987). Weddington also produced one of the industry's first independent proprietary sound effects libraries, culled from the extensive field recordings made by Mangini and his staff for films such as *Gremlins* (1984), *Star Trek IV: The Voyage Home* (1986), and *The Flintstones* (1994). In 2003, Echo and Weddington began to operate under the umbrella of Technicolor Creative Services. The press announcement emphasized that the acquisitions would enhance the abilities of these firms to compete in the marketplace, and enhance the parent company's

“end-to-end” post-production chain, a clear allusion to the all-in-one packaging offered by the majors.²⁸

Sensing trouble in the waters, Chris Jenkins, a Todd-AO executive and re-recordingist, told *Mix* in 1994:

There is a real threat to independent companies, and the unfortunate side is that the little guys get squeezed hard. The lower echelon—the person who could buy a Synclavier and operate alone and do one TV show a year, or the guy who could have one small mixing studio and do one episodic show or one small feature a year and make a nice living—that isn’t there anymore. So the independents have a lot of pressure on them to perform.²⁹

Again in 1998, Jenkins expressed caution over the re-integration trend: “We are independent, and we are only as good as our last job—if we aren’t the best, people will go somewhere else. Remember, our clients are also our competition, which makes it a particularly unique business.”³⁰ Most of the work received by Todd-AO, Soundelux, and Weddington originated at one of the major studios, a fact highlighted by company advertisements that emphasized their longstanding relationships with every major studio in the industry. However, an otherwise optimistic article in *Mix* pointed up the challenge to independent houses in the era of studio retrenchment:

Sound for feature films is a feast or famine operation, and you’re considered only as good as your last film. If Warner Bros. or Fox or Universal steals back one or two films a year from some of the independent editorial houses around town, it could have a huge impact, especially if the independents are leasing equipment, trying to maintain payroll and locked into a high rent.³¹

What was most troublesome to independents was that in addition to their own projects, the majors were also competing for outside projects. This meant that a Warner Bros. film could be posted at Universal by freelancers who worked out of a smaller editorial house.

The move toward re-integration by studios and larger independents had a serious impact on the smaller independent shops in Southern California, many of which were formed in the early eighties before the studios revamped their own facilities. With additional pressure from the encroaching studios, several companies with high-profile pedigrees faced a choice to battle the market or merge with an existing facility.

SoundStorm was one of the most recognized independent sound editorial companies in Hollywood before one of its co-founders left the company for Soundelux in 2004 with eight members of his creative team and three studio projects. Bruce Stambler was CEO of SoundStorm and lead supervising sound editor at the firm before relocating to Soundelux. "If you can't beat 'em, join 'em," Stambler said. "From my point of view I've accepted that I tried and gave SoundStorm 100%. That's all someone can do. Now I want to do what I do best, which is work on movies. Working at Soundelux will allow me to do that without the headaches associated with direct ownership of a company."³² Stambler's departure virtually sealed the fate of SoundStorm, which sold off its assets and dissolved its partnerships with other sound facilities one year later.

SoundStorm began as Walla Works Productions in 1984 and quickly became a premier sound editorial house in Los Angeles for features and television projects. After several corporate transitions and name changes, six of the firm's original members purchased the company in 1999 to become one of the only post-production facilities owned and operated by practicing sound professionals. Indeed, four of the six owners

were sound editors, including Bruce Stambler, John Leveque, Bruce Yawn, and Becky Sullivan, an ADR Supervisor. The other two partners were John Fanaris, company president, and Gary Bluffer, who ran the sound transfer department. At its peak in 2002, the company's Burbank facility employed up to sixty sound professionals, including ten supervising sound editors. One SoundStorm executive said, "Having people who are in the trenches running the company gives us a tremendous edge. It's not like having an investment banker or an accountant making decisions that don't apply to the real world of post-production. And, because of our smaller size, we can react quickly when we need to. It's not like an aircraft carrier where you turn the wheel and an hour later the ship turns."³³

Under the ownership of the "SoundStorm Six," the company developed relationships with off-site editorial and mixing facilities to handle re-recording duties on SoundStorm projects. This enabled the firm to extend ties to other independent shops, including the Wilshire Stages, in what can be described as an informal attempt at horizontal integration. SoundStorm negotiated budgets directly with producers, and packaged the editorial and mixing components in ways that mirrored those of the integrated firms. The biggest obstacle to SoundStorm was maintaining a level of work that could support the company's relationship with outside facilities and its own overhead costs. This meant SoundStorm was dependent on the relationships it developed with filmmakers, and the quality of its editorial work.

The new ownership arrangement emphasized the diverse strengths of its partners. Between them, Stambler and Leveque, have five Academy Award nominations and one win for *The Ghost and the Darkness* (1995). But it was their work on *Under Siege* (1992)

that won the pair their first nominations and industry acclaim. “It was really the most important thing in our company’s history,” Stambler noted. “It put us on the map.” This led to work on *The Fugitive* (1993), *Clear and Present Danger* (1994), *Batman Forever* (1995), and *The Fast and the Furious* (2001). Besides the action-adventure work of Stambler and Leveque, SoundStorm provided sound editorial for independent dramas (*Frailty*, 2001), comedies (*Blast from the Past*, 1999), and prestige pictures (*Pleasantville*, 1998). The company also recruited Alan Murray, another sound supervisor, who maintains a longstanding relationship with Clint Eastwood. He has supervised the sound on twenty-eight Eastwood films, including the Academy Award winning *Letters from Iwo Jima* (2006).

On a basic level, the ownership situation at StormStorm stressed the company’s sound editorial *for filmmakers by filmmakers* philosophy. In contradistinction to the consolidated approach, SoundStorm practitioners valued the company’s focus on sound artistry. “We can choose to work with people who care about their sound and are willing to give us the means to do the job we know how to do. We work with people who care, and who really want to make their movie special,” noted Alan Murray in 2002.³⁴ For Stambler and Murray, the key difference between an independent and a conglomerate was the level of commitment to a film project. “The big conglomerates often tend to take on too much,” Murray stressed.

As successful as SoundStorm became, the company’s boutique service could not, in the end, compete with the infrastructure of the consolidated firms. SoundStorm had begun to digitize its sound effects library, and digital workstations had replaced 35mm platforms, but it was a matter of shrinking budgets and downward pricing strategies that

kept the company from competing at the same level as the larger firms. The boutique services afforded by SoundStorm meant that most projects were packaged as single film expenditures, which accounted for the work of SoundStorm freelancers and the off-site mixing component. The downward trend on pricing left the mid-level independents at a disadvantage, since they were being asked to charge less on single film projects than it actually cost to complete the post-production sound work. Consolidated firms, on the other hand, could afford to undersell their services because of the depth of their resources. Whereas SoundStorm could sustain two or three projects at one time, Soundelux editorial could handle double or triple the workload. The pricing dilemma faced by SoundStorm was compounded by the shrinking number of major studio and independent productions available to independent facilities. A report in *Mix* highlighted this trend: "As the major studios upgraded their facilities, matters became even more difficult. And now that the studios are financing more independent projects, they have the clout to keep the production work on their lots."³⁵

Bruce Sambler's decision to leave SoundStorm for Soundelux reflected his commitment to the artistic component of sound production over the day-to-day activities of running a business. His vow to continue to foster personal relationships with filmmakers, and treat the post-production process as a creative enterprise also reinforced Soundelux's commitment to its client base and reputation for high-quality work. In the final analysis, if the conglomerates had taken on too much, then SoundStorm was unable to take on enough to remain buoyant. In a similar situation, Richard L. Anderson and Mark Mangini became fixtures at Soundelux after Weddington was bought by Technicolor Creative Services. Mirroring Stambler's press release announcement,

Mangini explained that the decision to join Soundelux was about gaining access to its breadth of resources and talent base. Soundelux offered both stability and depth of resources on which these sound editors could build their reputations. However, in 2008, Stambler and Leveque left Soundelux and opened Studio 8 Sound, a small all-in-one sound editorial and mixing facility in Los Angeles with offices also in New York.

More broadly, these situations have pointed up the relatively unstable environment of independent audio post-production in the post-divestment era. There was John Roesch's TAJ Soundworks (1984-1992), an editorial firm specializing in Foley that cultivated an impressive roster of clients, including directors James Cameron, Joe Dante, Robert Zemeckis, and Steven Spielberg. While TAJ maintained one of the premier Foley stages in the industry, the company eventually dissolved, and Roesch went on to become head of Foley at Warner Bros., where he has maintained the relationships forged at TAJ. Other firms have broadened their market base to offer services beyond feature film and television production. Pacific Ocean Post, a Burbank facility, now caters to commercials, music videos, digital restorations, and video games in addition to feature film sound editorial. Of course, the Los Angeles audio post-production community is considerably larger than this analysis suggests, with dozens of other small and mid-level shops competing with each other for the same feature film projects.

Despite a decade of large-scale changes, not every independent sound shop in Hollywood has been sacrificed. There are several independent houses that have weathered the impact of consolidation and re-integration. Perhaps the most famous of these is Skywalker Sound, the audio post-production arm of Lucasfilm Ltd., George Lucas' Northern California production complex. Largely immune to the institutional

changes to the south, Skywalker Sound has established itself as an all-in-one editorial and mixing facility for Lucasfilm properties such as the *Star Wars* and *Indiana Jones* franchises, and major studio releases such as *Terminator 2: Judgment Day* (1991), *Jurassic Park* (1993), and *Fight Club* (1999). Skywalker remains the envy of editorial and mixing houses in Hollywood primarily because of its self-sustaining, community-based approach to sound production. Like other independent facilities, Skywalker is an agglomeration of freelance talent contracted to work on a range of large and small budgeted films. Lora Hirschberg, a re-recording mixer at Skywalker, resists the claim that the company's approach to sound production is different than most other independents, but makes a distinction with major studio sound departments:

It's a facility that's just about sound. In Hollywood, you're in the sound department of a bigger studio. Everybody in this building is thinking about that one thing, and we're really focused on it. Also in Hollywood, the people who work there tie themselves into a particular room or a particular team. And here we're all basically freelancers and we move around and work with each other, and so we're constantly learning stuff from each other, and bringing new ideas to the entire group.

Skywalker has fostered the idea of a unified sound track that reflects the holistic attitudes of the company's earliest practitioners – Ben Burtt, Walter Murch, and Alan Splet – who essentially innovated the “sound design as production design” concept. Gary Rydstrom, the former head of sound services at Skywalker, has suggested: “You want people to be able to follow through so that you have as unified a style of soundtrack as possible. You can't achieve that when all of us have been forced to do the kind of sound jobs where there are so many people working over a short period of time, with one person doing the car-bys in reel 3 or the Foley in reel 4.”³⁶ At Skywalker, the packaging of editorial and

mixing is conceived as a necessary creative tool as opposed to one that serves the economic functions of the company.

At an institutional level, Skywalker has faced an array of pricing and workload obstacles since the back-to-the-lot movement began in the mid-1990s. Although Skywalker has built a reputation providing sound for high-profile blockbusters, those projects account for a small percentage of the company's output. Between 2000-2010, the facility handled post-production sound duties on 12-18 tentpole pictures per year, not enough to support the facility and the freelance talent.³⁷ Glenn Kiser, Vice President and general manager at the facility, noted, "Over the last several years, we've gotten a lot more aggressive in figuring out how to become more cost effective." A 2005 *Daily Variety* headline reported, "Skywalker Sound brings tentpole expertise to smaller pictures." In an effort to expand its market share and develop new relationships with budding filmmakers, Skywalker's key editors and mixers began taking assignments on smaller budgeted, independent films. Part of the marketing push reported in *Variety* emphasized the company's "big sound for small films" philosophy, hoping to change its image from the facility that "only [does] 'Star Wars' and dinosaur movies."³⁸ The strategy has resulted in a slate of productions at opposite sides of the budget spectrum. For every *Iron Man* (2008) there has been *The Kite Runner* (2007); for every *Finding Nemo* (2003) there has been *Hoodwinked* (2005).

Randy Thom's longstanding belief that sound should not be treated as an afterthought by filmmakers has been difficult to realize, but the move to smaller film projects at the firm has reinvigorated the premise that sound design should begin earlier in the production process. Glenn Kiser has noted, "We like to get involved with

[independent] filmmakers at the script stage, talk about characters and situations and setting for the film that are acoustically interesting.”³⁹ This approach adds a level of creative responsibility to the editorial and mixing crew that is otherwise left to producers and directors on larger features. Without the financial resources and career experience of major studio filmmakers, independent directors have looked to the facility’s key staff to design and polish their sound tracks so as to compete with bigger releases. Kiser’s intent, repeated in the pages of *Daily Variety*, was to build new relationships with filmmakers with the hope that they might return to Skywalker for future projects. A key byproduct of this approach is the practical application of Thom’s collaborative method. Thom, who is currently the Director of Sound Design at Skywalker, has stated, “Somebody needs to be thinking about sound and experimenting with sound early enough so that sound ideas can influence creative ideas in other crafts.”⁴⁰

By all accounts, the reintegration movement was advantageous for the major studios on two distinct levels. First, it allowed studios to use “soft” dollars to finance the post-production services for all in-house productions.⁴¹ Instead of contracting out sound editorial and mixing services to independent boutique houses, studios could control the costs by setting their own prices on in-house projects, and recirculating the funds through their own companies. Large independents such as Soundelux and Skywalker Sound benefited from this business strategy as well, given their focus on end-to-end post-production services.

Second, studios attracted filmmakers from other studios and independent production companies to take advantage of their high-profile editors and mixers and newly refurbished facilities. Throughout the 1990s and early 2000s, the majors flooded

trade magazines such as *Mix* and *Variety* with advertisements and press releases publicizing the multi-million dollar restorative work of their post-production facilities. A 2005 press release from Warner Bros. Hollywood announced the completion of a three-year renovation of its post-production sound department. The release read, in part:

This extraordinary building re-confirms our commitment to the post production community,” said Norm Barnett, Senior Vice President, Post Production Services, Warner Bros. Studio Facilities. “We have certainly raised the bar, and we are thrilled to be able to offer the industry a facility of this caliber.” ... Warner Bros. Post Production Services will continue to be a creative resource for not only Warner Bros. Studio television and film projects but also the industry at large.⁴²

These measures have enabled studios to expand their market share and contain post-production costs on a variety of in-house productions. As subsidiaries of larger parent companies, studio reintegration has meant that the majors could provide stock shareholders with a semblance of financial stability and, in most cases, continued profitability. By insourcing projects and extending audio services to outside production companies, studios such as Warner Bros., Universal, Disney, Sony, Fox, and Paramount – have gained a foothold on post-production audio services that, in some ways, exceeds their involvement in post-production from earlier eras. According to John Roesch, who came in on the ground floor at Warner Bros. when the studio reinvested in a variety of post-production services, the overarching goal was to consolidate the process and have everything under one roof.

The emergent independent system of Hollywood sound production was shaped around the transformative effects of studio decline and, later, reintegration. Embedded within these institutional and economic changes has been one consistent creative element

that has shaped the occupational identity of sound practitioners and supported the growth and development of sound shops in Hollywood: the sound effects library.

Considered by many to be the lifeblood of the sound industry, sound libraries remain the chief component of the sound editor's aesthetic palette, and in the digital era they have become more important than ever.

The Library: Sound Effects and the Freelancer System

When the major studios downsized their post-production holdings in the 1970s, sound effects libraries became one of the major casualties. In the studio system, it was not uncommon for sound departments to rely on a library of pre-recorded sound effects for the bulk of a film's effects track. Indeed, by the early 1970s astute audience members would have recognized several needle-drop effects that appeared in dozens, if not hundreds, of films during the studio era. According to Frank Spotnitz, the Paramount face slap was a staple of the studio since 1931 where it was recorded but not used for the Marx Brothers comedy *Monkey Business*.⁴³ Similarly, the Universal rotary telephone ring became ubiquitous in the studio's films and television shows. Other standard effects included gunshots with a canned ricochet, thunderclaps, and blowing wind.

Given that most classical films required some original effects recording, studio libraries grew to include hundreds of individual sound elements stored on 78rpms and 35mm optical film. In addition, studio sound engineers sometimes created new effects elements from stock sound materials by combining library tracks or adjusting the speed of the recording. The library had become the principal archive for sound engineers from

which to experiment and find usable tracks for new projects. However, the end of the studio system meant an uncertain future for effects libraries. The growth of location shooting and sound recording throughout the 1960s encouraged the new studio bosses to abandon the seemingly “artificial” shooting methods adopted by studio era practitioners, including back lot photography and stock sound effects. Although studios such as Paramount and MCA Universal downsized their feature film sound departments, broadcast television productions found a new use for the old sound libraries. By the mid 1970s, the Universal phone ring could be heard on MCA-produced television dramas such as *McMillan and Wife* and *Columbo*.

A new generation of filmmakers in Los Angeles and San Francisco found inspiration shooting on location using direct sound recording methods. In Los Angeles, Robert Altman was experimenting with multitrack production mixing, which attempted to capture several lines of speech at once as characters spoke over one another. In San Francisco, Walter Murch recorded original sound effects and background elements for Francis Ford Coppola’s *The Rain People* (1969), which was shot in Nebraska. Not being a member of a Hollywood craft union, Murch was restricted from using studio stock library tracks, so he recorded fresh tracks instead. As Murch later noted, “To quote Julia Child, ‘The best cooking comes when you use the freshest ingredients.’ So if you simply return to the library, the way a bored cook returns to canned food, the food you produce is going to have a harder time being interesting.”⁴⁴ Murch went on to create original sounds for *American Graffiti* (1973), *The Conversation* (1974), and *Apocalypse Now* (1979), avoiding the use of stock tracks wherever possible so as to give the films a unique soundscape.

This philosophical mandate rubbed off on Ben Burt, who was hired by George Lucas in 1976 to supervise the sound on *Star Wars*. Burt recalls:

When I started out, it was very unusual for someone to be employed to make specific sounds for a film. That may have happened in years past at the studios, but a disinterest had settled in. You found editors and sound people pigeonholed in their little rooms, just cutting in sounds they had in their library—that's all they were given time and money to do. Then along came George Lucas, who instructed me, "Here, take this microphone and Nagra, take a year and go out and collect all the interesting sounds you can think of. Bring them back and we'll go through the material and we'll use it for our film."⁴⁵

Instead of relying on aged library tracks, Burt fashioned an effects track out of newly recorded material and mixed it with processed stock studio elements.

From a technical perspective, *Star Wars* represented the first film to use Dolby-encoded tape at all levels of sound production, including production dialog, effects, ADR, and Foley. Essentially, Dolby's patented noise reduction technology meant a lower noise floor, which increased the quality of optical recordings.⁴⁶ Ultimately, the sound crew found that the older stock recordings sounded hollow and threadbare against Burt's new recordings. When reproduced in four-channel surround sound on select 70mm prints, the aged studio library tracks sounded out of place against the other Dolbyized elements.

The commercial success of the Dolby format, thanks in part to the worldwide popularity of *Star Wars*, reaffirmed for filmmakers the value of original recordings over the worn sounds of studio library elements. In some sense, the older studio recordings have become a point of nostalgia for filmmakers and sound practitioners. A student of Hollywood sound history, Burt claims to have found the "Wilhelm Scream" when searching interesting sound elements for *Star Wars* in a studio library. Singer Sheb

Wooley originally recorded the scream for the 1951 Warner Bros. film *Distant Drums*. The precise name given to the scream was “man getting bit by an alligator, and he screams.” Six recordings were made of varying pitch, intensity, and duration; the fifth take was ultimately used for the poor private’s dying cry. Burt had remembered the scream from another western, *The Charge at Feather River* (1953), and nicknamed the sound effect after a character in that film named Private Wilhelm.⁴⁷

While older stock effects were fashionable for their nostalgic patina, original field recordings had become de rigueur by the early 1980s. Born out of professional and technical necessity, the surge in field recordings was inexorably tied to the emergence of the freelance sound industry. Without direct access to studio libraries, many freelance sound editors were forced to devise their own effects for film projects. At the same time, producers and directors had come to expect high-quality (i.e. Dolbyized) sound effects after the blockbuster successes of *Star Wars* and other high-budget spectacles such as *Apocalypse Now* and *Raiders of the Lost Ark* (1981). According to sound supervisor Richard Anderson, “Libraries at the major studios exist, so you can go listen to these effects, but by today’s standards they’re not very dynamic. We got a print of *The Wizard of Oz* and listened to it. It just sounds like one of those canvas wind machines that were very common in the live theaters of radio at the time.”⁴⁸ Anderson, who co-edited the sound on *Raiders of the Lost Ark* and was one of the original owners of Weddington Productions, suggests that modern technical and aesthetic standards have made many of these stock effects feel archaic and thin.

The growth and consolidation of independent sound shops around Los Angeles was mobilized, in part, by the distinguishing characteristics of each company’s

proprietary sound library. Throughout the 1980s, sound editorial facilities held a loosely competitive attitude toward other local sound shops; in many ways, sound effects became the primary means by which a facility asserted its own identity in the sound community. Sound effects elements were not only the tools of a sound editor's trade, but also represented a facility's signature "sound." Large independent shops such as Soundelux, SoundStorm, and Weddington each maintained their own catalogue of effects recordings, which grew in size with every new film project's unique sound requirements. Richard Anderson recalls, "We kind of saw ourselves as the new wave at the time. We were trying to get things recorded in real stereo, as opposed to the studio libraries which were generally in mono."⁴⁹

In their attempts to distinguish themselves creatively from other editorial houses, freelance sound editors embraced Walter Murch's notion that every film should have certain original sound elements to call their own. Not surprisingly, Murch's philosophy can be read against the economic developments in the film industry in the 1960s and 1970s when major studios transitioned from producing dozens of films a year to distributing a handful of independently financed projects with their own unique aesthetic characteristics. Following Murch's lead, Los Angeles-based sound editors emulated the one-off approach and treated the sound effects track as a unique entity. In 1997, sound effects editor and recordist Christopher Boyes told *Mix*, "Every film should have a significant amount of new, fresh sounds that nobody has ever heard before. I am a really strong advocate of recording effects for the purposes of sound design for each film that are fresh and new."⁵⁰ One of the more eccentric stories of original sound effects recording concerned editor Frank Warner and his penchant for recording new sounds for

projects and then destroying the tapes before they could be reused in other projects by himself and other editors. In an interview with Vincent LoBrutto, Warner noted, “I established a library for each picture, and at the end of every picture I threw everything away—everything was destroyed. The only thing I didn’t destroy were the hits in *Rocky*, because I knew there were going to be sequels.”⁵¹

While some freelance editors like Frank Warner built their own personal effects libraries, most other editors relied on the growing catalogues of the independent houses. By 1992, four of the industry’s largest independent shops – Skywalker, Soundelux, SoundStorm, and Weddington – maintained sound effects libraries that rivaled those of the major studios in terms of size and breadth; most certainly, they surpassed the studio libraries in terms of audio quality. These libraries were largely proprietary collections. That is not to say that sounds were not loaned out or borrowed by editors at rival houses. Cecilia Hall, who worked at Paramount throughout the 1980s and into the 1990s, suggested that after the success of *Top Gun* (1986), “We [Paramount] have the definitive jet library. Everybody comes here for their jets.” The same jet elements from *Top Gun* were reused by Hall and the crew of editors on *The Hunt for Red October* (1990): “Nobody’s come up with better jets. The original recordings are not what’s in the movie; they’ve been relaid, reprocessed, combined, reversed, vari-speeded.”⁵²

The extent to which independent firms sought to protect their sound libraries was made plain in 1996 when a lawsuit over the ownership of a Hollywood sound library made headlines in the industry trade press.⁵³ The dispute began in 1995 when Stephen Hunter Flick opted to leave Weddington Productions, the company he co-founded in 1987 with fellow sound editors Richard Anderson and Mark Mangini. When Flick

decided to leave the firm and open his own independent sound house called Creative Café, he retained a copy of the Weddington library and continued to use it on subsequent projects. The library had been jointly assembled by the three partners over a period of nearly ten years, and was used in the company's Academy Award-winning editorial work on *Robocop*. Soon after Flick left Weddington, Anderson and Mangini obtained a preliminary injunction that prohibited Flick from using the Weddington library. In May of 1996, a Los Angeles Superior Court issued an order to show cause why Flick should not be held in contempt for violating the injunction by using the library to create sound effects for the film *Twister* (1995). Before a ruling could be made at the contempt trial, the two parties agreed to mediate the matter privately.

The mediation, known as an “alternative dispute resolution,” centered on the creation of a licensing agreement between the two parties. According to court documents, Weddington held that the sound library “is an indispensable tool to anyone in the sound editing business ... One cannot conduct a sound editing business ... without a high quality and well catalogued sound library.”⁵⁴ The injunction was designed to prevent “irreparable injury” if Flick was permitted uncontrolled use of the sound library. The two parties were unable to agree to the terms of a licensing agreement that would have given Flick controlled access to the Weddington library. According to the court record, there was no “meeting of the minds” on the matter of the licensing agreement, and Flick eventually broke off talks with the mediator. A superior court judge later affirmed the injunction, but reversed the decisions of the mediator after Flick stepped away from the session.

Ultimately, the parties resolved their disagreement privately, but the case spotlighted the degree to which modern sound firms protected what were considered the

“indispensible” tools of their trade: sound effects library tracks. Having to compete with other independent firms and major studios caused several firms to assign a proprietary value to library elements. The protective measures also presented firms with an opportunity to sell portions of their libraries to the general public. In the late 1980s, Soundelux, one of the largest independent houses in Hollywood, began selling collections of their extensive library in a series of Compact Disc sets under the name “The Hollywood Edge.” Geared towards novice filmmakers, radio shows, and budding film sound editors, the Soundelux collection was comprised of a sampling of the firm’s raw effects tracks, including weapons fire, explosions, footsteps, natural environments (rain, wind, thunder), fire, airplanes, automobiles, and so on. Advertisements in *Mix* and other trade magazines emphasized the library’s connection to Hollywood filmmakers by including endorsements from directors such as Martin Scorsese and Oliver Stone, who proclaimed, “The best sound effects library is The Hollywood Edge—without a doubt!”⁵⁵

The Hollywood Edge was not the first CD library to offer original effects elements from a major film studio. In 1990, Canadian sound effects publisher Sound Ideas released the “Lucasfilm Adventure Series,” which was comprised of generic sounds (animal calls and natural environments) from the Skywalker Sound archive. Sound Ideas came to prominence in the early 1980s with its reel-to-reel effects collections and what is generally believed to be the world’s first library on Compact Disc. The joint venture with Lucasfilm was followed by the release of original elements from the archives of other major studio libraries, including Universal, Warner Bros., Twentieth Century Fox, and Hanna-Barbera. As additional revenue sources for studios and independent sound shops, these releases represented a way for firms to profit from pre-existing material in a

controlled fashion. Other publishers followed suit, including Sound Dogs, which acquired the complete archive of the SoundStorm library in 2004 when the company decided to dissolve its partnerships and sell its assets. Broadly speaking, these commercial collections represented a profitable way for studios and independents to market a thin sampling of their archives in a controlled manner.⁵⁶

At the same time, the commercialization of these libraries reflected the industry's professional preference for original field recordings. Despite the expansiveness of modern libraries, contemporary sound editors value the unique and tailored fit of original field recordings over the use of a generic library track. Even in the age of solid-state storage media, some editors find it easier to record a track than search through the seemingly endless options in an effects archive: type the word "punch" into the Soundelux library search field and over a thousand results are returned. Ironically, the preference for recording original effects has yielded a surfeit of new library material. Mark Stoeckinger, a supervising sound editor at Soundelux, amusingly notes that the Soundelux archive is so deep that finding certain tracks can be like recording a fresh sound.⁵⁷

Notwithstanding the protective measures taken by Weddington to secure its library holdings in the late 1990s, the secret reality among sound professionals is a collaborative network of shared effects tracks. According to sound supervisor and designer Ren Klyce,

We all have to rely on sound effects libraries because there is always that moment when you go, "We need the door." The problem with sound is that it's a culture based on sharing. It's like being in school and asking to borrow someone's notes. There's a culture of sharing that I think is great. We all help each other out.

The unfortunate part is that it's like DNA: you want to have originality in sound because what happens is that you recognize these things. It becomes a sound cliché.

In other words, sound editors may re-use a particular stock effect at the risk of dulling its original patina. Klyce recalls a particular “truck-by” effect that he originally recorded for *Fight Club*. The element consisted of an 18-wheeler with a Doppler-shifted horn call. The sound proved so popular with other sound editors that its ubiquity in other films became a running joke in the sound community.

Many sound editors admit to borrowing and even stealing certain tracks from rival houses and other independent freelancers in order to find the “right” sound for a particular sound moment. Even when major libraries contain upwards of one million sound files, editors commonly trade for sounds in much the same way that children trade baseball cards in hopes of scoring a particularly prized card. This has led to a contamination effect within the sound community, whereby sound elements from one library can end up in another house’s archive. One prominent sound editor believes that most Hollywood sound libraries are collections of everybody’s work. He says, “In addition to material that we have reclaimed from particular in-house projects, the large majority of our own library is stuff that has been acquired, traded, and shared with other sound designer friends and people at other houses.”

The library track can be a crutch for a sound editor without the resources to record something from scratch. As Klyce suggests, even those in the top-tier of the sound editing community must rely on libraries, if only for the functional specificity that they provide. In addition, the flexibility of digital libraries and hard-disk systems has encouraged

editors to borrow elements from each other with unparalleled ease and convenience.

But Klyce's contention that a recycled sound loses its distinctive identity – its DNA – is not lost on other editors, who regularly modify stock tracks by processing them or combining them with other elements as a way to reinstate a modicum of distinctive “character” to a stock sound.

The growth of modern sound libraries, spurred in part by the freelancer's penchant for original effects tracks with crisper sound, helped to individualize independent firms and restore competitiveness to major studio sound departments. Infused by new catalogue recordings that grow with every new film project, sound libraries have indeed become the “indispensible” tools that Richard Anderson and Mark Mangini of Weddington Productions proclaimed them to be. Put another way, the freelance character of the sound community means that libraries and tailored effects constitute the primary means by which a sound shop can distinguish itself from the competition. The professional identity of the modern sound firm is, therefore, tied to the signature qualities of its sound library; sound elements can be shared with colleagues on a controlled basis, but they remain protected pieces of intellectual property.

In many ways, the freelance system, with its emphasis on professional identity and contract work, reinvigorated the functional specificity and signature value of the Hollywood sound effects library. The “original” field recording represented a way for sound editors to tailor a sound track to the dramatic and functional needs of a film. As signature elements of a particular house, newly minted tracks became the primary means by which independent firms built and major studios rebuilt archives of basic sound

elements. What began in the late 1960s as a professional necessity transformed the ways in which freelance editors conceived of their work and used the basic tools of their trade.

Stock libraries have become much more than repositories for every kind of functional sound effect. As an occupational ideology, sound editors approach the use of sound effects with an ear toward their unique aural signature, a practice that is tied to the industry's preference for original field recordings. Studio libraries that were once filled with worn tracks and endlessly recycled elements have become been replaced with massive archives of newly recorded sounds that continue to grow with every new film project. As a result, the new libraries have complicated the proprietary value of sound effects collections. Though they remain the property of a studio or independent house, sound effects elements are shared between freelancing sound editors looking for new projects and new sounds to color a scene and distinguish their professional style. Sound libraries foster a particular kind of professional identity, on the one hand, and shared community, on the other.

The Mid-Level Independent Sound Shop and Recurrent Transactions

From an institutional perspective, mid-level independent facilities in Southern California have not disappeared, but they have become a rare resource in a crowded field of consolidated independents and major studios. To distinguish themselves from other houses, independent sound shops seek not only to establish a unique stylistic signature to their work, but also a professional identity that is built on the reputations of its freelance

workers. A 2001 article in *Variety* emphasizes the risk undertaken by conglomerates and major studios in their attempts to provide a one-stop shop for all post-production audio needs. As Liberty Livewire, the former owner of Soundelux and Todd-AO, considered a move to further consolidate its holdings, Marc Graser reported that “filmmakers fear behemoths and tend to seek out boutiques, run by creatives they've worked with before, to handle their projects. The notion that Liberty could treat its facilities equally and shift customers around to shops that had openings didn't pan out, as clients left for other houses where they could control where their project would be worked on and by whom.”⁵⁸

Graser's analysis proved to be prescient. As several sound editors and mixers became fixtures at larger facilities, Perry Robertson went into business for himself. After spending seven years with Soundelux as a sound editor, Robertson, a Texas native and trained musician, partnered with Barney Cabral, a veteran dialog editor and ADR supervisor, to form Ear Candy in North Hollywood in 2002. As a journeyman editor at Soundelux, Robertson assisted on a number of high-profile projects, including Oliver Stone's *Any Given Sunday* (1999), *Black Hawk Down* (2001), and *The Bourne Identity* (2002). Seeking greater control over the editorial process, Robertson opened Ear Candy, in part, to attract a more diverse group of filmmakers and projects. Within a short time, Scott Sanders, a sound design specialist and Soundelux alum, joined the company and assumed the role of lead sound designer. In addition to a first assistant editor, Kevin Zimmerman, the Ear Candy staff is mainly comprised of freelancers contracted for specific projects. On several occasions, Robertson has brought on Soundelux freelancers to fill out the editorial crew. Mixing duties have been handled by freelancers at

independent facilities around town, including Wildfire Studios, a mid-level editorial and mixing shop in central Los Angeles.

Hidden in the suburbs of North Hollywood, the Ear Candy studio is a large family home converted into a post-production workshop. Amidst a maze of edit bays scattered throughout the home there is a Foley stage and a 5.1 monitoring studio for premixes and design work. With its skeleton crew and modest facilities, Ear Candy is a rare resource in modern Hollywood because it focuses almost exclusively on feature film projects.

Although the Foley stage has been rented out to television productions such as ABC's *Lost*, Ear Candy remains an editorial house dedicated to feature films. However, in an era of media diversification, Robertson's plan has been difficult to realize. After completing sound editorial for the Kevin Costner western *Open Range* (2003), Ear Candy initially provided sound services for a number of ultra-low-budget films, including *Love Don't Cost a Thing* (2003), *Down in the Valley* (2005), and *Waiting* (2005). "If I would have ever known that it was going to be as hard as it was for the first four years of this business, I probably would have never done it. There were times when it was just brutal. But, with that being said, the last two-and-a-half years have been completely amazing," Robertson notes.

After a string of very small projects, Ear Candy developed relationships with three directors that have since elevated the company's status to one of the premier independent houses in Los Angeles. Rob Zombie and his picture editor, Glenn Garland, approached Robertson to supervise the sound on *The Devil's Rejects* (2005), Zombie's follow-up to his debut film, *House of 1000 Corpses* (2003). Zombie returned to Ear Candy for his re-imagining of *Halloween* (2007) and its sequel, *Halloween 2* (2009).

Sylvester Stallone hired the Ear Candy team for *Rambo*, the fourth installment in the *Rambo* (2008) series. The relationship with Jason Reitman has spawned five projects to date, including his debut film, *Thank You for Smoking* (2005), *Juno* (2007), and *Up in the Air* (2009). As a producer, Reitman utilized Ear Candy for *Post Grad* (2009) and *Jennifer's Body* (2009). The breadth of material encompassed by these three relationships has certainly broadened the company's appeal, especially with filmmakers searching for sound tracks that evoke the same stylistic textures of the above-mentioned horror, action, comedy, and drama films.

Robertson's main objective with Ear Candy was to apply a boutique approach to large-scale sound editorial. Jason Reitman praised Robertson and his crew for "making the soundscape of my independent film feel as full as any studio feature."⁵⁹ It is precisely the sense of fullness that is not so much an Ear Candy stylistic signature but one that defines the modern Hollywood sound aesthetic. Just as Skywalker Sound provided "big sound for small films," Ear Candy aims for the same aesthetic on a smaller scale.

Weighing the advantages and disadvantages of going independent, Robertson says,

I think it affords us the flexibility to be able to work on some of the smaller features like *Juno* or *Thank You for Smoking* or *Lars and the Real Girl*, or something like that, because we don't have the overhead that the bigger companies have or that the studios have. And we can also pick and choose and go to smaller mix stages. We've learned to cut some corners where some of the bigger companies can't really do that. On the other hand, some of the bigger places like Soundelux or someone at Universal, if they really want to do a picture, they have the backing. They can use their own stages, they can make deals for stuff that sometimes we can't.

It's not like we can do it all time. We're like everybody else: we have to make money. But if it's something we want to do – if it's a good film or it's somebody we want to build a relationship with – then we have the option to do that. That's the greatest thing I love about having this smaller business that we have. It's the freedom to do whatever we want to do. But the downside is that we don't have the big dollar backing of a studio.

Industry segmentation between independent shop and large firm or major studio is a challenge to business owners like Robertson and freelancers in general, but it would be a mistake to assume that only one of these options provides the editor or mixer with the ability to work creatively, in an artistic capacity. Robertson's observations do not suggest that boutique firms are better equipped to organize an original and creative sound track; rather, an independent firm has the flexibility to create new career opportunities that fall outside the parameters or project schedule of a larger facility. At the same time, studios provide practitioners with a steady stream of projects with greater budget flexibility and cheaper resources. Majors such as Warner Bros. have even marketed their post-production services using the language of an independent firm. In 2000, a senior executive at Warner Bros. told the editors of *Mix*, "What we've managed to accomplish here is to create a boutique atmosphere within a full-service audio post environment."⁶⁰ Such divisions among firms at different industrial plateaus appear to collapse when we consider the significance of the freelancer/filmmaker relationship.

The structure of the modern sound industry as a whole suggests a labor market that is dependent on the formation of professional relationships between freelancer and filmmaker. The major studio and independent sound shop, and the freelance talent that comprises its labor force, competes for feature film projects, and access to filmmakers.

New projects represent the primary means by which practitioners like Perry Robertson at Ear Candy can exercise their artistic skills, develop a personal style, and become more visible to filmmakers. The mid-level firm must also compete for relationships with enterprising freelancers and off-site facilities to handle additional editorial and mixing duties. The ever-changing dynamics of the audio post district has made this an especially challenging task given the shrinking profit margins (between 1% and 5%) and tightening schedules across the industry.⁶¹ According to talent agent Lawrence Mirisch, “This is a business built on relationships. Relationships translate into projects ... which, in turn, will produce good work and more feature films and television projects.”⁶²

In this way, the relationship between productivity and recognition is invariably tied to what Robert Faulkner calls *recurrent transactions*, where networks between freelancers and filmmakers are formed on the basis of repeated collaboration.⁶³ Most obviously, the transition to flexible specialization in the film industry, which essentially reorganized the production process and redefined certain skill sets among practitioners, encouraged the development of recurrent transactions between filmmakers and professionals in a variety of crafts, including sound. With a freelance labor market designed to distribute work among independent contractors, client relationships built on recurrent transactions have been important components of this labor system. Indeed, the “new politics of production,” as indicated by Christopherson and Storper, have led to the creation of new “alliances” among freelancers, filmmakers, and major studios.⁶⁴

To a remarkable extent, the relationships between directors, supervising sound editors, and mixers are fairly strong among some of the most prolific filmmakers in the

industry. As much as directors are associated with composers, editors, and cinematographers, there is considerable consistency among directors who value sound to work with the same group of sound professionals on multiple projects. The most obvious feature of this approach is the familiarity that accompanies work with a frequent collaborator. In addition to Perry Robertson's relationships with Jason Reitman and Rob Zombie, Hollywood filmmakers on a broad scale have developed close professional relationships with their sound supervisors and re-recording mixers. Ren Klyce has supervised the sound on nearly every David Fincher film; Richard King has become the supervisor of choice for Christopher Nolan and Peter Weir; Robert Zemeckis and Randy Thom have worked together since *Forrest Gump* (1994); Ridley Scott maintains a strong relationship with Per Hallberg and Karen Baker Landers; and Steven Spielberg has called on Andy Nelson and Anna Behlmer to mix his films for over twenty years. By the same token, modern sound supervisors have hired the same network of freelance editors, mixers, and Foley artists to work on these projects. Recurrent networks between director and sound supervisor, and between sound supervisor and staff, represent the value of habitual practices to the sound industry. While recurrent networks are a goal among sound practitioners, they do not represent the norm. Scheduling conflicts, budgetary restrictions, and workload can prevent practitioners and directors from working together on every film project.

The main point is that the sound industry is organized around a collection of transactions, creative choices, and institutional conventions that converge with the relationship between practitioner and filmmaker. Not surprisingly, then, the goals of sound professionals often serve the broader functions of the filmmaking relationship. In

addition to the aesthetic tasks of sound track construction, practitioners work with directors and producers to conceive the specifics of the film's sound track. At a 2010 Cinema Audio Society event, Randy Thom explained to an audience of colleagues and students the dual task structures of contemporary sound editors and mixers:

Another part of training your ears is getting better at hearing what your clients are saying. And that's a skill that's very difficult for a lot of us to get good at. But it's the main skill that will keep you in the business. It's easy to get obsessed with what you think is good sound; what you think is the appropriate way to approach a given project. And by the way, every project needs to be approached differently. You can't assume that because a certain approach worked on the last project, it'll work on the next project. Every project you work on will have a different chemistry of people you are working with, collaborators and clients. And you need to find the best way to serve them.⁶⁵

In unpacking this statement, it is evident that sound professionals must negotiate two distinct tasks: the stylistic component of sound production, and the transactional component of the freelancer-filmmaker relationship. Moreover, Thom articulates what is essentially the fundamental tenet of the flexibly specialized sound industry: to be technically skilled at one's craft, but also hone the skill of hearing what the client wants.

That the freelancer must be able to balance artistic intention with more commercial imperatives is not unique to the modern era of Hollywood filmmaking; most certainly, artists and technicians in the studio era made creative decisions that were tailored to the demands of the producer or director. With the composition of the post-production sound industry structured by competing houses of various sizes, the freelancer must negotiate a complex set of resources on a project-to-project basis. These resources are embedded in the professional dynamics that are played out in the ways practitioners

interact with filmmakers. The constitutive relationship between freelancer and filmmaker is based on mutual need. The filmmaker client hires the sound professional to realize her vision for the sound track. As is most often the case, the client is creatively unsure about certain aspects of the process, or is unavailable to make every decision, and so the freelancer can work with the material in a way that expresses their own stylistic viewpoint with an ear toward the overarching goals of the client.

Obviously, there are different types of relationships with filmmakers. Some filmmakers are creative partners who are interested in the narrative and aesthetic potential of the sound track. Then there are some who prefer to let the sound chain “do their thing” and stand back from the process altogether. One sound editor explains the dynamic:

It depends on the directors themselves. Quite often we’ll get seasoned directors who have a love and appreciation of sound, and are very direct with what they want the sound to do on a given film. On the other end of the scale we have directors who know nothing about sound, and this might be their first film, and they look to us for guidance.

Many professionals who participated in this project found that their experiences fell somewhere between these two poles: directors and producers who had conceptual ideas on sound but nothing focused or specific. On the one hand, practitioners value the creative flexibility when given the chance with an inexperienced or indecisive director. It puts them in a position to try things out and experiment with material in a way that otherwise would not be allowed if the filmmaker was more precise with his or her direction. As the same editor notes, “It’s fun to open directors’ eyes with what sound can do when they’re having trouble conveying an emotion of a scene. We’re often able to

help them.” On the other hand, working with a filmmaker with a clear idea of the expressive potential of sound can be an invigorating challenge.

The Freelancer: From Craft to Art

The distinguishing characteristics of flexibly specialized sound editors and mixers can be productively linked to the occupational evolution of the sound mixer in the recording industry. Edward R. Kealy posits that the history of sound mixing in the recording industry underwent an occupational progression from the 1940s through the 1970s that facilitated the participation of sound mixers in aesthetic decision-making.⁶⁶

According to Kealy, sound mixers developed novel microphone and mixing strategies as the result of innovations in technology (e.g., tape-based editing) and industry decentralization after decades of performing more functional tasks. Initially, the primary aesthetic question of mixing was utilitarian: how well did a recording capture the sounds of the original performance?⁶⁷ Unionization gave mixers the ability to establish apprenticeship and seniority systems, and negotiate better wages and control the task structures of their craft against the demands of engineers, producers, and musicians. As music production became cheaper and more flexible, and some musicians did not have access to high-end studio facilities and “concert hall realism” recording aesthetics, the mixer became “like a service worker who must please his clients without benefit of appeal to a set of craft standards enforceable through his union.”⁶⁸ The emergence of the independent studios in the 1960s and 1970s encouraged music mixers to develop unique aesthetic solutions to creative problems stemming from budget constraints and technical

limitations. A consequence to this shift in practice was an expansion of the sound mixer's occupational ideology beyond that of "narrow, instrumental craft union technicians" to include participation in the creative decision-making of a musician's "sound."⁶⁹ In Kealy's view, work that was once considered purely technical then became artistic.

The occupational evolution of the Hollywood sound chain bears a striking resemblance to Kealy's articulation of mixers in the recording industry. Although the hierarchies in both industries remain fairly distinct, with the film sound industry remaining more structured and based on craft union regulations, film sound practitioners in the post-divestment era have experienced a similar transition from roles as technicians to creative artists in response to the changing economic and technological framework of the industry.

In formulating the creative and professional tasks that face sound editors and mixers at different levels of the sound chain, one might imagine the complexities of having to balance artistic demands with commercial ones. Whether they are part of a large facility, a mid-level firm, or remain independent, sound practitioners participate in a work environment that is structured by an interdependent chain of professional constraints and creative possibilities. As both artists and technicians, they are called on for their *creative* treatment of sound, and must also demonstrate professional alacrity in their relationships with filmmakers. This kind of conflict represents the difference between conventionalization and specialization.

Sound professionals perform conventional tasks that are based on routinized elements of their work. Very often, editors and mixers are guided by the conventional

logic of mainstream filmmaking practices so as to satisfy the demands of the filmmaker client, and ensure continuity among the different aspects of the sound chain. For example, Foley artists perform footfalls and cloth movement with an ear towards reproducing an appropriate sound; re-recording mixers often ensure that dialog remains intelligible during a character's important speech. On the other hand, specialization distinguishes the artistic virtuosity and innovative craft of sound practitioners. Specialization, as Robert Faulkner argues, magnifies the "innovative accent and quality of the commercial product."⁷⁰ Although artistic innovation is a fundamental aspect of flexible specialization, this may conflict with the business exigencies that guide the freelancer's relationship with producers and studios. Again, Faulkner suggests that "From the clients' viewpoint, cinematic conventions supply criteria for defining efficiency and even create budget guidelines to minimize labor costs in scoring, recording, and dubbing."⁷¹

The tension between routinization and innovation is central to our understanding of the flexibly specialized sound freelancer. Conventions provide the freelancer with a veritable shorthand of tricks and techniques that have worked before and may, in fact, work again on a similar sequence. Perhaps the sound effect of a car explosion can be reused in multiple films, but this kind of replication carries with it some risk. Specialization, on the other hand, creates its own set of risks. Perhaps the client is not satisfied with the creative treatment of the car explosion, and insists on using the original, unaltered sound effect. The freelance editor can either decide to carry out the client's request or voluntarily remove herself from the project. Depending on the time and

resources available to the sound chain, many of these creative decisions will be determined by external exigencies such as budget and schedule.

Conclusion: Flexible but Specialized

Ultimately, however, in the flexibly specialized world of sound production, the freelancer is there to facilitate the needs of the client. The dilemma of this kind of commercial art work is balancing what worked before and what will work now. The commercial aesthetics of the project are, thus, bound up in the structural relationship between sound freelancer and filmmaker. As with other culture productions, film projects are the site of an interplay between business and artistic interests, where freelancers “compete to shape the decisions and premises upon which culture production is collectively organized.”⁷²

Studio reintegration and the diffusion of large independent facilities in the Hollywood sound industry have facilitated a redefinition and reorganization of professional skills, relationships, and institutional dynamics. Changes in sound editing and mixing task structures that have been linked to broader shifts in institutional organization and practices, such as the initial decentralization of post-production work and the back-to-the-lot movement of the 1990s and 2000s, have encouraged sound practitioners to remain flexible but specialized artists and craftspeople.

Notes

¹ Allen Scott, *On Hollywood: The Place, The Industry* (Princeton, NJ: Princeton University Press, 2005): 1.

² David Cook, *Lost Illusions: American Cinema in the Shadow of Vietnam and Watergate* (Los Angeles: University of California Press, 2000): 1.

³ Janet Wasko provides a useful description of “synergy” and its practical implications in *How Hollywood Works* (London: Sage, 2003): 170. See also Janet Wasko, *Hollywood in the Information Age* (Austin: University of Texas Press, 1995).

⁴ Quoted in “The Day the Dream Factory Woke Up,” *Life* 68.7 (February 27, 1970): 44.

⁵ *Ibid.*: 46.

⁶ The term is appropriated by David Bordwell, Janet Staiger, and Kristin Thompson in *The Classical Hollywood Cinema: Film Style and Mode of Production to 1960*: 89-92.

⁷ Murray Smith, “Theses on the Philosophy of Hollywood History,” in Steve Neale and Murray Smith, eds., *Contemporary Hollywood Cinema* (London: Routledge, 1998): 9.

⁸ Matthew Bernstein, “Hollywood’s Semi-Independent Production,” *Cinema Journal* 32.3 (Spring 1993): 41-54.

⁹ Susan Christopherson and Michael Storper, “The Effects of Flexible Specialization on Industrial Politics and the Labor Market: The Motion Picture Industry,” *Industrial & Labor Relations Review* 42.3 (1989): 331-348. See also Michael Storper, “The Transition to Flexible Specialization in the U.S. Film Industry: External Economics, the Division of Labour, and the Crossing of Industrial Divides,” in Ash Amin, ed., *Post-Fordism: A Reader* (Oxford: Blackwell, 1994): 195-226. A broader discussion of flexible specialization in the United States can be found in Michael Piore and Charles Sabel, *The Second Industrial Divide: Possibilities for Prosperity* (New York: Basic Books, 1984).

¹⁰ Quoted in John Michael Weaver, “Master Re-Recording Mixer: Richard Portman,” *Mix* (September 1995): 22.

¹¹ See Mark Kerins, *Beyond Dolby (Stereo): Cinema in the Digital Sound Age* (Bloomington: Indiana University Press, 2010).

¹² Jay Beck, *A Quiet Revolution: Changes in American Film Sound Practices, 1967-1979*, Ph.D. dissertation, University of Iowa, 2004: 273.

¹³ *Ibid.*: 272.

¹⁴ A “client dominant” occupational structure essentially means that the client is the boss, since they (directors, producers, and studios) own the project. The sound professional is, in many ways, a “hired hand.” See Robert Faulkner, “Swimming with Sharks”: 101.

¹⁵ Personal website of sound designer Scott Wolf.
[<http://scottwolfsound.com/yourfilm.html>]. Accessed 1 Mar. 2011.

¹⁶ Faulkner, “Swimming with Sharks”: 100.

¹⁷ James G. Stewart, “The Evolution of Cinematic Sound: A Personal Report,” in Evan William Cameron, ed., *Sound and the Cinema: The Coming of Sound to American Film* (New York: Redgrave Publishing, 1980): 40. Emphasis in original.

¹⁸ Wayne E. Baker and Robert R. Faulkner, “Role as Resource in the Hollywood Film Industry,” *The American Journal of Sociology* 97. 2 (September 1991): 286.

¹⁹ *Ibid.*: 286.

²⁰ *Ibid.*: 286-287.

²¹ See John Belton, *Widescreen Cinema* (Cambridge: Harvard University Press, 1992).

²² See Maureen Droney, “Todd-AO: Branching Out Globally,” *Mix* (September 1998): 3.

²³ Richard Maltby, “‘Nobody Knows Everything’: Post-Classical Historiographies and Consolidated Entertainment,” and Tino Balio, “‘A Major Presence in All of the World’s Important Markets’: The Globalization of Hollywood in the 1990s,” in Steve Neale and Murray Smith, eds., *Contemporary Hollywood Cinema* (Routledge: London, 1998): 21-44; 58-73.

²⁴ Balio: 61.

²⁵ Quoted in Tom Kenny, “The Return of the Lots: A tour through L.A.’s Post Community,” *Mix* (September 1994): 13.

²⁶ *Ibid.*: 13.

²⁷ Quoted in Mel Lambert, “Michael Kohut: Mixer, Inventor, Executive VP at Sony Pictures Studios,” *Mix* (April 1996): 18.

²⁸ “Thomson Acquires Major Los Angeles Audio Facilities,” *Digital Content Producer* (March 6, 2003):
[http://digitalcontentproducer.com/news/video_thomson_acquires_major/]. Accessed 1 Mar. 2011.

²⁹ Quoted in Tom Kenny, "The Return of the Lots": 13.

³⁰ Quoted in Maureen Droney, "Todd-AO": 4.

³¹ Kenny, "The Return of the Lots": 13.

³² Quoted in Sheigh Crabtree, "Stambler All Ears for Soundelux Gig," *The Hollywood Reporter* (August 10, 2004): [<http://business.highbeam.com/2012/article-1G1-121283434/stambler-all-ears-soundelux-gig>]. Accessed 1 Mar. 2011.

³³ Maureen Droney, "Facility Spotlight: SoundStorm, Last of the Red Hot Independents," *Mix* (January 2002): [http://mixonline.com/sound4picture/facilities/audio_facility_spotlight_soundstorm/]. Accessed 1 Mar. 2011.

³⁴ Ibid.

³⁵ "Hollywood Business: Consolidation Hits the Post-Production Services Industry," *Mix* (October 2000): [http://mixonline.com/mag/audio_hollywood_business/]. Accessed 1 Mar. 2011.

³⁶ Quoted in Peter Bergren, "Blurring the Lines Between the Edit and the Mix: New Trends in Audio Post-Production," *Mix* (March 1997): 90.

³⁷ A "tentpole" film has been described as follows: "Studios and distributors hedge their bets by releasing a slate of movies each year. The most promising projects (so-called 'tentpole' or 'event' movies) will generally receive the most attention. These movies often receive the highest production budgets as well as the highest marketing budgets and, critical to a successful theatrical release, a favorable release date" (647). See Jehoshua Eliashberg, Ania Belberse, and Mark A.A.M. Leenders, "The Motion Picture Industry: Critical Issues in Practice, Current Research, and New Research Directions," *Marketing Science* 25.6 (November-December 2006): 638-661.

³⁸ David S. Cohen, "Audio Equalizer," *Daily Variety* (November 18, 2005): A6.

³⁹ Ibid.: A6.

⁴⁰ Randy Thom, "Meet the Winners" Question/Answer event sponsored by the Cinema Audio Society on the occasion of Thom receiving the Society's Career Achievement award. February 28, 2010.

⁴¹ This term refers to a means of paying for services using internal commission revenue as opposed to through normal direct payments. See "Soft Dollar Standards," The Global Association of Investment Professionals

[<http://www.cfainstitute.org/ethics/codes/softdollar/Pages/index.aspx>]. Accessed 1 Mar. 2011.

⁴² Press Release, “World’s Most Advanced Post Production Sound Facility to Open at Warner Bros. Studios in Winter 2005,” Warner Bros. Studios: n.p. [http://wbpostproduction.warnerbros.com/news/pps_fac_pr.pdf]. Accessed 1 Mar. 2011.

⁴³ Frank Spotnitz, “Stick it in Your Ear,” *American Film* (October 1989): 43.

⁴⁴ *Ibid.*: 43.

⁴⁵ Quoted in LoBrutto: 142.

⁴⁶ See Ioan Allen, “The Dolby Sound System for Recording *Star Wars*,” *American Cinematographer* (July 1977): 709, 748, 761. See also William Whittington, *Sound Design and Science Fiction*: 93-114; Jay Beck “A Quiet Revolution”: generally.

⁴⁷ See Benjamin Wright, “The Wilhelm Scream,” *Offscreen* 11.8 (2007) [<http://www.offscreen.com/biblio/pages/index/975>]. Accessed 1 Mar. 2011.

⁴⁸ Quoted in LoBrutto: 162.

⁴⁹ *Ibid.*: 172.

⁵⁰ Rick Clark, “Sound Effects Recording,” *Mix* (April 1997): 24.

⁵¹ Quoted in LoBrutto: 29.

⁵² Quoted in LoBrutto: 198.

⁵³ See David Robb, “Sound Of Surprise: Fx Upset Sound Of Surprise: Fx Upset / Judge Overturns Mediator's Accord In Flick-Weddington Case,” *The Hollywood Reporter* (January 9, 1998): 4. [<http://www.allbusiness.com/services/motion-pictures/4926221-1.html>]. Accessed 1 Mar. 2011.

⁵⁴ See *Weddington Productions Inc. v. Flick*, Court of Appeal, Second District, Division 2, California, No. B099986 (January 7, 1998): [<http://caselaw.findlaw.com/ca-court-of-appeal/1462517.html>]. Accessed 1 Mar. 2011.

⁵⁵ See “The Hollywood Edge” advertisement in *Mix* (September 1992): 82.

⁵⁶ See Michael Grotticelli, “SoundStorm Builds on Solid Foundations,” *Videography* 20.1 (January 1995): 76-79. See also the official Sound Dogs website at [<http://www.sounddogs.com/htm/about.htm>]. Accessed 1 Mar. 2011.

⁵⁷ Personal interview with Mark Stoeckinger.

⁵⁸ Marc Graser, "Liberty Livewire revamps post haste," *Variety* (November 12, 2001): 16.

⁵⁹ Quoted on the official webpage of Ear Candy Post
[<http://www.earcandypost.com/EarCandy/Home.html>]. Accessed 1 Mar. 2011.

⁶⁰ Norman G. Barnett quoted in "Warner Bros. Studios Post Production Services," *Mix* (September 2000): [http://mixonline.com/mag/audio_warner_bros_studios/]. Accessed 1 Mar. 2011.

⁶¹ See Mark Graser, "Liberty Livewire revamps post haste": 16; See also David S. Cohen, "Audio Equalizer": A6.

⁶² Quoted in Linda Dove, "This is Business Built on Relationships: An Interview with Agent Lawrence A. Mirisch," *The Motion Picture Editors Guild Newsletter* 16.2 (March/April 1995): 1.

⁶³ Faulkner uses this term to describe the relationship between film composers and directors/producers/studios. See Faulkner, *Music on Demand*: 31.

⁶⁴ Christopherson and Storper (1989): 333.

⁶⁵ Randy Thom, "Meet the Winners."

⁶⁶ Edward R. Kealy, "From Craft to Art: The Case of Sound Mixers and Popular Music," *Sociology of Work and Occupations* 6.1 (1979): 3-29.

⁶⁷ *Ibid.*: 9.

⁶⁸ *Ibid.*: 14.

⁶⁹ *Ibid.*: 11.

⁷⁰ Faulkner, "Swimming with Sharks": 121.

⁷¹ *Ibid.*: 121.

⁷² Baker and Faulkner, "Role as Resource": 284. See also Howard S. Becker, "Art as Collective Action": 767-776.

CHAPTER FOUR

A Sprocketless Future: Digital Audio Workstations, Pro Tools, and Digital Sound Practices

Digital workstations don't make the track any more than clothes make the man.

– Larry Blake¹

People eat with knives and forks, they eat with chopsticks, and they eat with their hands. The real goal is getting the food into the mouth. Balzac wrote 80 great novels in 20 years with a quill pen. So from a certain point, technology is irrelevant. What is always relevant is what you want to say.

– Walter Murch²

The use of digital editing and mixing platforms has had a profound effect on the social organization and working styles of modern Hollywood sound professionals. With the development of computer-based picture and sound editing systems, sound practitioners at all levels of the sound chain are able to work faster and more efficiently than ever before. At the same time, the transition to electronic editing and mixing has meant that practitioners have access to entire libraries of sounds stored on hard disk that will not degrade like magnetic film after repeated use. Curt Schulkey, a freelance sound editor, told *Mix* in 1996, “I was a die-hard critic of every electronic system we looked at. But now, I can't think of a single thing that I prefer about mag. Working electronically feels less like an assembly line. There are so many different solutions for a problem. With

mag, editing was more tedious; it was challenging, but not really fulfilling. Electronic editing changed the whole game.”³

However, the views expressed by Larry Blake and Walter Murch in the quotations that open this chapter belie the suggestion that developments in digital sound technology have fundamentally “changed the whole game.” Indeed, the more I came to know sound practitioners, their working styles, and the conditions of sound production, the more I realized that digital audio workstations, digital mixing consoles, and digital release formats were symptomatic of broader social and aesthetic features of the modern Hollywood production complex. James G. Stewart, a legendary figure among Hollywood sound practitioners, suggests that despite several technical revolutions since the conversion to sound in the 1920s, very little has actually changed. He says, “For the most part, people do many of the same things now as we did in the early days, but they do them faster and meet higher technical standards.”⁴

In exploring the multidirectional relationship between art, industry, style, and practice, this chapter seeks to understand how developments in the creation of film sound, particularly the computer-based editing and mixing tools of modern sound production, have impacted the social organization of sound professionals. Few scholars have investigated the occupational tensions and problems that arose out of the transition to digital editing and mixing platforms in the 1990s and 2000s. Essentially, I argue that digital sound technologies have not reshaped the ideologies of practice as much as they have led to a reorganization of practices in sound production.

Digital editing and mixing tools have had serious consequences on the means of production of the Hollywood sound chain. The computer-based digital audio workstation,

or DAW, has made it easier for editors to cut sound effects to picture at a staggering rate, which has led some producers and directors to expect editors to work more quickly. The assumption is that digital means “faster,” even though the most efficient technology cannot make the creative decisions for the editor or mixer. The art of sound craft still remains in the hands of the practitioner, who experiments with combinations of sound to arrive at what they deem to be the right choice.

In a 1994 article in *Mix* about new technologies in post-production audio, various editors and mixers discussed the practical implications of moving from analog editing platforms, namely the Moviola, to computer-based editing tools. Most of the respondents agreed that the future of film sound was exciting on a technological level, but they cautioned against overstatement. Chris Carey, who at the time was an executive at Buena Vista Sound, suggested that, more than anything else, the institutional workflow of sound practitioners would shift substantially in the workstation era:

The whole business hasn't gone that way yet, but the significance is that it will change people's job duties, it will change the real estate requirements, it will change the way time is used. Before, you would have a 30-minute reel change to put up all the new units. Now, you take the disk out, flip it over, and you're back to work.⁵

Carey's cautious forecasting underlines the social and creative pressures facing sound professionals in the current workstation era. Digital editing and mixing tools have afforded sound practitioners greater speed, efficiency, and an expansion of available tracks, but at what cost? How has this shift in workflow technology affected the professional and aesthetic demands of the sound track?

Ultimately, these questions point up the fact that technology and social practices are intrinsically linked to each other. This assumption follows from a model of analysis proposed by Trevor J. Pinch and Wiebe E. Bijker in their influential essay, “The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other.” In their essay, Pinch and Bijker suggest that the study of technological systems should be examined as a consequence of their social functions. In effect, by examining the “social construction of technology,” or “SCOT,” it becomes possible to reconstruct the essential factors in the development of various technologies. That one type of “machine” is adopted and readily used by a social group reflects, to their minds, a technology’s history of adoption and improvement rather than any sort of intrinsic success. Indeed, Bijker suggests that “machines ‘work’ because they have been accepted by relevant social groups.”⁶

Instead of accepting a “linear” or teleological model of technological development, the authors propose a “multidirectional” system that is influenced by the interplay between producers and the relevant social groups who use and adapt technologies based on their needs. The distinguishing characteristic of the SCOT model is its emphasis on the social malleability of technological designs: the “interpretive flexibility” of a technology refers to the way in which different groups of users can have very different ideas on the benefits of a particular technology. The initial design of a technology may be accepted and adopted into use, but others may be revised and adapted to other forms, which forces the producer to reconfigure the design to certain user groups. In this way, Pinch and Bijker approach the study of a technological system by

considering the winning characteristics of its design and the elements that failed to connect with social groups.⁷

According to this model, the presence of “closure” mechanisms provides a direct or rhetorical sense of stabilization to technological adoption. Once technologies are adopted and interpretive flexibilities are essentially exhausted, closure mechanisms “seal” it off from further innovation. However, since no closure mechanism is permanent, Pinch and Bijker propose two types of closure mechanisms: rhetorical and redefinition of the problem. When a social group deems a problem to be adequately solved, alternative designs are no longer considered. Rhetorical closure can take the form of promotional tools such as advertising. Closure by means of redefining the problem occurs when a social group can stabilize a particular technological design by creating a new problem, which is solved by the existing design. Pinch and Bijker use the example of bicycle air tires, whose problematic design was redefined once air tire bikes began to win races. Air tires effectively solved the problem of speed, which outweighed other problems with their design including their cumbersome appearance.

The SCOT model provides a useful base by which to consider the widespread adoption of digital audio workstations by the Hollywood sound chain. The move from analog editing and mixing methods to non-linear, computer-based systems was not a smooth one, and forced sound practitioners to reconfigure and adjust certain aspects of their occupational task structures. By incorporating the “interpretive flexibility” and closure mechanisms of digital workstations into discussions of craft practices and workflow, this chapter examines how Digidesign’s Pro Tools system became the most widely used platform for digital editing and mixing in Hollywood in a market that was

saturated with other recording, editing, and mixing systems. The industry-wide adoption of the Pro Tools platform led to increased compatibility among the different divisions of sound production. Being on the same system afforded practitioners the ability to send and receive digital audio files with no compatibility or “handshake” problems. But the adoption also caused irrevocable changes in the methods of sound production that are discussed throughout this dissertation.

Technology/Technique

It would be an oversimplification to suggest that the digital sound era marks a distinct turning point in the production of films, since the history of Hollywood film technology has shown that cinema’s machines, more often than not, fulfill a narrow innovative role to augment, but not undermine, the existing mode of practice. The technologies of digital sound have unfurled gradually over a period of nearly thirty years. Non-linear editing systems for picture and sound had been available since 1984, and the principles of sound editing and mixing have more or so remained consistent since the conversion to sound in the late 1920s.⁸ What has arguably changed in the digital era is the speed and ease by which practitioners go about editing and mixing sound. As Mel Lambert explains, “The advantages of these new random-access digital replay systems are obvious: instant search/rewind time and, with a suitably configured system, the ability to produce EDL/cut lists for editorial rooms that need to prepare updated temp tracks.”⁹ By the same token, if we overvalue the technological systems used by filmmakers, we risk abstracting the creative choices, horizons of possibilities, and institutional constraints

that ultimately shape their work. “Technology is there to facilitate exchange between creative people,” argues sound editor Alan Kozlowski, “but there’s no substitute for vision and professionalism.”¹⁰

Indeed, the network of technologies that comprise digital sound workflow has not solved every problem for sound editors and mixers; in fact, it in many cases it has created more problems. As some editors have already suggested, there are distinct workflow advantages to using digital audio workstations, but these have proved to have an inverse effect on scheduling and budgeting. The ease-of-use that Pro Tools and other DAWs offer has resulted in a culture of fast-paced turnover, where sound departments are expected to complete work on a film in a matter of weeks. Sound editor Jeff Payne notes, “the advantage of working in the digital domain on a random access system is the flexibility of moving things. Say you want to move a door slam or a footstep from the front to the back of a spot – you can do it almost instantaneously.”¹¹

The present study envisions the digital sound era as a particular model of filmmaking practice that contains both inherited and unique artistic and narrative functions. Its historical significance is predicated on the distinction between technology and *technique*, which Stephen Heath defines as “the procedures involving elements of technology in specific ways, processes in the production and presentation of films.”¹² The dynamics of the sound industry and the resultant stylistic qualities of contemporary Hollywood films are best explored from the ground floor of production and practice where craft traditions are forged. The objective here, then, is to treat digital sound technology as a theoretical point of departure, not as the principal site of investigation.

Taken on its own, sound technology alone cannot explain why practitioners value certain techniques in a range of genres, or how some editors construct a busy action sequence. Sound practitioners have long been associated with the role of technician, as manipulators of technology and knob turners with no real artistic license. The proliferation of digital tools has intensified this attitude, leaving some to wonder if the value of a sound editor or mixer is based on his or her proficiency with digital audio workstations. Randy Thom disagrees:

It's true that we twist knobs and we adjust parameters on plug-ins, but the most important thing we do is we make artistic decisions from moment to moment. When we're working on a movie for a director, we have to make a hundred creative decisions before we have something that we feel is appropriate to present to the director.¹³

As Steve Neale states, "The history and current state of the cinema rather involve an uneven and often complex interweaving of all these elements, each conditioning, but not fully determining or explaining, the others."¹⁴ Since modern sound techniques are not reducible to a set of technologies, it is important to remain sensitive to the complex interplay of aesthetics, institutional dynamics, and narration as well as technological developments on its form and function within the sound chain.

The Workstation Wars: Digital Audio Workstations and SMPTE Technical Standards

The history of modern film sound began in the 1970s with the re-introduction of stereo and surround sound formats. Paired with its noise reduction technology, Dolby Labs in partnership with RCA and Eastman Kodak engineered a relatively affordable

variable area stereo process that could be easily matched to existing 35mm optical film, thereby making stereo and surround sound accessible to standard theaters that chose to upgrade their sound systems. The landmark films of the early Dolby era, such as *Star Wars* and *Apocalypse Now*, showcased the formal properties and narrative possibilities of multichannel sound, and highlighted the pioneering work of sound editors and mixers such as Ben Burt, Walter Murch, Alan Splet, and Frank Warner. This proved also to be an unstable period of aesthetic experimentation and technical stagnation. By the 1980s more films were being recorded and mixed for stereo and surround formats (Dolby SR), but craft norms remained highly flexible since there did not yet exist a standardized release format; Dolby continued to refine its four- and six-channel processes, but not every film was recorded and mixed for multichannel reproduction.¹⁵ Aside from a handful of high-profile projects, the bulk of Hollywood sound tracks were edited and mixed with the same conventional logic that shaped the previous mono era.¹⁶

Before 1992, multichannel sound tended to offer novel treatment of offscreen space, or, in the cases of *Nashville* (1975) and *Tommy* (1975), embellishment of sound effects and music. Despite the technical achievements of Dolby Stereo (4-track and 6-track) and Dolby SR, none of these processes had the far-reaching impact to shape the dynamics of sound production or craft practices the way that digital sound did. The industry-wide adoption of digital multichannel sound, colloquially referred to as 5.1, did not revolutionize craft practices at the levels of production and exhibition as much as it did stabilize the delivery system of sound formats that grew out of the experiments of the late 1970s. By 1995, three competing formats – Dolby Digital, Digital Theater Systems (DTS) and Sony Dynamic Digital Sound (SDDS) – featured a multichannel platform

based on the specifications recommended by a 1987 subcommittee of the Society of Motion Picture and Television Engineers (SMPTE) on the standardization of digital sound in the film industry. Tomlinson Holman, who coined the “5.1” moniker, recalls that “the 5.1-channel system emerged as being the minimum number of channels that would create the sensations desired from a new system ... In fact, this can be seen as a codification of existing 70mm practice that already had five main channels and one low-frequency only, higher headroom channel.”¹⁷

The development of discrete digital sound formats grew out of the frustration among sound professionals and theater owners over the imprecise coding of the optical matrix that comprised the Dolby Stereo format in the 1980s. Basically, the Dolby matrix was derived from experiments with Quadraphonic sound, where up to four channels worth of information could be recorded onto two tracks of optical film and then converted back to four during playback. The “sansui matrix” developed by Peter Scheiber essentially delivered the front three and surround channel of a Dolby Stereo mix on two tracks, resulting in a far cheaper and less time-consuming system than manufacturing magnetic striped film.¹⁸ Holman recounts the problem with the matrix system:

The matrix is very good at decoding when there is one principal direction to decode at one time, but less good as things get more complex. One worst case is separate talkers originating in each of the channels, which cause funny steering artifacts to happen (parts of the speeches will come from the wrong place).¹⁹

The phasing problems propelled Walter Murch to release the stereo-optical version of *Apocalypse Now* without any derived surround information. It became evident that a discrete system could eliminate the cross-talk errors of the matrix and more accurately

replicate the sound track as it was originally mixed. Not being shackled to the optical format also meant a greater dynamic range of sounds, a separate pair of stereo rear channels, and the standardization of the low frequency effect channel (LFE) or “subwoofer.”

A more recent, and perhaps more fundamental, instance of historical change in sound technology and practice can be found in the transition from tape-based recording to non-linear, computer-based systems for sound editing and mixing. The digital audio workstation is a computer system capable of recording, editing, and mixing sound, which can be performed by a dedicated workstation or personal computer with an interface capable of manipulating audio. The workstation developed outside the film industry and first gained momentum in the recording industry in the 1990s. The trend towards all-in-one, non-linear systems in the film sound community was accelerated by the widespread adoption of Digidesign’s Pro Tools system, which has been cited as an all-encompassing platform for recording, editing, mixing, and mastering digitized audio. After a decade of experiments with other platforms, including Sonic Solutions, ScreenSound, Waveframe, AudioVision, CyberFrame, and Fairlight, major post-production facilities in Hollywood gravitated towards Pro Tools. Mel Lambert, an editor at *Mix*, elaborates:

Obviously, the methods of film soundtrack preparation have gone through some fundamental changes in recent years. For just about every type of sound effects, dialog, Foley and music editing, razor blades and sprocketed mag film have given way to hard disk systems, and in some of the more modern dubbing stages now coming online, the replay/record medium is totally nonlinear.²⁰

By 2005, the DAW – and specifically the Pro Tools platform – became a significant option for filmmakers at the high and low ends of film production. From field recording to effects editing to the final mix-down, digital tools launched a technical reconfiguration of sound production that transitioned the industry from linear editing on magnetic film to the random-access, tapeless culture of the digital era.

The development of digital picture and sound editing systems is intrinsically linked to the innovation of random-access tape and disk-based systems. The earliest electronic picture editing systems were linear machines such as the CMX system, a version of which was utilized by Francis Ford Coppola on *One from the Heart* (1981) and *Tucker* (1988). In 1981, Lucasfilm invested considerable resources in the development of a disk-based system called EditDroid, followed by SoundDroid, which rivaled a similar machine from Montage. These systems stored images on hard disks and other media such as Laserdiscs (EditDroid) and videotapes (Montage) and used computers to access and order the information. Walter Murch calls these systems “analog-electronic,” since computers were not used to digitize images, only to control the order of the images in a particular sequence.²¹

Although SoundDroid never went into production, its sound editing capabilities became the template for future applications of digital editing hardware. In a 1984 technical paper, SoundDroid engineers argue that their system can help lower post-production costs and create “new opportunities for experimentation and artistic expression.”²² As a modular system with a digital audio processor at its core, SoundDroid encouraged editors to experiment with different combinations of edits by accessing an entire library of stored sound effects and production audio in a horizontal, fluid manner

that enabled “playback at any time and in any sequence.”²³ These “soft cuts” represented a cost-effective way for editors to audition different sounds in an efficient manner that enhanced creative choice. What the authors stress is the current problem with analog editing media: “The editing no longer involves manual splicing, but is more reminiscent of word processing in its fluidity and ease of modification. Changes can be freely made and auditioned.”²⁴

By the early 1990s, EditDroid, SoundDroid, and Montage were overshadowed by technical advancements in computer memory and speed, which precipitated the turn to digital systems. In fact, the technology behind SoundDroid was acquired by Avid in 1993 before Avid made the move into digital audio hardware. However, early digital picture-editing systems were criticized for having poor image quality and extremely slow to operate.²⁵ Editors could not simply upload all of the raw footage onto a system at once; the footage would have to be sectioned and uploaded in smaller segments. Low screen resolution on computer monitors, due to a limited amount of storage memory, prevented editors from having a clear canvas with which to work. As well, Murch recalls that “[s]ome of the systems (Avid, for instance) were keyboard intensive, which was not what most film editors were comfortable with.”²⁶ These drawbacks, among others, prevented many picture and sound editors from taking the digital plunge in the 1990s. While automation and “horizontal” editing was a valuable feature to professional sound and picture editors, the lack of standardization and file-sharing capabilities among sound shops on different platforms was viewed as a major drawback.

The major standards organizations in the film industry, namely the Audio Engineering Society (AES) and the Society of Motion Picture and Television Engineers

(SMPTE) were aware of the compatibility problems, but, according to Ron Franklin, “moved slowly” to create a universal solution.²⁷

In her technical paper, “Standardization and Independence: The Founding Objectives of The SMPTE,” Janet Staiger argues that technical standardization in the film industry has operated as a site of legitimization for various technical and scientific innovations. Staiger suggests that without technical standards, industry commerce may continue, but the filmmaker suffers from inherent confusion.²⁸ In adopting a new or cutting-edge technology, filmmakers risk alienating themselves from others in the community because the new standard may not be compatible with current or accepted standards. In 1916, recognizing the need for certain standards and cooperation among the diverse elements of film production, the Society for Motion Picture Engineers was founded to bring order to the confusion created by largely incompatible technologies of early cinema. In 1950, the Society revised its name to reflect the addition of television engineers to its membership, thereby becoming the Society for Motion Picture and Television Engineers. In its history, the Society has functioned as the leading organization for the development of industrial standards for nearly a century, providing operational standards in areas including, but not limited to, film stock dimensions, camera speeds, timecode, color grading, high definition television, and digital audio formats.

Voluntary technical standards in the film industry are achieved through engineering committees whose function is to assess the viability of a range of innovations and proposals with the goal of producing an industry-wide standard. However, the standardization of non-linear editing and mixing consoles did not happen through the

efforts of SMPTE. While SMPTE was involved with the development and standardization of digital 5.1 sound, digital editing manufacturers were not subject to the scrutiny of SMPTE committees. As a result, filmmakers and practitioners experimented with a variety of non-linear editing platforms throughout the 1990s, not all of which were compatible with each other.

With competing workstations operating at different post-production houses, there existed no simple way to move audio files from workstation to workstation. Worse, there was no feasible way to take the finished picture cut and transfer all of the picture editor's audio choices and original production tracks with timecode to an audio workstation. According to Ron Franklin, the problem was a "matter of creating an extensible data model for digital files that would allow a complete representation of which media was used and how the media pieces related to each other in time, encoding various parameters associated with the media."²⁹ The major workstation systems were proprietary systems, which meant that neither code nor file formats were necessarily compatible between the different workstation manufacturers. Compatibility issues could be avoided if one system or facility was used for the duration of a project, but this proved to be a rare situation given the independent nature of sound production in modern Hollywood. In 1992, SMPTE and AES officials began to examine the matter with the hope of creating a viable industry-wide standard, but sound professionals feared this process could take years to accomplish.

The first and most significant attempt to synthesize picture and audio file formats came in 1992 when Avid Technology, not yet involved in audio products, introduced its Open Media Framework Interchange (OMFI, or more commonly known as OMF). The

OMF was designed to allow Avid picture editing files and edit-decision-lists to be opened on a wide variety of audio workstations. The format found a loyal contingent among picture and sound editors who utilized Avid and later Avid/Digidesign (Pro Tools) software. The OMF design promised to be the Esperanto in which all workstations could effectively communicate with each other, but it was never adopted as a technical standard by SMPTE or the AES. Indeed, the OMF data structure was based on a format called Bento, which was the intellectual property of Apple Computer, a company that was unwilling to expose its proprietary systems to competitors.

Given that SMPTE and AES standards must be based on work that can be described openly and shared with everyone in the industry, and since Apple would not allow Bento to be included in an open-access standard, the OMF design was eliminated as a potential blanket format for the two societies. The OMF would therefore remain a proprietary system for users of Avid/Pro Tools, opening the door for other manufacturers to try their hand at creating a digital handshake between different file formats. Although the Audio Engineering Society proposed their own series of standards that would allow edited content – including all edits and fades – to be moved from one system to another, the OMF continued to find favor among sound professionals, and has since become the de facto industry standard in every major area of picture and sound editorial and mixing.

It is important to note that despite advances in non-linear editing platforms, the post-production process is still a linear one. Hilary Wyatt and Tim Amyes suggest that this is due to the way in which post-production equipment has developed. Digital audio workstations were largely developed by companies specializing in sound equipment such as mixing consoles and other outboard gear.³⁰ Picture editing platforms, however, were

generally developed by software companies, and featured very basic sound editing options. In other words, these systems were not developed with each other in mind. As Wyatt and Amyes state, “Manufacturers could not agree on a universal operating system, and so all designed their own proprietary software. The end result of this is that the post production ‘chain’ comprises a string of stand-alone systems whose only common language is SMPTE timecode!”³¹

For many practitioners in the field, the 1990s represented a period of intense technological instability. There were analog machines, digital machines, and analog-digital hybrids that attempted to bridge the technical divide. By 1994, trade publications such as *Mix* had begun reporting on the benefits and drawbacks of digital editing software and hardware, while most Hollywood sound and picture editors were still in an analog world. A January 1994 headline in *Mix* announced “One More Digital Nail in the Mag Editing Coffin,” referring to the widespread interest in digital workstations as a replacement for the old war-horse of film picture and sound editing: the Moviola.³²

To be sure, digital workstations reduced the labor-intensive process of cutting magnetic film, and expanded the number of available tracks. Most crucially, the non-linear, random-access feature of DAWs meant that editors could store large amounts of raw footage on a series of hard-drives, and retrieve the footage almost instantaneously. Episodic television, commercials, and special projects such as music videos were among the first to adopt digital machines in the early 1990s because of their random-access capabilities and speed. However, feature film production continued to rely on traditional editing platforms such as the upright Moviola and German-made flatbed KEM machines

because they were cheaper to rent than digital workstations, especially for large editorial crews.

The Moviola may have been a familiar and reliable platform, but it lacked flexibility. In a 1994 interview with *Mix*, sound editor Stan Bochnar noted, “You only had two tracks, and one of them was taken up with the guide, which left a single track to show your effects—hardly an ideal situation.”³³ Essentially, the Moviola could not accommodate the number of tracks sound editors wanted to include. Sound editors were also limited in not being able to audition every track at the same time while editing together a sequence. Each sound was cut separately and added to the composite track after the fact. Not surprisingly, Bochnar highlighted the benefits of the Pro Tools system, which included its capacity for rendering 128 virtual tracks. As I have already suggested, Pro Tools was one of many similar systems being introduced to Hollywood editors at the time. Independent editors and sound facilities expressed concern that investing in the wrong technology could be costly. As a result, there was little compatibility among post-production facilities since not everyone was on the same platform. In fact, a survey of post facilities in *Mix* found that major firms were endorsing no fewer than four different platforms.³⁴

The move to non-linear workstations and automated mixing consoles was accelerated by the re-emergence of the majors in the post-production marketplace. There was a sense that if smaller editorial and mixing facilities were going to compete with the majors, then they needed to assure their client base that they were a forward thinking, technologically savvy firm. Consequently, the early 1990s represented a time of unparalleled technical discontinuity among sound firms, with studios and independents

deciding on different platforms. This essentially meant that firms handling different aspects of the sound chain could not “talk” to each other on a technical level. Such incompatibilities proved costly to firms that adopted a platform that failed to gain traction at other facilities. Much of this confusion stemmed from the uneven development of digital editing and mixing tools in the film industry. Writing in *Mix* in 1994, Larry Blake identified some of the key technical concerns of digital editing:

Initially, only certain elements (most often effects) were cut on DAWs, with the final result then transferred to Dolby SR-encoded mag or multitrack for delivery to the mix stage. The next plateau...has been cutting most everything on a DAW and then dubbing from the DAW onto standard linear media like multitrack (analog or digital) or mag film. The precise path of the cut audio still varies. The next step will be to mix directly from DAW to DAW, at least insofar as premixes are concerned. This will have the big-time advantage of making all elements at the final dub edit-accessible at all times.³⁵

On top of the fact that post-production facilities were using different non-linear platforms, the move away from traditional magnetic film editing tools was an additional obstacle to a sprocketless future.

Correspondingly, the decade between 1994 and 2004 became known as a transitional era for Hollywood sound practitioners. That is when the major studios and independent facilities invested in non-linear editing and mixing systems at a record pace. What was not known at the time was which platform would gain widespread acceptance, since it was seemingly necessary for the industry to use compatible systems. After all, Hollywood sound editors had been accustomed to the Moviola and its common-denominator capabilities for decades. In the flexibly specialized marketplace of modern Hollywood, it was all but necessary for freelancers to be able to communicate with each

other on a technological level. A bevy of non-linear workstations crowded the marketplace in the early 1990s – from Fairlight to WaveFrame to ScreenSound to Pro Tools. Initially, Warner Bros. invested in Fairlight workstations, but by 2004 the company converted to Digidesign's Pro Tools at a cost of hundreds of thousands of dollars. MaryJo Lang, a Foley mixer at Warner Bros., recalls, "They still had all these Fairlights sitting there, not being used!"

As the "workstation wars" subsided at the turn of the new century, Digidesign's Pro Tools platform emerged as the workstation of choice for the majority of editorial houses, including the major studios. The common perception among sound editors was that Pro Tools provided an attractive package of features at a reasonable cost. To remain competitive, freelancers and independent firms began the transition to the Pro Tools format. MaryJo Lang explains, "If the majority of sound editors are using Pro Tools, then we have to use Pro Tools just to keep up with them and be able to service them." Sound editor Charles Maynes confirms, "It has become the common tool." But why Pro Tools?

Pro Tools: Interpretive Flexibility and the Third Party "Plug-in"

As I have already indicated, there were several other competing non-linear workstation systems available to both professional and amateur users when the film industry began its turn towards digital sound editing systems. Far from being the ideal editing or mixing platform, Pro Tools users admit that the general interface and programming options are technically imperfect and do not respond to some of the core

needs of editors and mixers. However, most have accepted the platform's shortcomings and work around any perceived deficiencies. As Kevin O'Connell told *Mix* in 2007:

Pro Tools has got its little ticks and glitches and whatever, but just like anything else, when you have a technological change you work your way through it. There are major advantages to it, obviously. I can reach up and move tracks and edit tracks and I volume-graph tracks. There's a lot I still don't know about, but I'm learning. At this point, I believe Pro Tools is great for recording and playing back on, and I believe the Harrison [MPC] board I work on gives me the best mixing surface on the planet, so I have the best of both worlds.³⁶

To understand why the Digidesign system became ubiquitous among the majority of Hollywood sound editors and mixers, we must first consider how the platform came to be.

The Pro Tools platform was originally conceived by Peter Gotcher and Evan Brooks, two undergraduate students at the University of California, Berkeley. In 1984, the two computer science majors began selling drum sound chips under the Digidrums label, and the pair soon developed a software program called Sound Designer, which was originally designed to edit sounds for sampling keyboards such as the E-MU Emulator.

In 1987, they developed Q-Sheet software, which essentially allowed users to place MIDI (Musical Instrument Digital Interface) events at timecode locations so that samplers could be used to place effects to picture. The software package, renamed "Sound Tools," was developed for use on Macintosh computers, and became a fairly easy to use platform for editing mono and stereo music recordings. Additionally, Mike Collins notes that "the system made it possible to transfer audio from DAT [Digital Audio Tape]

into the computer, edit and compile selections, and put the audio back onto DAT to be sent off to a mastering studio.”³⁷ The system represented a crude but effective way of editing sound and music files in a digital environment. One of the first productions to use this system for audio post-production was the *Thomas the Tank Engine* video series.

Sound Tools debuted at the National Association of Music Merchandisers in 1989, and represented Digidesign’s first attempt to branch out from the musical instrument marketplace and become a hardware and software company specializing in the emerging field of desktop audio editing. Although the Sound Tools software had the capability to do far more, it was limited by hard drive technology, which was used to stream the audio and allow for the non-destructive editing that the format offered. However, Sound Tools had gained enough traction among professional post-production audio users that the company decided to expand its operation beyond the musical instrument marketplace.

In 1991, Digidesign released the first version of the Pro Tools system, which included a four-channel interface. Mike Collins suggests that, at that time, the very first incarnation of Pro Tools was too basic for most Digidesign customers who were still using Sound Tools at that stage. With the appearance of Pro Tools II in 1993, Digidesign released its own dedicated Pro Tools software, which attempted to expand the system’s technical capabilities, and move beyond the Sound Tools label. The major leap forward for Pro Tools II was the development of a 16-track system that could compete with other 16-track analogue systems, which were generally regarded as the minimum number of tracks required for professional multitrack music recording. It also featured a Video Slave

Driver and an SMPTE Slave Driver synchronizer, which allowed the Pro Tools system, for the first time, to be synchronized with video components.³⁸

Hardware and software upgrades continued through the 1990s and 2000s, including the addition of 24-bit systems that afforded greater audio quality and dynamic range, and the inclusion of 5.1 multichannel sound processing. The key, however, to the success of Pro Tools as an editing and mixing tool for sound practitioners in the film industry was Digidesign's decision to include third-party manufacturers as partners in the development of software that interfaced with the Pro Tools system. Third party programs, or "plug-ins," offered users the ability to manipulate audio and video in ways that the basic Pro Tools software could not. In many ways, the continued growth of third-party manufacturers made it possible to simulate many of the necessary components of a traditional music recording studio and film editing bay. By 1997, plug-ins provided audio compression, pitch shifting, EQ adjustments, and other design tools.

Mike Collins has suggested that Pro Tools offers the most "integrated" and "all-encompassing" production system for desktop editing and mixing.³⁹ In addition, Collins argues that the company's integration of third-party software has contributed to the brand's reputation as a user-friendly platform. He writes, "As more advanced converters and DSP processors, hard drives and computer systems have become available, Digidesign has always been quick to adopt these."⁴⁰ Despite the creative possibilities and technical capabilities of the Pro Tools platform, Collins seems to ignore one important component: market share.

Digidesign began life as a music software start-up and began selling its Sound Tools platform through mid-level retail channels. Competing workstations such as

WaveFrame and New England Digital Synclavier were priced out of the mid-level range and were sold through professional audio dealers, and commanded a higher price point. Ron Franklin argues that by the time Digidesign introduced Pro Tools, they were already in a much better distribution channel and had easier access to the working musicians. He writes, “It’s easier to take a wide base of customers and bring them along to spend more and more over time than it is to try and widen a very narrow high end distribution model down into the low end.”⁴¹

Significantly, the Digidesign platform remained competitively priced compared to other workstation models. At less than \$6,000, the original Pro Tools package – Mac-based system that integrated multitrack digital audio recording/editing, Digital Signal Processor, and digital mixing – was considered an entry-level model. As Ron Franklin contends, “This allowed Digidesign to acquire a larger following of customers who had entered the Digidesign path and would continue to invest in their systems with Digidesign rather than switch to something else.”⁴² As other non-linear editing platforms began to flood the market, competitors were essentially priced out of the market by Digidesign’s pricing structure and upgrade strategies.

These factors can explain how Digidesign’s platforms became standardized components in the field of audio production, but do not go far in explaining how Digidesign made the leap to the film industry’s premier editing and mixing tool. In 1995, Digidesign was acquired by Avid Technology, Bill Warner’s California-based company that pioneered the use of non-linear video editing applications in the late 1980s. Avid’s principal product was the Media Composer video editing system, which utilized the Pro Tools platform as its audio subsystem. Avid also introduced the Digidesign name and Pro

Tools system to the larger film and video post-production community through the Media Composer platform. According to Ron Franklin, “Once AVID acquired Digidesign, the combined companies were able to leverage their integration to bring AVID’s large installed base into the Digidesign camp for their audio systems.”⁴³

As Avid’s video editing system became a standard among Hollywood picture editors in the late 1990s, Digidesign gained exposure to the world of feature film production. Therefore, in addition to having a broad distribution network and competitive price points, Digidesign partnered with, and was eventually absorbed, by the leading video editing software provider in Hollywood.

In this case, Digidesign’s market share was directly tied to its product marketing strategies and ongoing software development. In its early stages, Avid and Digidesign courted high-level film post-production facilities, and promoted their partnership in trade publications such as *Mix*. Since 2007, Avid has published video commentaries by film composers and sound editors who extol the virtues of the Pro Tools HD platform and its various plug-in applications.⁴⁴ These testimonials have the effect of both legitimizing and promoting the ease-of-use and widespread application of Pro Tools. The videos also suggest to novice editors and smaller post facilities that the “pros” prefer Pro Tools to other systems.

The relationship between Avid/Pro Tools and the film sound industry was further solidified when the Cinema Audio Society awarded Pro Tools with its Post Production Technology Award, in 2007. Danny Caccavo, a Digidesign product manager, noted at the time, “This award acknowledges this collaboration and Digidesign’s commitment to the needs of our post customers, who have reinforced Pro Tools’ place as the premier digital

audio workstation for film and television sound mixing.”⁴⁵ Significantly, the CAS award served to further solidify Digidesign’s position in the industry, and enabled Pro Tools to become synonymous with non-linear sound editing.

Essentially, Pro Tools entered the film sound marketplace with a direct advantage over competing systems. By retailing the platform across the wider field of mid-level shops, Digidesign could improve quality as issues cropped up. This way they could “hold those gains and achieve a major market advantage,” says Ron Franklin.⁴⁶ Indeed, Franklin was on the front lines of the workstation wars as a chief executive at WaveFrame, and recognized that other workstations were at risk of becoming extinct if Pro Tools was able to maintain its market position as a recognizable brand, and not simply as a competent editing tool. When this occurred, Franklin knew the war was over:

In 2001 when I was President of WaveFrame, we had a system we licensed from Merging Technologies that we called FrameWorks. We were in a tight battle for the business of the Nashville Network (TNN) in Nashville. They had Sonic Solutions systems but needed to upgrade and were considering other systems. We loaned them our system and I went there twice to work with them on evaluating the system against Sonic and Pro Tools. After a long and thoughtful evaluation their engineers all agreed our FrameWorks system was best and they needed four of them. While I was getting ready to build the machines, they came back and said that since they were now part of MTV networks. An executive in New York had looked at their Purchase Order Request and said, “What is this? Everybody is using Pro Tools – tell them they can just get Pro Tools,” and he overruled the engineers and their careful considerations of their needs. That’s when I knew there was no doubt the DAW wars were over and Digidesign had become the standard – they could win even when they lost.⁴⁷

Ultimately, the rhetorical closure mechanism that solidified Pro Tools as the dominant workstation among Hollywood sound professionals is tied to the technology's perceived ease-of-use and cross-promotion with brands such as Avid, which had already solidified its reputation among picture editors as a competent editing system. The flexibility of the Pro Tools platform, including its third-party plug-ins, further enhanced the notion that Pro Tools could perform the tasks required by sound editors and mixers. However, there is nothing to suggest that another platform could introduce a new set of aesthetic and practical solutions for sound professionals that could essentially re-open the design aspect of sound editing and mixing tools.

In a broad sense, the adoption of the Pro Tools platform by film sound professionals was exacerbated by three inter-related factors. First, the platform offered a relatively cost-effective package of non-linear, desktop-based editing and mixing features that could be effectively incorporated into a freelancer's home or studio PC system.

Second, Digidesign's commitment to improving system features based on feedback from audio professionals meant that the platform remained responsive to technical and creative changes at the level of practice. The inclusion of third-party plug-ins also positioned Pro Tools as a user-friendly system that offered new creative options to film and music professionals without having to upgrade the entire system. Among the more successful plug-ins for film sound editors and mixers was the Waves Audio "Sound Design Suite," which offered a range of compression, phasing, modulation, and pitch shift tools to augment sound effects recordings. According to sound editor Scott Martin Gershin, "What I'm excited about, is now I can just go to a place I'm going to mix, or any other facility or rental company, and say, 'Give me this Pro Tools system and make

sure it has the Sound Design Suite on it.’ And that’s all I need to say, because I know that within the Sound Design Suite, it’s going to give me the essential building blocks.”⁴⁸

Finally, the ubiquity of Pro Tools among major film sound editors and mixers was due, in part, to the competitive conditions that Ron Franklin experienced firsthand. Even though major studios and independent sound shops were experimenting with other non-linear platforms throughout the late 1990s and early 2000s, there came a point when the flexibility of the Pro Tools platform and its attractiveness to mid-level professionals caused some to believe that “Everyone is using Pro Tools.” The sentiment echoes Foley mixer MaryJo Lang’s suggestion that independent and studio-based freelancers could only remain viable if they were using the same workstations.

The Creative Costs and Possibilities of Digital Editing and Mixing

Gradually, over a period of fifteen years, non-linear editing and mixing has almost completely replaced tape and film-based editing systems. As computer technology advanced and economies of scale made computer memory cheaper, the advent of on-line systems, including the Pro Tools format, has meant that most Hollywood feature film projects could be completed within the system without any significant loss in picture or audio quality.

On an institutional level, however, post-production sound services have been the target of budget constraints and shortened schedules since the back-to-the-lot program began. Some analysts have attributed the tightening of purse strings to the conglomerate movement of the 1970s, 1980s, and 1990s.⁴⁹ Post-production sound services continue to

be targets for budget shortfalls because of its position at the end of the production line. By the time a film reaches the post-production sound chain, it has already been shot and partially edited. In some cases, producers who are looking to avoid going over-budget will cut post-production costs to make up for expenditures that were added during the pre-production and shooting phases of production.

One experienced re-recording mixer, who began her career before the re-integration movement, told me:

At this point there are always budget cutbacks and constraints. No matter how well the film industry is doing – which it's doing well – the problem is that the conglomerates who own the film studios are losing money all over the place. So you're just this little section that's doing well, but according to them, you're not because no one is doing well and everybody has to cut back. No matter how big the picture is, no matter how big the budget is.

Other editors and mixers, who began their careers at a time when sound crews were comprised of dozens of practitioners for a single project, share this perspective. On most high-budget films in the mag film/Moviola era, it was common to have up to twenty-five sound editors working on a film; now, highly complex projects are being completed with crews of five or ten editors.

Coupled with the conservative nature of film budgeting among contemporary production companies and major studios, digital editing and mixing tools have had a double-edged effect on sound production. While the promise of non-linear platforms has made the editorial process more streamlined and, some might say, faster, post-production schedules have slowly been eroded. Greg Russell, a re-recording mixer at Sony, notes:

Pro Tools has made it so much easier for everyone to present their material, and it's given all of us much more flexibility when it comes to making changes. Editorially speaking, now that everything is living in Pro Tools, if they have picture conforms and edits to be made, it's not like they have 25 drives that have the audio media on them and individually edit each one.⁵⁰

Consequently, Russell and his colleagues contend that the rise of digital tools and the shortening of schedules are not coincidental. All of my research participants acknowledged the professional impact of digital tools on production schedules and budgets.

At the same time, the perceived speed and efficiency of computer editing has encouraged some facilities to trim their staff on individual film projects. Since editors are no longer confined to the Moviola or subject to the technical inefficiencies of cutting magnetic tape, fewer editors are needed for feature film projects; instead of hiring six or seven editors to cut simultaneously, many high-budget features rely on a teams of two or three. The streamlining of digital editing is also mirrored in the design of the modern sound production complex. If a sound editor was given six weeks in the analog era to compile and cut sounds for a mix, the same job may be allotted three weeks. Although cutting and transfer times have been reduced with computer workstations, digital tools have not accelerated the creative tasks of recording fresh effects, cutting effects, and designing new sound elements. While every project contains its own set of production requirements, constraints, and allowances, the trend toward downsizing is a modern reality for Hollywood sound professionals.

Implicit in these critiques of digital workflow is a strong sense that sound editing and mixing remains a creative process. The essence of the editing and mixing process is the emotional connection between practitioner and film, which, as sound editor Charles Maynes explains, “is purely an emotional function as opposed to some technical aspect that we’re overcoming or being limited by. We want to take the discipline into the emotional and artistic realm as opposed to just being a boffin who can operate the hardware.”

Indeed, as re-recording mixer Michael Minkler told *Mix* in 2002, “The important question, though, is what kind of creativity does [digital technology] bring you?”⁵¹ It is precisely the implications of Minkler’s question that this dissertation will address. While the watchwords of digital editing and mixing have been *speed*, *choice*, and *ease-of-use*, it is important to look past the net effect of a technical change and consider how these tools have re-shaped the aesthetic character of modern film sound style. The notion of choice – of being able to cut and mix more tracks – is considered a vice and a virtue by sound professionals. If a sound editor cuts twenty different versions of a door slam, the re-recording mixer is tasked with having to audition each one, and base a decision on the smallest nuance among the alternatives. On the other hand, an ADR editor can cut and synchronize a line of post-synchronized dialog with greater precision and speed with Pro Tools workstation. According to ADR Supervisor and dialog editor Becky Sullivan:

I can cut almost any line now. I can use the tricks in Pro Tools and the cutting tricks I know to get a line in sync and make sure it works. As far as being able to give the director more choices, and give yourself more choices, as I sit here and cut through lines, I can listen to a lot more material. Back on the Moviola, it was a much more cumbersome thing to offer choice.

There is no doubt that digital, non-linear editing and mixing systems have had a significant impact on the role of Hollywood sound professionals, and the aesthetic textures of Hollywood sound tracks. The interpretive flexibility of the Pro Tools system has, arguably, eased the transition from analog machines to digital ones, but the move to DAWs also facilitated a new set of time-based and economic challenges and constraints. Flexibly specialized sound practitioners must balance, on the one hand, a distinct professional identity that is determined by notions of personal taste and creative autonomy, and the institutional constraints of the modern re-integrated studio system, on the other. Issues of technological practice and aesthetic style are, in these ways, symptomatic of the social and occupational composition of the modern sound chain. Certainly, the work of sound professionals represents a place where aesthetic decision-making and technology meet, but a detailed examination of digital sound technology, no matter how expansive, cannot adequately reveal the ways in which sound editors and mixers go about their work.

The remainder of this dissertation considers, among other things, the implications of digital workflow on modern sound practices in each of the major roles in the sound chain. As opposed to situating digital sound technology in teleological or deterministic terms, digital workflow is examined as an element of craft practice that is as influential to the sound of contemporary films as the task structures of sound professionals and the occupational collaboration between them.

Notes

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- ¹ Larry Blake, "Go Back and Listen: Classic Film Soundtracks," *Mix* (August 1995): 110.
- ² Quoted in Tom Kenny, "The Search for Order in Sound & Picture," *Mix* (April 1998): 21.
- ³ Loren Alldrin, "Dialog Editing: Better Tools, Bigger Challenges," *Mix* (June 1996): 118.
- ⁴ Quoted in John Michael Weaver, "Post-Production Pioneer James G. Stewart," *Mix* (September 1992): 77.
- ⁵ Quoted in Tom Kenny, "Return to the Lots": 14.
- ⁶ Wiebe E. Bijker, *Of Bicycles, Bakelites and Bulbs: Toward a Theory of Sociotechnical Change* (Cambridge, MA: MIT Press, 1995): 270.
- ⁷ Trevor J. Pinch and Wiebe E. Bijker, "The Social Construction of Scientific Facts and Artifacts: Or How the Sociology of Science and the Science of Technology Might Benefit Each Other," in Wiebe E. Bijker, Thomas P. Hughes, and Trevor J. Pinch, eds., *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology* (Cambridge, MA: MIT Press, 1987): 40.
- ⁸ See Michael Rubin, *Droid Maker: George Lucas and the Digital Revolution* (Gainesville, FL: Triad, 2006): 315-324.
- ⁹ Mel Lambert, "Digital Dubbers: Random-Access Replay Technology for Film and Video Post-Production," *Mix* (September 1995): 34.
- ¹⁰ Quoted in Tom Kenny, "The Return of the Lots": 7.
- ¹¹ Blair Jackson, "Digital Post: Southern California Sound Designers and Editors Talk About the First Generation of DAWs," *Mix* (September 1991): 50.
- ¹² Stephen Heath, *Questions of Cinema* (Bloomington: Indiana University Press, 1981): 232.
- ¹³ Randy Thom, "Meet the Winners."
- ¹⁴ Steve Neale, *Cinema and Technology: Image, Sound, Colour* (Bloomington: Indiana University Press, 1985): 2.
- ¹⁵ See Jay Beck, *A Quiet Revolution*: 37-135.

¹⁶ See David E. James, *At Least Half the Picture: Sound and Narration in the Postwar/Pre-Dolby American Film*, Ph.D. dissertation, University of Southern California, 2008.

¹⁷ Tomlinson Holman, *5.1 Surround Sound: Up and Running*: 9.

¹⁸ See Peter Scheiber, "Four Channels and Compatibility," *Journal of the Audio Engineering Society* 19.4 (April 1971): 267-279.

¹⁹ *Ibid.*: 11.

²⁰ Mel Lambert, "Digital Dubbers: Random-Access Replay Technology for Film and Video Post-Production": 33.

²¹ Walter Murch, *In the Blink of an Eye*: 92.

²² Jeffrey Borish, James A. Moorer, and Peter Nye, "SoundDroid: A New System for Electronic Post-Production of Sound," *SMPTE Journal* (May 1986): 567.

²³ *Ibid.*: 567.

²⁴ *Ibid.*: 571.

²⁵ Michael Rubin, *Droid Maker: George Lucas and the Digital Revolution*: 329. See Also Murch, *In the Blink of an Eye*: 90-93.

²⁶ Murch, *In the Blink of an Eye*: 93.

²⁷ Ron Franklin, "Workstation File-Format Interchange, Part I," *Mix* (October 2002): [http://mixonline.com/internet/newformats/audio_omfi_workstation_fileformat/]. Accessed 1 Mar. 2011.

²⁸ Janet Staiger, "Standardization and Independence: The Founding Objectives of The SMPTE," *SMPTE Journal* (June 1987): 532.

²⁹ Ron Franklin, "Workstation File-Format Interchange, Part I,": [http://mixonline.com/internet/newformats/audio_omfi_workstation_fileformat/]. Accessed 1 Mar. 2011.

³⁰ Hilary Wyatt and Tim Amyes, *Audio Post-Production for Television and Film* (Oxford: Focal Press, 2005): 15.

³¹ *Ibid.*: 15.

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- ³² Larry Blake, "One More Digital Nail in the Mag Editing Coffin," *Mix* (January 1994): 80.
- ³³ Gary Eskow, "Manhattan Post," *Mix* (September 1994): 18.
- ³⁴ Blair Jackson, "Digital Post: Southern California Sound Designers and Editors Talk About the First Generation of DAWs": 44-46, 49-50, 52, 55.
- ³⁵ Larry Blake, "One More Digital Nail in the Mag Editing Coffin": 83.
- ³⁶ Blair Jackson, "Transforming Blockbuster Sound: Kevin O'Connell and Greg Russell Know When It's Loud Enough," *Mix* (July 2007): [http://mixonline.com/post/features/audio_transforming_blockbuster_sound/]. Accessed 1 Mar. 2011.
- ³⁷ Mike Collins, *Pro Tools for Music Production: Recording, Editing and Mixing* Second Edition (Oxford: Focal Press, 2005): 9.
- ³⁸ Mike Collins, *Pro Tools 5.1 for Music Production: Recording, Editing and Mixing* (Oxford: Focal Press, 2002): 14.
- ³⁹ *Ibid.*: 17.
- ⁴⁰ *Ibid.*: 17.
- ⁴¹ Personal e-mail from Ron Franklin (June 18, 2010).
- ⁴² *Ibid.*
- ⁴³ *Ibid.*
- ⁴⁴ See the official Pro Tools webpage at [http://www.avid.com/US/products/family/pro-tools] for a variety of professional testimonials. Accessed 1 Mar. 2011.
- ⁴⁵ "Pro Tools Earns Cinema Audio Society Award," *Pro Sound News* (March 14, 2007): [http://www.prosoundnews.com/article/13014]. Accessed 1 Mar. 2011.
- ⁴⁶ E-mail from Ron Franklin.
- ⁴⁷ *Ibid.*
- ⁴⁸ Quoted in "An Interview with Sound Designer Scott Martin Gershin," Waves Sound Design Suite official website: [http://www.waves.com/Content.aspx?id=11127]. Accessed March 1, 2011).

⁴⁹ See Paul McDonald and Janet Wasko, eds., *The Contemporary Hollywood Film Industry* (Oxford: Blackwell, 2008).

⁵⁰ Quoted in Blair Jackson, "Transforming Blockbuster Sound":
[http://mixonline.com/post/features/audio_transforming_blockbuster_sound/]. Accessed March 1, 2011).

⁵¹ Quoted in "Sound Roundtable," *Editors Guild Magazine* 23.4 (July-August 2002):
[<https://www.editorsguild.com/Magazine.cfm?ArticleID=463>]. Accessed 1 Mar. 2011.

CHAPTER FIVE

“We’ll fix it in post”: The Professional and Creative Constraints of Production Mixing

Remember that the audience only gets one chance to hear it.

– Ed Novick

The ‘grain’ is the body in the voice as it sings, the hand as it writes, the limb as it performs.

– Roland Barthes¹

Roland Barthes refers to the unique sonorous qualities of the human voice as the “grain of the voice.” The grain is conveyed, as it were, in the “very precise space of the encounter between a language and a voice.”² The assumption is that the *grain of the voice* carries enough meaning to the ear that spoken language is not necessary; instead, the listener is guided by the sonorous texture and emotional value of the voice. Barthes suggests that this grain is tied to the affective character of a vocal performance and the expressive qualities of an individual’s particular vocal identity. In the quotation above, Barthes accords the grain a material value that emphasizes the dramatic textures of vocal pitch, register, intensity, and frequency.

According to Sarah Kozloff, the closeness Barthes feels to an opera singer’s expressive voice also informs how the voice functions in cinema. Since film dialog is designed and sculpted *for* the audience, the instrumental qualities of the human voice infuse dialog with different nuances. As Kozloff maintains, the “age, gender, ethnicity, [and] experience” of different vocal registers all contribute to a variety of vocal textures

that enhance the signifying elements of speech.³ Indeed, the mediating qualities of sound technology, including microphone placement and signal processing, can fundamentally affect the perceived grain of a voice. In *Apocalypse Now*, Captain Willard's voiceover fills the sound track with a booming intimacy as if he were confessing his thoughts right into our ears. "I told Marty [Sheen] to imagine that the microphone was somebody's head on the pillow next to him, and that he was just talking to her with that kind of intimacy," recalls supervising sound editor Walter Murch.⁴ The close-miked voice track combined with its reproduction across the front three channels (L-C-R) of the multichannel format, as opposed to coming from only the center channel, further strengthened the subjective appeal of having Willard represent the "eyes and ears" through which the film's events unfold.⁵

The conclusion Murch reaches about character psychology and interior subjectivity is a direct result of the textural and the technological treatment of Sheen's voice. Beyond the signifying aspects of speech, the voice communicates an emotional resonance that not only relies on the actor's performance decisions, but also the choice of microphone and the voice's interaction with other elements on the sound track, including music and sound effects. In other instances, the absence of speech pushes us to strain our ears to hear what may not be there at all. The final scene between Charlotte (Scarlett Johansson) and Bob (Bill Murray) in *Lost in Translation* (2003) teases us with a whisper that we cannot hear, and yet there is still the urge to lean forward and listen more intently in hopes of catching some of what he tells her.

In addition to spotlighting the sensual aspects of the "grain of the voice," these examples illustrate that dialog remains the primary means by which narrative information

is communicated in Hollywood cinema. As Kozloff points out, the audience must be able to “read” the dialog thoroughly, although narration need not be tied to real characteristics of sound space, scale, or camera angle.⁶ In this way, film sound space is structured around the functions of “narrative emphasis, not of more or less precise precision,” a signifying element of sound practice since the conversion era.⁷ Historians have suggested that sound engineers settled upon a sound track that emphasized uniformity, clarity, and intelligibility, or what engineer John L. Cass calls an “indefinite position” where the audience hears “sound which would be heard by a man with five or six very long ears, said ears extending in various directions.”⁸ Fidelity to spatial dynamics and natural reverberation were, in turn, sacrificed for a certain “frontality” that resulted from the fact that many transition-era engineers had been trained in the radio and telephone industries, which placed a premium on intelligible, frontal voice signals.⁹

In theorizing the representational character of film sound, James Lastra attends to the “constructed” nature of sound production. Arguing against theories of film sound as a recording of an original pro-filmic event, Lastra suggests that all sounds are inscribed sounds and that “all realities are constructed realities,” meaning that film sound is technologically and conventionally an approximation of an original event.¹⁰ The representational value of film sound recording is based on the reference to a seemingly “real” and authentic experience but one that is attenuated by the conventions of the Hollywood mode of production and the recording apparatus. Here Lastra is, of course, assuming that film sound aims not to reproduce an “authentic” sound event, but instead offers an approximation where the “signs” of sound are perhaps more important than the sounds “themselves.”¹¹ By attenuating the unique qualities of an original sound space,

film sound works to highlight a “contextless” space, but one that communicates narration clearly.

John Belton reminds us that the “sound track seeks to duplicate...the sound of an image, not that of the world.”¹² In other words, sound is motivated by its relationship to the image and to the most basic principle governing the technological structure and aesthetic style of Hollywood cinema: narration. Very often sound serves to enunciate what Michel Chion calls the “significations” of film sound – the narrative properties of aural narration, whether they are coded as speech, sound effects, or music.¹³ As a form of legible speech, the emotional contours of the “grain” of the voice are particularly well suited to the representational model adopted by Hollywood engineers. According to Lastra, Belton, and Mary Ann Doane, the close-miked approach with its “contextless” spatial acoustics can illustrate the most detailed nuances of the voice more accurately than a hypercardioid microphone in a highly reverberant space.¹⁴

Implicit in Lastra and Belton’s intelligibility thesis is an assumption about Hollywood sound production that is quite different from the attitudes and practices expressed by many current sound professionals. Indeed, the contrast between the theory of practice and the work of contemporary practitioners points to a significant gap in the applied characteristics of modern film sound style. There is no denying the underlying premise of the theory which is that sound functions to articulate the cause-and-effect nature of classical narration. In large measure, modern sound practices uphold the basic principles of dialog intelligibility established by conversion-era sound engineers. However, despite the perceived uniformity of sound practices among the current generation of practitioners, there is, in fact, a shared lexicon of conventions and

techniques that build upon, if not completely eschew, the formalized patterns of practice sketched by these theories of sound practice. The fields of stylistic possibility for Hollywood sound professionals are intrinsically more complex and diverse than the intelligibility thesis suggests.¹⁵

At the level of production, the well-worn tradition of a closely miked dialog track is carried on by production/location sound mixers who are tasked with recording and mixing on-set vocal performances. Given the complex working conditions of a modern film set, production mixers are often challenged by a host of social, technological, and aesthetic constraints that complicate the seemingly streamlined history of sound reproduction and representation. In some cases, creative possibilities are borne out of certain stylistic limitations. In this chapter, I address the occupational role of the production mixer and the technological and stylistic components of recording and mixing for voice in film. In assessing the creative and technical functions of voice recording, production mixers are primarily concerned with capturing “good sound”; that is, clean and intelligible vocal tracks. Needless to say, the production mixer is not only concerned with the technical recording of the voice, but also its “grain” and the expressive textures of the vocal performance.

The means by which production mixers achieve these goals are varied and pose a distinct challenge to the film-theoretical claim that “real” space is not an aesthetic or technical issue for production sound practitioners working in Hollywood. Although Lastra argues that sound “scale and angle are functions of narrative emphasis, not of more or less precise perception,” contemporary production mixers shoot sound with the aim of reproducing an approximate symmetry between sound and picture scale.¹⁶ Mixing

between several microphone sources and distances give the production mixer the option to emphasize shot scale, the expressiveness of the voice, or both. As an occupational ideology, production mixers achieve “good sound” by balancing the integrity of the voice with the larger goal of maintaining shot scale. These two seemingly contradictory goals betray the ideological strictness of sound theory, but support the overall claim that practitioners are primarily invested in the clear communication of narrative information. Ed Novick, a prominent Hollywood production mixer, points out, “Remember, the audience only gets one chance to hear” the dialog.

Importantly, this occupational mandate was put to the test by Novick and his mixing crew on *The Dark Knight*. The death of star Heath Ledger shortly after principle photography was completed reaffirmed Novick and director Christopher Nolan’s preference for location sound recording as opposed to using post-synchronized Automated Dialog Replacement (ADR). Without the filmmakers’ close attention to microphone placement, shot scale, and vocal grain, Ledger’s dynamic performance might have been lost.

To a certain extent, we need to look outside the history of film sound theory to be able to describe and evaluate the occupational and stylistic ideologies of current production mixers. Though the mixer remains one of the most uncelebrated components of the sound chain, the sound track begins and often ends with their location-based recordings. In the case of *The Dark Knight* and the treatment of vocal grain and shot scale, which will be discussed in the latter part of the chapter, clearly there is an association between modern shooting practices and the professional philosophies of location sound mixers.

Location Mixing, Recurrent Transactions, and the Professional “Jazz Band”

Contracting with freelance post-production sound personnel comprises one of the largest and most demanding aspects of modern film production, but filmmakers must also work with another group of freelancers before the post crew is usually hired. In the studio era, it was common for production mixers and utility sound technicians (boom operators, cable runners, and engineers) to be contracted by studios, but in the post-divestment era they have become independent freelancers. While some mixers joined aggregated talent pools that farm out mixers and utility technicians for film and television productions, the majority of feature film location mixers remain freelancers, working from project to project.¹⁷ Recurrent transactions are valuable but not necessarily common. With the average film shoot approximately three to six months, most mixers cannot work simultaneously on two projects given the intensive schedules of day-to-day shooting. As I indicate further on, mixers find other ways of securing new projects when recurrent transactions prove to be more difficult to arrange.

As a department head, the location sound mixer is responsible for organizing and hiring his or her crew, including the boom operator and utility sound personnel. It is also common for mixers and their crew to provide the production with the recording equipment, including microphones, radios, booms, mixing boards, headphones, etc. This is considered an asset, since the mixer is already familiar with the operation of their equipment. In many cases, studio projects will budget for additional equipment if necessary.

As freelance practitioners, production mixers and their crews build relationships with filmmakers in much the same way that post-production personnel develop partnerships with producers and directors. Mark Ulano describes recurrent transactions as being part of a director's "jazz band." He says, "What I do — psychologically and emotionally — is a lot like being a session player. We come in and sight-read the chart and perform immediately in the context of the band, or the orchestra, that is the film crew."¹⁸ As I suggested earlier, the freelancer dynamic is framed by the logic of familiarity. Ulano's session player analogy keenly articulates the ways in which location mixers negotiate the habitual aspects of the craft, and the improvisational nature of recording in what are often chaotic, impromptu, and intense conditions on set. "There's not a lot of time, so it gets left to us to interpret what's working best. And that's how relationships and trust develop with directors," Ulano insists.¹⁹

In the case of Peter J. Devlin, recurrent transactions with producer Jerry Bruckheimer and director Michael Bay account for eight of the mixer's credits. As with sound editors and mixers, recognition plays an important part in securing future projects. Devlin explains the typical paths to new projects:

Each project is different. I first worked with [Bruckheimer and Bay] back in '94 on the first *Bad Boys*. And I've worked with them subsequently. Then there are other shows, like the one I'm working on at the moment. I haven't worked with any of these folks before, and I think I got it through a referral. So it can be very varied. It can be a script supervisor who recommends you or somebody in post-production, a sound editor. Or it can be me making a cold call. For example, *Star Trek*. I'd worked with the director of photography before, and he recommended me to the producer who brought me in for an interview with J.J. Abrams. So it's a varied path to arriving at your first day on set.

Another veteran mixer highlights the often confusing and awkward structure of the freelance system:

You get a call. You get hired. You make your deal. There seems to be this ritual of coming into a meeting with the director. I never know what these meetings are really about or what I'm supposed to do at them. I've been doing them a long time and still I don't know why we have it. I think, on the one hand, the director wants to make sure that he can find someone to communicate with. That you don't have two heads. That you're not the horror that he's heard sound guys are.

The dispositions toward these transactional aspects of sound production are as much irritants as they are “a way of doing” things. Indeed, the social worlds of the production mixers are fraught with the objective demands of filmmaking procedures and protocol. The mixer's professional identity is necessarily bound up with their creative practices, and the articulated concerns about their role in the filmmaking chain. In a certain sense, there is a guerilla quality to location mixing, where even the most organized and disciplined location mixer must think on their feet and adapt to the changing surroundings.

The dual task structures of the post-production practitioner, as outlined by Randy Thom, are enhanced at the level of production recording and mixing.²⁰ There is an unspoken diplomacy that underscores the binary structure of the job, whereby location mixers intend to provide “good sound” (i.e. a clean recording) without overstepping their place in the production chain. This usually involves a negotiation between director and mixer in terms of the material and technical needs of the production sound crew. As production mixers attempt to negotiate their place in the hierarchy of on-set film

production, and legitimize the conventions that define it professionally, modern mixers have been vocal about their marginalization during shooting. In some cases, the concrete needs of the recording crew have a tendency to be outweighed by practical exigencies from other departments.

What Thom does not articulate is the potential conflict between the two task structures. This becomes particularly evident during the shooting stage of a film when there is often very little time to experiment with creative options. Added to the intensity of expensive shooting schedules is the place of sound in the production hierarchy – virtually nonexistent. For practitioners at all levels of the sound chain, one of the most contemptible phrases uttered by filmmakers since the studio era has been, “We’ll fix it in post.” This expression is most often used to describe the process whereby sound glitches or photographic inconsistencies are altered in post-production.²¹ For example, dialog that is deemed unusable by the sound supervisor may be re-recorded during ADR sessions with the principal actors. The tendency among some high-profile filmmakers to concentrate on the bare essentials when shooting on location has had an adverse effect on the role of the production mixer, especially on complex action-adventure projects requiring pyrotechnics, wind machines, and noisy generators. One mixer notes, “The set is a place for photography, primarily.” This attitude is repeated by other location mixers who have learned to accept the visual bias of the shooting process. “They might say, ‘Sorry about the freeway,’ but then you just do the best you can with what they give you. They know it’s a trade-off. They know a location won’t always work for sound and that sometimes they’ll have to replace stuff later,” says Bill Gocke, a production mixer for film and television.²²

Social and Aesthetic Constraints: Shooting Sound Around the Frame

In some cases, serving the needs of the filmmaker and completing the task of capturing an actor's performance have become irreconcilable aspects of the process.

"One of the things that I joke about is that when you go in for an interview for a job, they tell you how important sound is, and in post-production how important sound is. But that little bit in the middle when you're actually shooting, it doesn't seem so important," Peter Devlin says. There is a point during shooting when mixers must negotiate the needs of other departments with their own in order to satisfy the demands of the shot. Since "time equals money" in commercial filmmaking, mixers will often sacrifice a preferred microphone set-up to simply appease the filmmakers. One of the most common complaints among Hollywood production mixers is the creative constraint placed on the sound crew by the camera department, namely the director of photography. Remaining professional, the freelance mixer must work within the imposed constraints, and, as Ulano suggests, adapt to the rhythms of the jazz band ensemble. Others describe the process as a battle between the camera department and the sound crew. Here is one mixer's impression of the potentially contentious relationship between filmmaker and mixer:

Since the dawn of sound, they say, "We want good sound. We're going to do everything we can to get good sound." No, you're not. You're going to do everything reasonable once you're able to get the picture. You're not going to want to take the time. People take time for lighting. If you're changing a lens, they take time to see the lens, take focus marks, make sure operation of the camera is correct because you've made this change. But if you want to

change a microphone, then it becomes “We don’t have time for that! Just shoot!” I’m used to that. I’ll say, “pretend it’s a light.”

Several themes are important in this statement, and appear with some regularity among current production mixers.

First, one dimension of the production mixer’s relationship with other departments is the ability to communicate. Much of the work of the mixer is based on negotiations completed prior to the start of shooting. Ed Novick, who has handled production audio for directors such as Christopher Nolan and Michael Mann, makes an effort to be involved in pre-production discussions and meetings to sort out his role in the shoot. Novick will participate in location scouting trips with the art and camera departments to determine where the sound crew will be located during shooting, and what types of microphones will be needed. He will also confer with the prop department if specialty items will be needed, such as plastic handcuffs or shackles that emit no discernible sound but will appear correct to the eye. At the shooting stage, Novick may lay carpet to deaden footfalls or remove materials that could potentially disrupt the recording of an actor’s performance, such as vibrating items on a desk. These modes of collaboration are necessary, but not always afforded to the sound crew.

The politics of a film set can also complicate the mixer’s tasks. Jeff Wexler tells *Mix* that filmmakers do not want location mixers “making waves” on set, interrupting a shot, or pausing to adjust something. “I deal with things quietly, usually with a conversation early on, where we set rules and protocol and whether if a director is getting into trouble and I have a solution I should bring it to him or her,” Wexler adds.²³ This is why Novick prefers to map out the fundamental aspects of his job before shooting begins

in order to avoid confrontations with other departments, and expedite the shooting process. In dealing with an actor's vocal performance, Novick points out the process by which he can make it known that there is a problem:

I'll usually start off by telling the director, "It sounded like he had marbles in his mouth on that last take. I think he could be clearer with the words." And the director will say, "Thank you very much." He'll then either do nothing or he'll go to the actor and say, "You could be a little clearer." Or he could turn to me and say, "You tell him." At which point I would be given the right to approach the actor and say, "You could be clearer there."

Citing the protocols of set behavior, Novick works around the political environment to achieve reasonable solutions to audio problems.

The historical relationship between filmmakers and production mixers has tended to be quite formal. One of the misconceptions about production mixing is the utilitarian function of the location mixer. The mixer records and mixes the performances that have been staged and choreographed by the director and his or her photography unit. In most circumstances, the mixer has no musical or artistic background in filmmaking, and performs his or her task as a recording engineer would record a musical artist, "without regard of whether he appreciated the musical style or talents of the artists."²⁴ Industry trade publications such as *Mix* and *Post* have inadvertently fostered this misconception by focusing their investigative efforts on the post-production sound chain, largely ignoring the social, technical, and aesthetic values and implications of production sound.²⁵ When dialog editors and re-recording mixers speak about working with production tracks, there has been a tendency to treat those tracks as analog or digital objects created *ex nihilo*. Not surprisingly, many re-recording mixers consider production

tracks (and some effects tracks) to be raw ingredients, devoid of any real character or artistic shape. Those raw ingredients are then combined into the final mix, where production dialog is manipulated, edited, and tweaked into its final form.

Second, one of the biggest changes to the task structure of production mixing has been the proliferation of multiple camera shooting. Throughout the 1990s and 2000s, filmmakers have relied more heavily on shooting a variety of conversation and action sequences with two or more cameras running simultaneously, known as “A” and “B” cameras. The upshot is that coverage angles are captured at the same time as the principal action as a way to decrease production costs and maintain a sense of continuity between shots. The most obvious advantage to multiple camera shooting is with complex action set pieces requiring timed explosions or other pyrotechnics that cannot be replicated in subsequent takes, or the director wants several options when cutting the sequence together. Traditionally, a two-camera setup yields a close-up and a long shot of the scene.

A 2009 report in *695 Quarterly* found the impact upon production sound units of two or more cameras shooting simultaneously to have outweighed any technological changes of the last ten years, and represent the biggest challenge to the production mixer.

Jay Patterson writes:

The ramifications for the Production Sound Department are enormous, and new demands have been placed upon the individuals within the department. Today, a production sound mixer needs to be able to immediately address a problematic two-camera setup and persuade the director and director of photography that there may be a solution to the situation that allows all departments to be satisfied, in the same number of setups, without being confrontational or patronizing.²⁶

On most second-camera setups the biggest obstacle for the production mixer is finding a microphone solution that will satisfy the many needs of the shot. Boom microphones, or shotguns, have been the mic of choice for sound professionals since the conversion era, as they provide a wide dynamic range and full-bodied sound for vocal and effects recording. But to be most effective, mixers suggest the boom be placed close to the actor since the full-bodied sound can only be achieved at close range. This can be a problem if the “B” camera is shooting the scene from a distance, because the boom mic is not only large but also fixed to the end of a large pole and angled at the sound source by the operator.

The most common solution has been to attach a lavalier, or radio microphone, to the actor. Introduced in the 1950s as a way for gaffers to communicate with each other on large sets, the radio mic eventually became a useful tool for sound mixers who needed to mike scenes that made it difficult for a boom mic to be used. In most cases, the mic is hidden under clothing to avoid being spotted. Unfortunately, these microphones do not carry the same dynamics and sensitivity as a shotgun, and carry a narrower frequency range, making it more difficult for production mixers to blend boom and lavalier frequencies. However, the prevalence of multiple camera shooting and the convenience of hidden radio mics have made them popular among contemporary filmmakers.

In addition, radio mics can rub against clothing or shift out of place if the actor is moving, producing unusable results. The ideal situation, according to some mixers, would be to utilize both shotgun and radio microphones for a scene and blend the best elements of both. But this is not an option if two or more cameras – positioned at all

angles around the set – eliminate the option for the boom. In other cases, radio mics are the only option for the sound crew.

The rationale for shooting “wide and tight” is primarily cost related. There is the perception that capturing two or more angles at once will save time and money and allow the director to stay ahead of the shooting schedule by completing more setups at one time. The production mixer must not only adapt to this method of shooting, but might also have to sacrifice the quality of his or her sound recording for expediency. The logic of this situation is sometimes faulty according to Ed Novick, who suggests that in many cases the filmmakers will re-shoot portions of multi-camera scenes with the principal “A” camera in order to ensure a more pristine take. In this situation, the multi-camera setup shot with a radio mic appears not to be necessary, but nevertheless “good to have” for editorial convenience. In Novick’s view, *good sound* is also a valuable asset, but one that is increasingly harder to achieve given the above mentioned technical and stylistic constraints placed on location sound mixers.

In navigating the murky waters of the sound mixer/filmmaker relationship, Jeff Patterson offers encouragement to mixers in the field:

Develop a good working relationship with the director of photography, based on a mutual understanding and respect. This is not too difficult, as both are up against many similar challenges. Both are required to deliver quality goods, in a timely manner, day after day after day. Both have to earn the respect of the actors—the photography, in addition to the telling the story, must be flattering to the talent; the sound should capture the performance well enough to prevent the actors from having to repeat the performance two weeks later on an ADR stage.²⁷

The consequences of the “wide and tight” philosophy are not limited to sound. Directors of photography are tasked with lighting for two different focal lengths at two different angles. Fill lights that accentuate details in an actor’s close-up need to be placed further back or dispensed with altogether. In addition to lighting compromises, Patterson notes that shot/reverse-shot setups can also suffer from eye-line mismatches.²⁸ Frequently these errors in continuity are corrected by re-shooting close shots with the primary “A” camera as a way of protecting the integrity of the close-up. Picture editors must also contend with the inconsistencies of A/B shooting. Mixer Chris Munro notes, “When I see a close-up that’s been shot on a long lens as the B camera, and compare it to a properly set-up close-up in the same scene, it sticks out like a sore thumb. The eye line is often too wide — but shooting this way is a necessity in many schedules.”²⁹

While Patterson preaches compromise, experienced mixers like Novick have acclimated themselves to the often oppositional task structures of production mixing. Working against aesthetic preferences and serving the needs of the other filmmakers goes hand in hand with accomplishing the task of recording the vocal performance in a shot. At the end of the day, Novick and his colleagues make the shot work with a variety of technical and social constraints working against them. “I make those kinds of corrections all day,” says Novick.

On an aesthetic level, the production mixer values the “live” nature of the actor’s vocal performance. Their occupational mandate is to capture the performance in a manner that is appropriate to the scene. Aside from the technical aspects of the mixer’s tasks – deciding where to set up the microphones, retrofitting the set with noise-

dampening objects and materials, organizing the location of the sound crew on a cramped set – stylistic specialization is a central feature of their work. As Jeff Wexler explains:

I've been extremely lucky to work with people who *do* have an allegiance to the production soundtrack because of all the things it can bring to a movie. Not just the fact that you don't have to replace the dialog. But the fact that the actual recording itself lends something to the movie; it tells you something about the characters.³⁰

The constitutive elements of production sound style remain fitted to the concept of capturing the emotional textures of a vocal performance. In this way, mixers participate in an occupational relationship governed by the bilateral adherence to conventional modes of working, and a specialized expertise that derives, in part, from the constraints of contemporary shooting practices.

Shooting for Perspective and Intelligibility: *The Dark Knight* and the Joker's Grain

It may not be an exaggeration to suggest that film sound begins and ends with the production mix. Although the post-production sound chain handles the bulk of material, location recordings contain what are arguably the most important audio elements: the actors' voices. After months of shooting on soundstages and on location, picture editors and supervising sound editors build the rest of the sound track around these crucial vocal performances. Given the various means by which mixers record sound, the fidelity between image and sound is largely based on capturing the "feel" of an actor's physical performance. The synchronicity between what is seen and heard is about capturing the

grain of the voice while the camera captures the actor's physical movements. Mark

Ulano stresses the importance of mixing for intelligibility and authenticity:

Recorded dialog isn't just a scratch for what will be dubbed in later. That's a common myth. The goal is to preserve performances, not just capture references. My music background helps on so many levels, as I'm literally mixing on the set, not just getting sounds. You're aiming for a mix that's coherent, and have to think like the actors who are dealing with segmented action. Choices of levels, dynamics, mics, etc. must make the process seamless, even when recording in hostile environments. Sound should create the illusion of another reality and support the material, not dominate it, although each director has varying philosophies.³¹

The fidelity of performance is not guaranteed but remains a fundamental characteristic of production mixing ideology.

That Ulano aims to “preserve” a performance and not create one is a telling feature of his craft. To preserve a performance means to provide the image with a degree of aural authenticity, something that is not possible when the bulk of sound effects, music, and other audio elements are added in post-production, months removed from the time the actors were actually photographed. Production dialog attempts to circumvent this disjunction by providing a sound recording that captures the “live” characteristics of an actor's on-set performance. In other words, production mixers strive to “create the illusion of another reality” by remaining faithful to the fidelity between picture and sound.

For production mixers, the “grain of the voice” not only connotes the emotional tenor of an actor's performance, but also the “live” characteristics of the sound recording. Jeff Wexler notes, “I've always said that I feel like I've done a really good job if I can sit

in dailies with my eyes closed and listen to a scene — the raw recordings before anyone else has gotten to them — and you can tell something about the characters, how they're feeling, where they are in the room, what emotions they're having.”³² In a certain sense, the grain of the voice reveals the spatial signature of a particular environment, the distance between the microphone and the actor's mouth, and the emotional textures of the vocal performance.

These aspects of practice support the production mixer's goal of capturing the actor's vocal performance and unique spatial characteristics of the recording environment. However, the demands of current production practices often interfere with a location mixer's aesthetic priorities and occupational ideologies. Often, vocal performances are sacrificed on set in order to satisfy the demands of the photography unit. The decision to ensure that location sound recordings preserve the narrative and emotional characteristics of an actor's performance is not always in the hands of the mixer given the other competing interests of stage and location shooting practices.

For these reasons, it is not uncommon for filmmakers to develop close working relationships with production mixers to ensure that the location sound unit is afforded a fair opportunity to record and mix the dialog tracks. The recurrent transactions between directors and mixers aim to reduce the complications arising from the competing interests of the photography unit, including the location of lighting rigs, generators, and cameras. As much as mixers attribute their professional success to their ability to fulfill the demands of the director, there are clearly artistic sensibilities and notions of a professional ideology that ultimately shapes the way in which production dialog is recorded and mixed. Recurrent transactions between directors and mixers, therefore,

signify more than a mixer's penchant for professional kowtowing: some relationships foster the creative input from the mixer.

One of the most interesting relationships to emerge from the current crop of Hollywood filmmakers and mixers is between director Christopher Nolan and mixer Ed Novick. The two – whose collaborations include *The Prestige* (2007), *The Dark Knight*, and *Inception* (2010) – share an appreciation for single camera setups and “live” location sound. As a director, Nolan is known for staging many of his sequences with one camera, avoiding the cluttered multi-camera setups that are currently favored by other Hollywood directors. Novick reveals that unlike other directors who station themselves by a bank of video monitors near the periphery of the set – known as “video village” – Nolan prefers to stand beside the camera, close enough to hear the performances without headphones. As Novick says, “he is able to hear everything he needs to” by positioning himself close to the action.

Nolan's production designer on *Inception*, Guy Hendrix Dyas, told the *Los Angeles Times* that the director is leading a “mini-renaissance” with his unorthodox shooting practices. He explained, “He still believes that the best way to achieve realism and get great performances from his actors is by trying to shoot everything upfront, even if it means challenging his shooting crew on a day to day basis and being open to the idea of using older set building techniques and special effects.”³³

As a sound mixer, Novick's aversion to multi-camera shooting is routinely undermined by directors who prefer to shoot otherwise straightforward dialog scene with two or more cameras. With no room for an overhead boom microphone, Novick often resorts to using lapel microphones that force upon voice recordings an unnatural

frontality that is “good enough for TV but not the dynamics of film.” Writing in the pages of *The Coffey Files*, Novick argues:

The single greatest factor that contributes to getting good production sound is the use of single camera. For production sound mixers, this may seem painfully obvious. But for others reading this, the revelation may not be clear. Here’s my chance to stand on the soapbox: When the second camera comes off the truck and onto the set to shoot a dialog scene, the craft takes a backseat to the budget. For one, in many cases, the actor’s eyeline is compromised. For another, the lighting is often compromised. But mostly, and this is the part I know best, the production sound suffers.³⁴

What is at stake for “good” production sound is the potential loss of performance “grain.” That is, the radio microphone – with its limited frequency range and close proximity to the mouth – reproduces the voice with a magnified presence that strips the recording of any spatial perspective or architectural signature.

In addition to matching shot scale, the performance “grain” of production sound is also tied to the fidelity between image and sound. When mixers speak about capturing the live characteristics of a performance, they are referring to the synchronization between image and sound that reproduces the natural “feel” of the profilmic event. Instead of recreating the spatial signature and emotional tone of a vocal performance using ADR, production mixers like Ed Novick value the spontaneity and “liveness” of location shooting. Novick’s view is shared by Christopher Nolan, who has established himself as a director that prefers to record vocal performances on set rather than during an ADR session.

In an interview with *Wired* magazine, Nolan explains his preference for location sound, saying, “I just think separating the voice from the face and the body is very tricky.

It is, after all, blatantly unreal.”³⁵ Although the mechanical synchronization between image and sound is, in itself, an “unreal” process, Nolan’s remarks suggest a more complex understanding of sound/image relations. What he is after is a representational sound space that preserves the immediacy of the profilmic event: the nuances of the actor’s “live” vocal performance.

Indeed, Nolan’s preference for location sound recording was spotlighted in 2008 when Heath Ledger, who portrays the Joker in *The Dark Knight*, passed away before the film was completed. Ledger died on 22 January 2008 as *The Dark Knight* was in the middle of post-production. While principal photography wrapped in November 2007, some ADR sessions and other visual effects components had not been completed at the time of Ledger’s death. However, a statement issued by Warner Bros. soon after the actor’s death confirmed that Ledger’s work on the film was finished.³⁶ Nolan and Novick had successfully recorded Ledger’s vocal performance during principal photography with no need for additional ADR sessions.

Given the extent to which Ledger’s performance is anchored by his vocal mannerisms, it remains a staggering achievement that the sound crew was able to successfully record everything during production, and that Ledger himself was up to the challenge to provide the production team with a detailed and nuanced dialog track. As producer Emma Thomas told *Wired*, “Everything you see [and hear] is his performance.”³⁷ As it turned out, Nolan and Novick’s preference for “live” sound saved the production from having to potentially hire another actor to revoice Ledger’s lines in ADR.

As much as the Joker's physical appearance – the poorly applied clown makeup, the colorful, silky wardrobe, and the ear-to-ear mouth scars – helps to define the character's persona, Ledger's vocal performance distinguishes the character as the “agent of chaos” he portends to be. The Joker's laugh is, by far, the most iconic element of the character, which has been interpreted by several actors, including Cesar Romero in *Batman*, the 1960s television series, Jack Nicholson in Tim Burton's *Batman* (1989), and more recently by Mark Hamill in *Batman: Mask of the Phantasm* (1993). Most certainly, the showy, high-pitched cackle that characterizes the Joker is evident in Ledger's interpretation, but the most valuable aspects of his Joker are the seemingly inconsequential vocal mannerisms that possess a certain improvisational character.

Specifically, Ledger manipulates the register of his voice during his line readings in a way that suggests a personality with several facets. There is an impromptu theatricality to the Joker that underlines the character's playful regard for his own “history.” At various points in the narrative, he recounts the story of how he received his facial scars, and each time the story changes. The Joker is a character without an origin or a defined past, leaving room for the character to “act” his way through key moments in the narrative. Indeed, Ledger's dynamic vocal mannerisms stand in contrast to his meek physical image. He appears frail but commands a room with his shifting vocal register and playful enunciations.

Ironically, the Joker's laugh remains the most elusive element of the character's vocal persona. Far from being the character's sonic signature, the distinctive crow is used sparingly in the film. The laugh is largely associated with the Joker's taunts about turning the city on its head, disrupting the social fabric, and threatening its citizens with random

acts of violence. His effrontery turns sinister when a Gotham news channel airs a grainy videotape with a highly reverberant sound track featuring the Joker interrogating a Batman impersonator. Holding the camera in one hand, the Joker dances around the hostage, giggling as he asks him if he believes Batman has made Gotham a better place. The hostage nervously looks away, unable or unwilling to respond, at which point the Joker's vocal tone dramatically shifts. In a guttural and demanding tone, he roars, "Look at me!"

He turns the shaky video camera on himself and, in a giggling manner, imparts a warning to Batman, "You see, this is how crazy Batman's made Gotham. You want order in Gotham? Batman must take off his mask and turn himself in. Oh, and every day he doesn't, people will die. Starting tonight. I'm a man of my word."

The Joker's message contains another playful use of vocal coloring as he moves from dizzying and high-pitched to steady and dark. He slows his cadence when he issues the "Starting tonight" threat, and deepens his voice further when he issues, "I'm a man of my word." Suddenly, he erupts in laughter – amused with his own melodramatic delivery – which causes the camera to shake and the image to blur. We hear the hostage begin to scream in the background, but the Joker's sustained cackle dominates the sound track.

Later, during the interrogation scene, the laugh is used in a more defensive manner as Batman uses physical violence to force the Joker to divulge the locations of Rachel Dawes (Maggie Gyllenhaal) and Harvey Dent (Aaron Eckhart). Completely resigned to his fate, the Joker laughs at the uselessness of Batman's physical threats: "You have nothing, nothing to threaten me with," he taunts. He is out of breath, having

been thrown to the ground and repeatedly hit in the face, so the laugh takes on a desperate, winded character – but remains no less piercing.

The laugh becomes a punctuation point to the character's overall vocal mannerisms. Indeed, the most interesting aspects of Ledger's vocal performance are the tonal gradations that ebb and flow within the Joker's speeches. He manipulates the pitch and register of his voice to emphasize certain emotions; he controls the speed and cadence of his delivery to underline frustration or anger. He punctuates these playful mannerisms by moving his tongue around the scar tissue that surrounds his lips. Those reptilian lip smacks suggest a nervous tick, as he explores the inner and outer crevices of his disfigured face.

Achieving these vocal effects required Novick to work with Ledger and the other actors between takes. In the event that Novick or an actor was not satisfied with a particular take, certain elements would be recorded "wild" without the camera rolling. Wild recordings take place between setups when the actor is still "in the moment" so the sound unit can capture the performance in the same spatial environment, with the same microphone and intensity as the photographed takes. Not quite ADR, the wild take functions as an extension of the production take without the camera present to record the actor's physical movements. It provides the sound mixer an occasion to capture specific sound elements that may have been muffled during the photographed take.

There are lengthy moments in the film where Ledger's manic vocalizations are foregrounded, allowing Nolan to build suspense through the suggestion that, at any moment, the Joker could shift his tone and change the direction of the conversation from playful to threatening. During a fairly tense hospital room scene, where the Joker

harasses a bedridden Harvey Dent, Nolan builds suspense out of Ledger's unpredictable vocalizations. Cutting between the two characters, Nolan fashions a fairly straightforward dialog exchange built around alternating close-ups of the Joker and Dent. But it's the Joker's shifting tone that sets the mood for the scene.

The Joker, dressed in a female nurse's uniform, is initially shy and nervous when he confronts Dent. His tone is shaky, even apologetic, as he explains that he is not to blame for Dent's disfigurement or the murder of Rachel Dawes. In an uncontained moment of glee, he then exclaims, "Do I look like a guy with a plan? You know what I am? I'm a dog chasing cars. I wouldn't know what to do with one if I caught one! I just...do...things."

As the conversation goes on, it's clear that he is reluctant to accept any blame for the situation, and, instead, offers Dent an opportunity to turn his anger on the Gotham police, the mob, and Commissioner Gordon. His voice grows coarser, he licks his scars incessantly, and, finally, he tells Dent to "introduce a little anarchy. Upset the established order and everything becomes chaos. I'm an agent of chaos." The scene ends with the Joker seething at the prospect of Dent shooting him with the gun he has wrapped in his hand.

This sequence, though quite conservatively staged, demonstrates how "live" production sound can shape the mechanics of a scene. Ledger builds the monologue using different mannerisms that require careful attention to framing and body movement. Even the slightest bend of the neck or twist of the jaw is synchronized with the microphone and its placement above the camera. Indeed, Ed Novick attributes the success in capturing

usable takes of Ledger's performance to Nolan's preference for single camera setups.

He says:

He actually wants good sound and gets it. He'll push me to get good sound to make me better. He also only shoots one camera. What can be better for a production mixer than to have a mic above frame and have the actors fall under it. As the frame gets tighter, the microphone gets closer. Perspective matches. I don't have to create new perspective with a radio mic.

Novick's desire for perspective is an important aspect of craft practice, since it is often assumed that production dialog is recorded with the aim of intelligibility over fidelity.

While Novick works to ensure that dialog is comprehensible, he is also aware of the microphone's relationship to the camera. He stresses that if the camera moves from a medium shot to a close-up, the microphone should follow suit. In the scenes described above, including the prison interrogation and hospital confrontation, Novick and his sound crew emphasized the relationship between picture and sound by relying on the boom microphone to record the production tracks.

The hospital scene offers an obvious correlation between camera placement and microphone distance. For much of the sequence, Nolan favors medium shots of the Joker and Dent, cutting between them during their conversation. As the Joker's intensity and anger increases, Nolan's camera moves closer and Novick's microphone follows suit. By the time the Joker forces a gun into Dent's hand and proclaims "I'm an agent of chaos," his voice dominates the sound track, sounding closer and more intimate than before, as if he's whispering into the audience's ear.

Conclusion: The Grain of the Production Mix

The idea that production tracks can both represent the intimate “grain” of the voice and be tied to the fidelity of shot scale and perspective is the implicit, guiding assumption of Novick’s work. Just as other current mixers have identified themselves in terms of their ability to record and mix clean, clear, and intelligible dialog tracks, there is also an implicit critique of modern shooting practices that pervades the occupational ideology of location mixers. Whereas subtle differences of personal taste, style, and equipment are common among most mixers, the appeal to filmmakers to afford the sound unit more resources and respect is seemingly a universal one. This general attitude is perhaps best understood by situating the occupational structure of production mixing within the broader production chain. In an editorial for *Mix*, Larry Blake spotlights the level of cooperation that is required in order for production mixers to do their job. He points out that mixers benefit most from “grips who really know how to lay dolly tracks, electricians who keep light ballasts as far from the set as possible, and costumers who avoid using synthetics, etc., all contribute to the quality of the location audio.”³⁸ In this way, the prerequisite for participation in a modern film shoot is the knowledge that “live” sound is not necessarily a priority.

This assumption also suggests that, like the other major roles in the sound chain, production mixers possess an occupational mandate to record “good sound,” but they ultimately must relinquish creative ownership of their dialog tracks to the post-production sound crew. Even at the stage of production, mixers compete with other units – photography, electrical, costuming, production design – to ensure that their work is

recorded, mixed, and preserved to the technical and aesthetic standards of the craft.

Notwithstanding the constraints imposed by other production units, the biggest challenge to location mixing is the prevalence of multiple camera shooting and, by corollary, the use of hidden radio microphones.

To be sure, Ed Novick's professional relationship with Christopher Nolan has set the bar reasonably high among Hollywood filmmakers and location mixers. That Nolan affords the production sound crew the opportunity to get what they need to ensure the location recordings are clean and intelligible is, indeed, a small miracle according to current production practices. The relationship also sets in relief the occupational ideology and craft mandate of location mixers whose role as chief dialog recordist is supported by a highly rigorous and conceptual philosophy of sound, the voice, and the emotional dynamics of an actor's "in the moment" performance.

During the production of *The Dark Knight*, Novick worked closely with the post-production sound crew to provide them with additional sound elements and materials that were ultimately used as background ambiences in Richard King's sound design. When the film crew visited Hong Kong to shoot a handful of scenes, King asked Novick to record crowds, sirens, and other ambient material that could be sewn together with other design elements. In addition, Novick routinely sent his dialog elements to the re-recording crew to ensure that the voice tracks were acceptable in order to avoid ADR sessions. Novick points out that while some material needed to be post-synchronized, nearly all of the film's dialog was ultimately culled from production tracks.³⁹ Significantly, the collaborative spirit of this relationship has spotlighted the ways in

which location mixers not only shoot for perspective and scale, but also strive to preserve the emotional “grain” of the actor’s live performance.

Most important to me here is the manner in which these issues of mixing ideology, production constraints, and vocal performance challenge the rigidity of the fidelity/intelligibility sound models espoused by some film theorists. Indeed, Donald Crafton suggests that classical Hollywood sound engineers and technology “moved progressively toward limiting randomness by isolating (or fabricating) individual elements and constructing the scene according, not to what it originally sounded like, but to what it should sound like.”⁴⁰ This meant “masking” the “natural” elements of sound space, including shot scale and reverberation, in favor of a foregrounded and intelligible track, prioritized by the demands of the narrative.

Crafton’s articulation of the intelligibility model favored by engineers, while not entirely inaccurate, provides a large-scale assessment of classical Hollywood sound production that uncritically accepts the notion that film dialog is recorded and mixed without consideration of spatial dynamics or acoustic “naturalism.” As I have argued, however, this assertion does not take into account the fine-grained technical, social, and aesthetic challenges of modern production mixing. Lacking the authority on film sets, production mixers must often sacrifice their goals of an intelligible and “airy” recording for one that suits the demands of other production units, and accepting that the actors will re-record their dialog in post-production. The set may be for photography, but location mixers have evolved in a way that suggests an adherence to the intelligibility of vocal “grain,” and a fidelity to the complexities of shot scale, perspective, and spatial signatures. Taken together as an occupational mandate, the ideology of production

mixing reinforces the demand for comprehensible dialog tracks but not at the expense of acoustic fidelity.

Notes

¹ Roland Barthes, "The Grain of the Voice," *Image Music Text*, Translated by Stephen Heath (New York: Hill and Wang, 1977): 188.

² Ibid.: 181.

³ Sarah Kozloff, *Overhearing Film Dialogue* (Berkeley: University of California Press, 2000): 91.

⁴ Quoted in Michael Ondaatje, *The Conversations: Walter Murch and the Art of Editing Film* (Toronto: Vintage Canada Edition, 2002): 65.

⁵ Walter Murch makes a similar statement in a conversation with Michael Ondaatje when he notes, "Willard is the eyes and ears through which we comprehend this war, and through whose sensibilities the war is going to be filtered." See Michael Ondaatje, *The Conversations: Walter Murch and the Art of Editing Film*: 71.

⁶ Kozloff: 99.

⁷ James Lastra, *Sound Technology and the American Cinema*: 143.

⁸ Quoted in Rick Altman, "Sound Space," in Altman, ed., *Sound Theory, Sound Practice* (New York: BFI, 1992): 49.

⁹ Rick Altman traces the practices of sound perspective in the 1930s in his essay, "The Technology of the Voice," *Iris* 3.1 (1985): 3-20.

¹⁰ James Lastra, "Reading, Writing, and Representing Sound," in Rick Altman, ed., *Sound Theory, Sound Practice*: 85.

¹¹ Ibid.: 78.

¹² John Belton, "Technology and the Aesthetics of Film Sound," in Elisabeth Weis and John Belton, eds., *Film Sound: Theory and Practice* (New York: Columbia University Press, 1985): 66.

¹³ Michel Chion, *The Voice in the Cinema*, Translated by Claudia Gorbman (New York: Columbia University Press, 1999): 1.

¹⁴ See Lastra, *Sound Technology and the American Cinema*: 149; John Belton, "Technology and the Aesthetics of Film Sound": 66; Mary Ann Doane, "Ideology and the Practice of Sound Editing and Mixing," in Weis and Belton, eds., *Film Sound: Theory and Practice*: 54-62.

¹⁵ James Lastra provides the most comprehensive study of the “intelligibility” of classical Hollywood sound practice in *Sound Technology and the American Cinema*.

¹⁶ Lastra, *Sound Technology and the American Cinema*: 143.

¹⁷ See especially Larry Blake, “I’m Still Here,” Part One: Production Sound,” *Mix* (September 1994): 42-45; Blair Jackson, “DAT on Location: The Progress and the Problems,” *Mix* (March 1994): 32-38.

¹⁸ Quoted in “Q&A: Production Sound Mixer Mark Ulano Talks Tech,” *Edgewise Media*: [<http://www.edgewise-media.com/qprsomimault.html>]. Accessed 1 Mar. 2011.

¹⁹ Ibid.

²⁰ Thom, “Meet the Winners.” See “The Sound Industry” chapter in this dissertation.

²¹ In an open letter, production mixer John Coffey asks filmmakers to replace the term “We’ll fix it in post” to “Let’s fix it on the set.” See John Coffey, “An Open Letter from Your Sound Department,” *The Coffey Files* 21.3 (2009): 26.

²² Blair Jackson, “Boom Times for TV Location Recordists,” *Mix* (April 2004): [http://mixonline.com/mag/audio_boom_times_tv/]. Accessed 1 Mar. 2011.

²³ Quoted in Maureen Droney, “Jeff Wexler: Hands on Technology, Heart in the Film,” *Mix* (April 2005): [http://mixonline.com/mag/audio_jeff_wexler/]. Accessed 1 Mar. 2011.

²⁴ Edward R. Kealy, “From Craft to Art”: 11.

²⁵ Personal interview with Blair Jackson, managing editor of *Mix*.

²⁶ Jay Patterson, “Two Camera Hell: The Use of Two Cameras in Dramatic Production,” *695 Quarterly* 1.1 (Spring 2009): 16.

²⁷ Ibid.: 17.

²⁸ Ibid.: 16.

²⁹ Quoted in Stephanie Argy, “Roll, Cut, Print: A Conversation Between Sound Professionals from the Set of the Editing Room & the Mixing Stage,” *Editors Guild Magazine* 25.1 (January-February, 2004): [<https://www.editorsguild.com/Magazine.cfm?ArticleID=454>]. Accessed 1 Mar. 2011.

³⁰ Quoted in Blair Jackson, “Location Recording Real Time,” *Mix* (September 2002): [http://mixonline.com/recording/applications/audio_location_recordingreal_time/]. Accessed 1 Mar. 2011.

³¹ Quoted in “Up-Close in Post-Production with Mark Ulano,” *Mix* (December 2004): [http://mixonline.com/news/headline/Post-Production-Ulano-1209043/]. Accessed March 1, 2011).

³² Quoted in Blair Jackson, “Location Recording Real Time”: [http://mixonline.com/recording/applications/audio_location_recordingreal_time/]. Accessed March 1, 2011).

³³ Guy Hendrix Dyas, “Christopher Nolan’s dark arts: ‘He thinks like a magician,’” *Los Angeles Times* (December 25, 2010): [http://herocomplex.latimes.com/2010/12/25/inception-christopher-nolan-thinks-like-a-magician/]. Accessed 1 Mar. 2011.

³⁴ Ed Novick, “Inception,” *The Coffey Files* 22.2 (2010): 17.

³⁵ Quoted in Scott Brown, “Dark Knight Director Shuns Digital Effects for the Real Thing,” *Wired* (June 2008): [http://www.wired.com/entertainment/hollywood/magazine/16-07/ff_darkknight?currentPage=4]. Accessed 1 Mar. 2011.

³⁶ Kim Masters, “The Dark Knight Without Heath Ledger,” *Slate.com* (January 31, 2008): [http://www.slate.com/id/2183273/]. Accessed 1 Mar. 2011.

³⁷ Quoted in Scott Brown: [http://www.wired.com/entertainment/hollywood/magazine/16-07/ff_darkknight?currentPage=4]. Accessed 1 Mar. 2011.

³⁸ Larry Blake, “‘I’m Still Here,’ Part One: Production Sound”: 44.

³⁹ Personal interviews with Ed Novick and re-recording mixer Lora Hirschberg. Novick adds, “Kudos to Lee Smith, the picture editor, and Richard King, the supervising sound editor, and his crew. Keeping production sound in the film doesn’t necessarily mean that all sync takes are perfect. The post crew is very adept at finding audio from out-takes and from wild tracks, in order to say clear of ADR. Certainly, without the wild recordings done with Heath Ledger during IMAX photography, his death would have created exceedingly difficult choices regarding the audio.”

⁴⁰ Donald Crafton, *The Talkies: American Cinema’s Transition to Sound, 1926-1931* (Los Angeles: University of California Press, 1999): 248.

CHAPTER SIX

Sleight of Hand: The Social and Technical Art of ADR and Dialog Editing

In an open letter to producers and directors published in *Mix*, sound supervisor Larry Blake expressed a number of creative and technical issues plaguing the contemporary sound industry. One of Blake's issues was the growing amount of Automated Dialog Replacement (ADR) in film mixes, which he attributed to cost-saving production strategies such as multiple camera shooting. Blake writes:

It really is possible to do films with minimal ADR recording—if you give the production sound team half a chance. It all comes down from you, and if you don't want looping, you don't have to have it. ... This is the key issue that you should always keep in mind: If the intelligibility is there, and the track is smooth and well-prepared, then it probably won't bother the audience in the least.¹

Blake argues that in some cases production tracks can be salvaged if mixers are given the time and resources to record clean dialog. But he does not dismiss the need for ADR in other situations; most certainly, despite the best efforts of production recordists and mixers, “looping” has become a ubiquitous aspect of modern post-production sound work. Dialog editor and author John Purcell has identified three areas where re-recorded dialog has its creative advantages: replacements, added tracks, and group loop.²

Replacements are re-recorded lines of existing dialog. There are a number of factors that result in a post-production line replacement. Noise that is deemed inappropriate to the scene will often be replaced with a clean line; technical issues such

as clothing rustle from a radio microphone or audio distortion may necessitate a line replacement; vocal quality can vary from shot to shot, so if an actor is not enunciating his or her words, it may need to be replaced. Additionally, a director or actor may want to change a line reading.

Adding dialog to the existing production tracks is a convention used to enhance narrative details. After the first edit assembly, the picture editor might recognize an instance where an important piece of story information is not communicated properly, so an actor will be asked to record new script lines to fill the story holes. Most often, these lines will be placed over establishing shots or over-the-shoulder shots where the line can be satisfactorily hidden. In the final scene of *Field of Dreams* (1989) when Ray Kinsella's (Kevin Costner) father is reunited with his son, we hear Kinsella call out to his father. Up until this point the audience has not been introduced to Ray's father. Test screenings revealed that audience members were confused with the final scene and didn't make the familial connection between the two characters. Director Phil Alden Robinson notes, "You're building up to this great moment and then he doesn't tell the catcher, 'You're my father.' And we thought, 'You didn't know that?' They didn't know. We were too subtle." As a solution, Robinson inserted the ADR line, "Hey, dad," over a shot of Ray's father walking away. The end result was, "Hey, dad – do you want to have a catch?" This solved the problem of the catcher's identity, and provides some closure to the narrative.

Finally, *group loop*, or "*walla*," involves recording crowds of people to simulate background chatter. Professional loop groups are hired by the sound editorial crew to improvise or perform scripted dialog for background conversation that will be intelligible

in the final mix. Since production mixers rarely capture background sound, preferring instead to focus on close-up speech from the main actors, crowd din must be added in post.

The terms “ADR” and “looping” tend to be used interchangeably by sound practitioners even though they refer to different technical processes. The practice of replacing dialog has been a part of sound production since the conversion period when unusable production dialog was replaced in a process called “looping”: studio sound editors created physical loops of film with the reference dialog. Played back on a continuous loop, the actor would repeatedly hear the line of dialog, and, cued by a series of sonic beeps and visual indicators, would repeat the text into a microphone. This process continued until the engineers were satisfied with a particular take. The constant repetition helped actors replicate the rhythm of the original dialog, which assisted engineers in achieving accurate synchronization with the picture.³ By all accounts, looping was a cumbersome technical process since synchronization could not be checked immediately. New prints of the replaced lines would need to be processed before they could be aligned with the image. Studio era engineers have noted that looping would only be used when the dialog was completely unusable, damaged, or the scene needed clarifying dialog.

The development of magnetic film recorders in the 1950s and 1960s that could move in reverse and provide stop-go playback, known as “rock and roll” dubbing, eliminated the need for engineers to produce physical film loops; instead, the dialog could be rewound and played back for the actor after each take. By the time Glen Glenn Sound Services introduced automated looping for its television productions in 1964, the

process became far more intricate, allowing actors to preview the re-recorded dialog almost instantly, and make subtle fixes in real time. With hard disk recording introduced in the 1990s, workflow speed changed considerably. Today, as John Purcell notes, “the ADR engineer can immediately combine selected pieces of chosen takes, given everyone immediate feedback as to what works and what doesn’t.”⁴

With the development of automation, dialog replacement has gone from being a filmmaking luxury to a basic component of the post-production sound chain. The immediate consequence of this shift in production has been a redefinition of the production mixer’s role and task structure, as outlined in the previous chapter. Fewer opportunities to record usable dialog on set has increased the (perceived) need for post-synchronization. Randy Thom provocatively suggests, “If the recording of ADR were treated more like shooting the movie it would almost certainly be better. Recording it in more authentic environments (instead of studios) tends to help the actors’ performance enormously. Environmental noise is a problem whenever you record outside of a studio, but well worth the trade-off in my opinion.”⁵ In Thom’s view, the expansion of ADR has created a philosophical divide between production mixers and ADR supervisors. While some production mixers are experiencing a narrowing field of opportunity to complete their tasks, ADR personnel have seen a widening in their creative and technical tasks. Of course, every film project is different with its own production and ADR requirements. In most cases, creative and redundant uses of ADR are as large or small a part of the sound chain as the director needs them to be.

There are no clear estimates on the amount of ADR in contemporary Hollywood mixes. The percentages vary from film to film. For *Titanic* (1997), Hugh Waddell

supervised dialog replacement on 95 percent of the production tracks. “While they were shooting on one side of the ship, they were building the other side. There were buzz-saws, beeps from trucks backing up, construction workers yelling at each other, wind machines, wave machines and general background voices,” Waddell recalls.⁶ Even though production tracks were available, and in some cases usable, the final mixers, in conjunction with James Cameron, decided to use 75 percent of the looped tracks. Becky Sullivan faced a similar dilemma on Rob Cohen’s film, *The Mummy: Tomb of the Dragon Emperor* (2008). As ADR supervisor on the film, Sullivan recognized that the production tracks were plagued with extraneous noise from wind machines, snow machines, and the generally unsympathetic conditions of shooting in cavernous soundstages. “So I give Rob a call and I say, ‘Sadly, we’re going to have to loop this whole movie.’”

In other cases, production tracks have survived the harsh conditions of shooting large-scale films. For example, Peter Devlin and Kevin O’Connell have explained that Michael Bay prefers the rough-edged dialog that comes from the production track, and will only replace lines when they are beyond salvageable. In an interview with *Studio Daily*, mixer Mark Ulano suggested that current film mixes utilize 95 percent of the production tracks and use ADR minimally.⁷ Of course, these figures are dependent on the type of film and the conditions of its shooting. While Michael Bay’s *Transformers* (2007) may have ultimately used 90 percent of production tracks, Robert Zemeckis’ *Contact* (1997), another CGI-heavy film, salvaged only 40 percent of production tracks.⁸ These discrepancies vary from film to film mainly due to production conditions and the philosophies of directors and actors toward the entire ADR process. Charleen Richards-

Steeves told *Mix* in 1993, “I think most directors and actors would rather keep all of their original dialog, whenever possible. ADR is uncomfortable for many actors. A lot of them come in thinking, ‘I’ve already done this.’ It’s not anybody’s favorite thing.”⁹

There is a clear diversity of practice among ADR mixers, editors, and supervisors. Each practitioner has a particular approach to their work, but many display what Michael Axinn describes as a sense of creative possibility that is more than filling a hole in the production track. The technical redundancy of recording, editing, and mixing a line that already exists in the form of the production track is approached with a variety of social and aesthetic attitudes, depending on the nature of the project. Hugh Waddell, an ADR supervisor, believes post-synchronization can add something “just slightly different from the original quality, which can bring points out of a scene that you never knew existed.”¹⁰ In Waddell’s view, ADR is a complement to the production track, not simply a replacement.

In terms of task structure, the ADR supervisor performs a social and creative function. As artistic labor, the supervisor must balance the commercial imperatives of conventionalization and the innovative aspects of sound specialization. In a certain sense, ADR is a technical process guided by the simple objective of synchronization: as long as the lips of the actor match the delivery of the line replacement, then the ADR is effective. While the occupational mandate of ADR is, most basically, the goal of synchronization, there exists a practical and social reality to the work of ADR that ultimately shapes the goals of an ADR session. This correlates to the aesthetic goal of creating a seamless line replacement, and the broader social goal of working with actors to enable them to perform the line in a manner that matches the original production track.

The social and aesthetic task structures of ADR supervision and dialog editing are inexorably tied to the functional art and craft of dialog editing. The occupational ideology may be the same – to produce a clean and intelligible dialog track – but the ADR crew must strike a balance between achieving a serviceable track and interacting with the performer. On the other hand, dialog editors work with existing material to essentially shape a performance out of the bits and pieces of a vocal track. In most cases, the dialog editor and ADR editors work together to fuse production and replacement tracks into a legible performance. In this chapter, I explore the social and aesthetic implications of ADR and dialog editing in the digital era. Specifically, I examine how screen performances are mediated by the social interaction between ADR supervisor and performer, and how the re-voicing technologies and practices of modern dialog editing ultimately shape the actor's vocal performance.

Directing the Performance: ADR and the Human Factor

First, let's consider the social aspects of ADR. Post-synchronization demands organizational rigor from the ADR supervisor. He or she is tasked with creating a list of the post-sync needs by spotting the film with the supervising sound editor, director, picture editor, and/or dialog editor with the aim of identifying the areas that require line replacements and additions. Some dialog editors prefer to wait until later in the post-production process to begin looping in order to compile a more accurate and complete ADR Cue Sheet containing all of the loop lines in chronological order. Wait too long and the margin of safety is reduced, especially if acting talent becomes unavailable.

The organization of ADR preparation is also about social interaction. In his textbook, *Dialogue Editing for Motion Pictures*, John Purcell suggests that supervisors be acutely aware of their social obligations to the task of dialog re-recording:

Getting through an ADR session without blowing it or ‘blowing a fuse’ requires outstanding organization. By carefully spotting the ADR cues and organizing the data in a way that’s comfortable for the production company, the engineers, and the talent, you’ll streamline the session. When you clearly have your act together, the talent will be more relaxed and you’ll have greater power. Being able to control a session is vital because you—more than anyone—know what you need to complete the dialogue.¹¹

This is otherwise known as the “human factor.” In addition to the technical nature of synchronization, ADR supervisors are tasked with working with actors. Here, conventionalization gives way to stylistic specialization, as supervisors conduct ADR sessions in a number of individualized ways. Some supervisors not only perform organizational duties, but are also tasked with directing acting performances if the director is not present.

Becky Sullivan’s recurrent transactions with director Rob Cohen have resulted in a trusting relationship where often Cohen leaves Sullivan to direct the actors on the emotional and technical requirements of post-synchronized performances:

The challenge on [*The Mummy: Tomb of the Dragon Emperor*] was that Rob Cohen — of the 55 days of ADR shooting — he was with me for about seven of those days. So Rob is a guy that trusts me to get the performance he needs. And that’s exciting for me because I’m directing the performance of the actor. Because we are dubbing all production dialog and using only the loops, the loops have to be great. And with Rob not there, he entrusts me to get the performance he needs for his movie, which is exciting. We’ve done four films together and he trusts me to do that for him.

Sullivan's sensitivity to performance puts her in a position to keep an ear toward the technical goals of the ADR session, and the interaction with acting talent. In dealing with reticent or uncomfortable actors, Sullivan, who is a senior ADR supervisor at Soundelux and the company's Operations Manager with 100 films to her credit, speaks about coercing the performance from the actor: "I go in every project and say, "We're going to save as much of your production [tracks] as possible, and we're just getting this [ADR track] for safety, but we may have to use it. And if we do, let's make it awesome."

Coaxing a performance out of an actor who is uncomfortable or frustrated with the ADR process is a practical element that John Purcell highlights in his guidebook:

If an actor has particular difficulties on a certain line, don't beat it to death. Move on. When you finish the other required lines, go back to the problematic ones and try again. Be gentle with actors. Never forget that acting ADR lines is horrifically hard stuff. Try it sometime. It's not easy to walk into a role months after the shoot, and many actors don't react well to seeing their scenes for the first time ... Be patient and don't buy into the actor's frustration or anger. Your job is *[sic]* to get the line, more or less at all costs, and getting flustered rarely helps. Be kind and polite, but don't let the talent get the better of you.¹²

Much of this process has to do with creating an open environment on the sound stage with the acting talent and engineers. Notwithstanding the resistance from some high-profile talent, some actors enjoy the process, believing that it gives them a second chance to approach a scene.

In more difficult situations, ADR supervisors describe their work as that of an occupational therapist. The actor may be having difficulty synching his performance with the picture, or he may be dissatisfied with having to re-do so many lines. Often,

supervisors will attempt to coax the performance from an actor by trying to read the situation and respond appropriately. Becky Sullivan notes, “You’ve got to be pleasant. Nothing fazes me. ‘You want to do that? Sure, absolutely. I’m here for you and the movie.’ I’ve had people yell at me, and by the end of the day they’re eating out of my hand.” In this way, supervisors will create a comfortable environment for the acting talent with the hope that it may improve their mood and the quality of their performance. At the same time, Charleen Richards-Steeves cautions, “You have to know when to say something and when not to because the most important thing is trying to make everything calm and peaceful.”¹³ In these ways, the general vibe of the ADR stage is based on the supervisor’s relationship with the engineers and talent. Although some actors find it difficult to perform under such conditions, the ADR supervisor seeks a level of comfort and control to complete the work in a timely manner. Some supervisors will dim the stage lights for the actor, others will keep the mood light with small talk, and others will ensure the craft service table is stocked with snacks.

ADR supervisors must also earn the trust of filmmakers. With a crowded post-production schedule, some directors will not be available to sit-in on every ADR session and coach the acting talent on every line. During a visit to Stage 2 at Todd-AO Hollywood, while the director was supervising a temporary mix with re-recordists Kevin O’Connell and Beau Borders, Becky Sullivan shuttled back and forth between the dub stage and the ADR stage. An actor was performing what were described as “demon voices” for a swarm of angry, undead monsters. After directing the voice-over actor on the ADR stage, Sullivan returned to the dub stage with the fresh material that could be edited into the mix. Back on the ADR stage, Sullivan directed the performance of the

voice-over artist, calling for multiple takes of “demon-speak” at varying intensities. The re-recordists needed options, and Sullivan was tasked with providing a range of choices to satisfy the director’s request for different vocal intonations that could match certain cuts.

Crafting the Performance

On a strictly practical level, the world of post-synchronization and dialog editing is often cited as the least creative aspect of Hollywood sound production. What ADR and dialog editing add to the sound track is the illusion of what Mary Ann Doane calls “normality,” the smoothing over of a potential break in the film to guarantee a sense of “flow.”¹⁴ What they are adding to the sound track is a lack of annoyances, a mask to hide the work of production in an attempt not to “lose the audience.” John Purcell explains the methodological aims of the dialog and ADR editor:

Dialogue editing’s most important sleight of hand is taking the elements of a scene, often shot at different times under dissimilar conditions, and nursing them into a living scene that viewers will truly believe to be *real*. Matching the voice qualities, the degree of “on-mic” sound, and the level and quality of the room tone and creating narrative-enhancing perspective are what make a scene shine. Shot balancing removes the *mechanics* of filmmaking, but exploits the *language* of film to allow the sound of the dialogue to be more than just the carrier of the text.¹⁵

The creative task of dialog editing involves a sleight of hand technique that asks the audience to believe that what they hear matches what they see. The associated ideology of ADR mixing is based on this notion of perceptual clarity and naturalism.

Thus, the conventional logic of dialog editing and post-synchronization favors intelligibility and naturalism. Most ADR supervisors and dialog editors are bound to this conventional framework, since Hollywood films continue to be cause and effect narratives driven by intelligible speech. The creative function, then, is to serve the broader narrative by creating “clean, focused tracks” to “help the story along and create minute details that enhance plot, character development, and drama.”¹⁶

The stylistic character of ADR is largely based on its success or failure in a given scene. If the ADR is judged to be “good,” then it matches sync with the picture, and approximates the aural characteristics of the original production track, which may be used in the rest of the scene. When ADR is judged to be unsuccessful, it can be painful to watch. Here, Richard Portman describes how “bad” ADR can ruin a scene’s audio-visual fidelity:

When you take a photograph and record a soundtrack that goes with that photograph, there’s a body language that goes with the dialog. So, when you don’t have the track to use, you’re missing half your negative. Half of the emotion of the scene is missing. When you try to replace that, everybody in the world knows it’s phony. It’s a matte shot.

Portman’s disdain of the ADR process notwithstanding, the emphasis on artificiality can represent an instance of creative and technical failure. Likewise, the process of combining separately photographed shots onto one print is a sleight of hand trick that hinges on its acceptability as a marker of something *real enough*. If the seams of the matte process are visible, or if the replacement line is out of sync, the illusion is destroyed.

Of course, sound practitioners vary in the manner to which they apply this conventional logic. As noted before, ADR is as much a social process as it is an artistic one. Achieving “good sync” is about more than simply matching picture to sound: ADR supervisors and dialog editors must read a scene in terms of sync, pitch, tone, emotion, and rhythm. Practitioners describe this process in terms of “feeling out” a vocal performance. Though there are varying attitudes among ADR supervisors, editor, and mixers about shooting an ADR performance, these five elements constitute the essential emphasis points. Breaking down a replacement line into these five categories is a way for the supervisor to address the technical and vocal requirements. If we accept that post-synchronization and dialog editing are fundamentally about selling continuity, then we should consider the ways in which these practitioners apply this convention to ADR performances and dialog editing.

Specifically, the relationship between ADR sound and picture is characterized by the supervisor’s attention to energy level. Gwendolyn Yates Whittle, an ADR and dialog supervisor at Skywalker Sound, believes that these five elements are linked to the actor’s energy level: “...that’s half of it, more than half of it. If the energy’s not there, it’s not going to work.”¹⁷ In addition to creating a certain professional environment, supervisors and mixers are tasked with finding ways to assist actors in replicating performance energy. According to Whittle, this is where the five elements become essential to the creative process: the performance must “match their eyes and their face and their body language.”¹⁸ In recreating a performance, supervisors will try almost anything. On *Titanic*, Whittle had Kate Winslet lie on a bench for two days to recreate the same vocal timbre for the sequence where her character is stranded on a makeshift raft in the middle

of the Atlantic Ocean. The problem Whittle faced was in trying to match the timbral qualities of the production track, and the emotional resonance of the scene.

Other supervisors emphasize the importance of pitch over other factors. Doc Kane, an ADR supervisor and mixer at Walt Disney Studios, tells *Mix*, “Sometimes you get these actors in the morning. The shot was done at 4 a.m., and they’d been working for 12 hours. Their voice is in a whole different spot. And then we start to loop, and I will listen to see. Are they lower? Are they a little bit higher? I’ll play it back, and we’ll AB against the production.”¹⁹ Quite often, dialog editors will intercut usable production tracks with ADR material, which explains Whittle and Kane’s preference for timbre and pitch accuracy. Kane will work with actors to recreate the energy level of the original performance, trying almost anything to simulate the conditions of the shoot. “I’m up for anything. If the director says, ‘I want this guy to walk around the parking lot 17 times and then come in,’ we’ll do it.”²⁰

These ADR supervisors make it clear that, while ADR is very much a technical skill, dialog editors and mixers participate in forms of aesthetic decision-making. In part, the occupational ideology of ADR mixing is associated with the skill of careful listening. John Purcell instructs editors and mixers to *listen* to the recording and “trust your gut” if something feels off.²¹ These instructions underscore the ADR supervisor’s task of understanding the performance from an emotional and dramatic perspective in addition to the technical task of synchronization. While the ultimate goal of ADR is accurate sync, many supervisors will attest that their aesthetic decisions are of equal value.

The aesthetics of ADR also include the manipulation and placement of stage microphones. As a musician might use her instrument to tell a story, the ADR mixer has

adopted the microphone as their musical instrument. Microphone selection and placement on the ADR stage has been called a “delicate art” because the mixer is often tasked with simulating the aural environment of the production track.²² ADR stages, like any other recording studio space, are sonically dry spaces with little or no “air,” which means there are different colorations between the two spaces. Production tracks are laced with a mix of sonic signatures: the hum of an air conditioner, a creaking floor, birdcalls, camera whirr, and so on. Even though most production mixers mic actors for close-up sound that spotlights speech, the air between words gives the sound a signature texture.

In addition to the social framework, the artfulness of ADR mixing involves a problem/solution dynamic that is fairly unique to ADR personnel. The process of matching production sound quality usually begins with finding an appropriate set of microphones for a given scene. There are several variables in this area, and most mixers do not necessarily look to use the same mics as the production mixing crew. Jeff Gomillion, an ADR supervisor and mixer, suggests, “Even though they use certain mics, when you get in a controlled environment with a lot of sound deadening, you might not be able to use the same mics because the coloration is different.”²³ Coloration is a term used frequently by ADR supervisors to describe the sound quality of a microphone. From an engineering aesthetic, shotgun mics carry a great deal of “warmth” and full-bodied “smack,” while lavalier radio mics are “cooler” and sharper. This is about aural texture as much as it is about microphone placement.

In either case, the logic of practice that informs an ADR mixer’s miking approach is based on the goal of continuous flow. As an interpretive art, ADR mixers bring a set of specialized stylistic schemas to the conventional logic of dialog replacement. If

production notes are available that indicate the kinds of microphones used during shooting, then mixers can better approximate the color qualities of the ADR recording. In most cases, mixers will utilize a combination of boom and radio mics on the stage. Finding the balance between the two mic types is prefigured by the picture editor's decision to assemble the scene in a certain way. Doc Kane notes that "If there's a mic angle change and you can hear it, if we're listening to the actor and the actor sounds a little close-miked, we'll move the actor in or move the mic in. And if in the next shot you hear a little more ambience, we'll have the actor move back so we can match all the mic angles."²⁴ By this approach, changes in perspective necessitate a change in microphone angle. As Kane insists, "When the shot changes, I change." What Kane and his colleagues are doing is creating a sonic signature where there is none. Or, more accurately, they are creating a dimensional vocal track from a studio setup that is designed to strip a recording of any environmental artifacts.²⁵

Although digital tools such as convolution reverb can approximate background "fill," editors and mixers are usually tasked with combining original production tracks with ADR material.²⁶ In addition to the technical craft of matching sync and microphone perspective, mixers must also ensure that "the meaning, melody, and attitude" of the loop matches the original. In this instance it is not surprising to see mixers such as Becky Sullivan discuss the occupational ideology of dialog editing and ADR supervision as having social and aesthetic components. In both cases, as Sullivan has mentioned, she distinguishes herself from her colleagues by her professional taste. Knowing how to coax a performance out of an actor, mic a scene, and cut dialog together are all tied to a specialized sense of taste: a subjective instinct based on an emotional "feeling" of what

works best. Blair Jackson argues that much of the function of ADR and dialog editing serves a more general purpose of emotional resonance.²⁷ In other words, a sonic moment may not be the most technically precise, but it may better fit the dramatic “meaning, melody, and attitude” of the scene.

Editing Within Words: Revoicing Film Dialog

If the ADR process is largely comprised of socially determined tasks, then cutting ADR and production dialog is about detailed sonic textures. John Purcell describes the editing process as follows:

Most ADR lines need editing, often necessitating a combination of takes, time expansion/compression, pitch shift, and other tricks. It seems a formidable task to compare numerous outtakes and combine them in a way that honors the spirit of the take that you or the director selected in the recording session. Yet with a standardized plan you can extract the best parts from each take without creating a soulless Frankenstein.²⁸

As Purcell describes it, there is a surgical precision associated with dialog editing, where even the smallest nuance must be fitted to the existing production track and the larger flow of the picture. Maybe an actor swallows a vowel or holds a word for too long (or not long enough). Maybe the “perfect take” is a combination of production tracks and multiple ADR takes.²⁹ Above all, however, Purcell suggests that editors must not lose sight of the fact that the final tracks should have a *soulful* quality, an emotional resonance. If the vocal performance seems *real enough* and dramatically appropriate, then the seams of the Frankenstein vocal tracks will remain hidden.

The fine-grained nature of dialog editing is a function of modern sound production. “Editing within words” is a specific technique that both ADR and dialog editors incorporate into their aesthetic tasks. The microscopic approach of treating every syllable and vowel as a unique element of a vocal performance is not shared by all sound professionals, but editing manuals encourage practitioners to be mindful of the subtle nuances of vocal inflection and intonation. John Purcell’s manual suggests that, when combining ADR and production tracks, editors should cut in the pauses between words; look for shorter or longer vowels in other takes; and use sibilants (“sh” or “ch” sounds) from other takes.³⁰ For the 1982 film *Frances* (1982), Kay Rose rescued partially unintelligible words like “can’t” by using a “c” from one take and a “t” from another.³¹

The practice of “revoicing” a scene highlights the extent to which dialog editors can shape a vocal performance out of bits and pieces of character dialog. Indeed, Gianluca Sergi suggests that actors have limited control over their voice. He writes, “They have no control over the way in which it will be recorded, manipulated, and placed in the overall soundtrack.”³² In addition, their work is mediated not only by sound technology, but also by the camera lenses, filters, and other image-based distortions that, as Sergi argues, “impinge” on their performance. Despite his attempt to draw a valuable connection between a performance and its mediating apparatuses, Sergi fails to describe the degree to which post-production sound practitioners often reshape actors’ vocal performances. Moreover, while other sound theorists have studied the implications of technological mediation in film acting and performance, the transformative effects of ADR and dialog editing on performance have largely been ignored.³³

Other studies of sound technology and performance have emphasized the artificial construct of the image-sound dynamic. Kaja Silverman suggests, “The fiction of authenticity of cinematic sounds thus promotes belief not only in presence but in self-presence.”³⁴ In more theoretical terms, cinematic identities are tied to the false notion that body and voice are truly integrated. Focusing on the “faith” of image-sound unity and the effacing properties of classical sound techniques, Silverman spotlights the fissure created by sound technology and the goal of audio-visual integration. More recently, Pamela Robertson Wojcik recast the study of screen acting and sound technology by considering the actor’s performance as governed by the mediating effects of the cinematic apparatus. She writes, “Rather than imagine acting and recording as rivals, or as discrete steps in the filmmaking process, we need to recast film acting as a complex and layered process of audiovisual representation, a process that often depends upon the separation and reintegration of sound and image.”³⁵

What Wojcik suggests is a reconsideration of sound theory and screen performance that attempts to bind together the various forms of embodied voices as social and technological relations. If performance is indeed dependent on technological mediation, then it is important to consider an analysis of both technology and its effects on screen acting. She notes, “Rather than assert an identity between voice and body or a nonidentity between acting and technology, we must describe film performance as nonauratic and always already mediated.”³⁶ By accepting the mediated nature of film sound, Wojcik circumvents the protracted discourse common to theories of voice and technology in cinema. Consequently, she develops a novel heuristic where acting and technology are positioned as symbiotic partners in the process of audiovisual

representation. In turn, this supports Sergi's contention that actors are acutely aware of their professional inability to control their image and voice beyond their own "original" performance.

Wojcik's analysis of voice in classical and contemporary Hollywood cinema is limited to the representational features of the mediated performance. In turn, the practical exigencies of dialog editing and mixing are largely abstracted in favor of general considerations of the form and function of film acting and voice-over work. Indeed, Wojcik appears to look past the technical craft of dialog editing and focus instead on the compositional nuances of a performance. But if the technical process of dialog editing is necessarily bound up with the performance itself, then foregoing an analysis of how the practical realities of dialog editing and its associated occupational ideologies (to supply clean and intelligible tracks) explain only part of the story.

In large measure, the task structure of dialog editing has not changed since the studio era. Dialog editors prepare a vocal track by smoothing out words, repairing lines, and removing pops, clicks, and other environmental noises. In addition, dialog editors remain sensitive to the performative qualities of the vocal track. Performances must not only match synchronization with picture, but also retain the emotional and rhythmic values of the actor's original line readings. Dialog editors use the vocal track in much the same way that sound editors sculpt and refine effects elements to achieve a particular dramatic feeling. In a technical sense, the word splicing techniques and occupational ideology of dialog editing have not changed considerably since the studio era, but they have intensified. Given the technical flexibility of workstations, dialog editors now

regularly perform fine-grained surgery on dozens, and sometimes hundreds, of lines of production dialog.

Syllable splicing is not a new trend in dialog editing, as the *Frances* example illustrates, but film-based editing platforms such as the Moviola tended to be less precise. Editors would physically remove certain frequencies from the voice track by scratching the celluloid. In the digital era, editing within words has become easier with software plug-ins that can automatically adjust pitch, speed, and length of a sentence, word, or syllable. Frequencies can be isolated and erased with surgical precision using sonic spectrograms and waveforms. However, dialog editors have expressed skepticism towards spending too much time massaging tracks, citing the time constraints of sound editorial. Becky Sullivan suggests that an editor must trust his or her instincts on a cut, and not waste too much time finessing a particular edit. “If you spend hours cutting an ADR line, you’ve lost perspective,” she argues. On the other hand, contemporary editing manuals encourage novice editors to experiment with pitch and compression tools, and other word-splicing strategies. John Purcell implores his readers to stay “true” to the production track and achieve a sense of spatial depth with a “feeling of space around the words.”³⁷ In this way, dialog editing is also about creating and embellishing the performative values of a voice track.

Although digital workstations have facilitated the perceived intensification of dialog editing techniques, the transition has encouraged editors to refine their work in a way that can actually slow down the editorial process. Once a utilitarian function of the sound track, dialog editing now shares more in common with artful work of sound effects editing. Revoicing dialog is about creating clear and intelligible tracks as much as it is

about crafting a vocal performance out of the bits and pieces of ADR and production tracks. Color-coded waveform analysis in Pro Tools can expedite the process of eliminating unwanted frequencies, but the dialog editor is now also tasked with revoicing more material because of the precision of these tools. An intensified scrutiny is placed on every syllable of every word to ensure clear transmission. At the same time, the level of focus and detail is matched by the editor's commitment to matching the "air" and "feeling" of space around the words to the original production track.

Frederick Stahly, a freelance dialog editor based out of Soundelux, reaffirms the extent to which editing within words is a common feature of the editorial process:

We'll frequently take different syllables and pieces of other takes to repair something that was damaged with a production noise or a vocal quality, like if an actor has phlegm in their throat or stumbles on a word. A lot of times it's a lot of lip smacks.

With certain programs you can take a sonic spectrogram and you can do a waveform analysis. Certain frequencies come out as certain colors, like orange or yellow or blue. It's just like looking at a picture of the sound, and you can highlight that band of frequencies and either attenuate or replace it.

Stahly's task description emphasizes the functional qualities of dialog editing, and reinforces the ideological goal of producing clear and intelligible tracks. But beyond the utilitarian function, Stahly also performs a more significant function on the dramatic and aesthetic value of an actor's vocal performance.

Scrubbing the Track: Frederick Stahly and *The Wolfman*

Stahly's work on *The Wolfman* (2010) provides a useful example. Sir John Talbot (Anthony Hopkins) arrives at the London asylum where his son, Lawrence Talbot, is being held and subjected to ice water and electrotherapy treatments. Having been arrested for the gruesome murders of several townspeople, the hospital doctors believe Lawrence to be insane, yet Sir John has come to tell Lawrence the truth about his condition. Lawrence awakes in his cell, chained to the wall by his neck, and finds his father sitting across from him. In a lengthy monologue, Sir John explains that on a hunting trip to India many years before, he was infected with lycanthropy by a feral boy who bit him. The curse was passed on to Lawrence when Sir John, in werewolf form, struck him in the neck during the massacre of a gypsy camp.

The monologue portion of the scene is intercut with a brief flashback to Sir John's encounter with the feral boy in the Indian cave. The rest of the sequence plays out in Lawrence's cell, and lasts about 3 minutes. While Lawrence lies in a fetal position for most of the scene, Sir John moves around the cell as he tells the story. The scene is broken up by editing that alternates medium shots of Sir John and close-ups of Lawrence. Over the course of the scene, Sir John moves around the perimeter of the cell, leaning against its stone walls from which hang chain-link restraints.

During shooting, Anthony Hopkins repeatedly brushed up against the chains as he was speaking, which interfered with the production mixer's attempt to record a clean and intelligible track. As the dialog editor on the film, Frederick Stahly was tasked with repairing the audio and salvaging the production track without having to resort to ADR.

Stahly notes, “Directors know that we can salvage production [tracks], but on some shows it just becomes too difficult, so the production recordist is simply providing a guide track for us. [ADR] is the only option, then. But schedules sometimes conflict and an actor isn’t always available to dub his or her lines.”

As a solution, Stahly devised a two-stage plan to recover the production tracks and re-sculpt Sir John’s monologue. First, he searched alternate takes for clean versions of words that were obscured in the guide track. “So we would take a word or a syllable where you’d hear the chain hit,” Stahly says. When Sir John first leans against the far wall of the cell he says, “Every night of the full moon, for many years, I have been locked away in that crypt by Singh, my faithful servant.” Editing within the words of this line, Stahly found alternate syllables to cut-and-paste into the original track. When he says, “...by Singh, my faithful servant,” there is a cut to Lawrence that essentially hides the disjunctive quality of the revoicing due to the different textural qualities of the takes.

“We tried the cut-and-paste first, and the director thought it was okay. You could tell there was a little different performance in the words,” Stahly recalls. Since Hopkins’ line readings varied with each take, Stahly felt that the cadences and “flow” of the performance were not entirely seamless. “A lot of the time if the pitch of one word doesn’t match the others in the replaced take, we can alter the pitch a little bit to try to have it match.” Not entirely satisfied with the manual revoicing, Stahly applied a spectrogram analysis to the scene that isolated the chain hits with a color-coded waveform. Essentially, Stahly was able to scrub the chain spikes from the track, leaving a fairly clean vocal track in its place. In the end, Stahly provided the supervising sound

editor and director with the two options at the final mix, where a combination of the two techniques was used.³⁸

Certainly, Sir John's monologue is an important one from a narrative perspective. In the monologue, he reveals the reason behind Lawrence's transformation and the family's lycanthropic curse. If we examine the sequence from a narrative point of view, it isn't surprising that the sound supervisor and director would be concerned that Hopkins' voice was not perfectly intelligible. In addition, the filmmakers' concern over the effectiveness of the revoicing only served to underline the commitment to a crisp and unencumbered track. However, careful attention to the track reveals a slight shift in vocal timbre that is the result of shifting between different takes of the monologue.

This sequence also underscores the level of detail afforded to words and the voice. Director Joe Johnston fashions a visually static scene that emphasizes Sir John's words and tone. Consider the first shot of the scene: a close-up of Lawrence with his eyes closed. Over the shot is the sound of the cell door being opened and Sir John intoning, "Lycanthropy...lycanthropy." The words seem to roll off his tongue with a prurient silkiness. Sir John moves around the space with a nervous energy, but Lawrence stares blankly ahead, transfixed by his father's voice.

The syllable splicing and corrective tasks of dialog editors emphasize the technical and creative dimensions of their work. As an ideology, Frederick Stahly was guided by the desire for a clear and unencumbered track, especially one with a pivotal narrative role to play. Stahly's creative choices and solutions were borne out of traditional cut-and-paste techniques inherited from film-based editing practices, and the innovative "scrubbing" techniques common to the digital audio workstation. Both

techniques served to augment Anthony Hopkins' original performance by culling words and syllables from other takes and assembling them into an amalgamated track. The words may have been Hopkins', but Stahly crafted their delivery and cadence.

The scrutiny of style and practice in ADR recording and dialog editing suggests an intensification of crafts in the Hollywood sound chain. The technical precision expected by ADR supervisors and dialog editors has been largely facilitated by the adoption of non-linear editing tools, but the digital workstation has also uniformly raised the standard level of detail expected of voice recording and performance. In addition to creating an intelligible track, ADR supervisors are tasked with matching the texture and "feel" of the original production recording. The twofold occupational mandate of ADR personnel suggests a social and aesthetic function to post-synchronized dialog. ADR personnel craft performances not by editing within words, but by coaxing actors to deliver a performance that matches the sync and "feel" of the original track. They are sound directors in the way they work with actors to craft a performance that is tonally and spatially indistinguishable from the production track.

In addition, dialog editors routinely balance the demands of intelligibility with the aesthetic values of an actor's vocal performance. Dialog editing's greatest sleight of hand is not simply the creation of a "realistic" voice track out of material that was shot at different times and under different conditions, but the sculpting of an actor's performance that better suits the filmmakers' intentions. While some filmmakers may prefer a rougher dialog track, the task structure and occupational ideologies of modern ADR and dialog editing have become ingrained in the structure of the sound community. In terms of style, revoicing an actor's performance through ADR or word splicing reconfigures the

mediating and auratic qualities of sound technology and performance by positioning the ADR and dialog professional as an integral component to the aural character of an actor's performance.

Notes

¹ Larry Blake, "An Open Letter to Directors/Producers," *Mix* (March 1996): 123.

² John Purcell, *Dialogue Editing for Motion Pictures: A Guide to the Invisible Art* (Burlington, MA: Focal Press, 2007).

³ *Ibid.*: 248-250.

⁴ *Ibid.*: 251.

⁵ Quoted in "Randy Thom in Conversation: Designing a Movie for Sound," in Philip Brophy, ed. *Cinesonic: Cinema & the Sound of Music* (North Ryde: Australian Film and Television Radio School, 1999): 9.

⁶ Quoted in Michael Axinn, "ADR – Necessary Evil or Saving Grace," *Mix* (April 2000): [http://mixonline.com/mag/audio_adrnecessary_evil_saving/]. Accessed 1 Mar. 2011.

⁷ Bryant Frazer, "Production Sound Mixer Mark Ulano Talks Tech," *Studio Daily* (June 26, 2008): [http://www.studiodaily.com/filmandvideo/tools/gear/Production-Sound-Mixer-Mark-Ulano-Talks-Tech_9610.html]. Accessed 1 Mar. 2011.

⁸ Randy Thom "ADR Discussion" on C.A.S. Online Forum: [<http://filmsound.org/QA/ADR-Discussion.htm>]. Accessed 1 Mar. 2011.

⁹ Quoted in John Michael Weaver and Pete Elia, "An Introduction to the Audio Post-Production Process," *Mix* (February 1993): 59.

¹⁰ Quoted in Axinn, "ADR – Necessary Evil or Saving Grace": [http://mixonline.com/mag/audio_adrnecessary_evil_saving/]. Accessed 1 Mar. 2011.

¹¹ Purcell: 255.

¹² *Ibid.*: 266.

¹³ Quoted in Blair Jackson, "Dialog Replacement 101," *Mix* (November 2006): [http://mixonline.com/recording/applications/audio_dialog_replacement/]. Accessed 1 Mar. 2011.

¹⁴ Doane, "Ideology and the Practice of Sound Editing and Mixing": 57.

¹⁵ Purcell: 137. Emphasis in original.

¹⁶ *Ibid.*: 129.

¹⁷ Quoted in Axinn, "ADR – Necessary Evil or Saving Grace":
[http://mixonline.com/mag/audio_adrneccessary_evil_saving/]. Accessed 1 Mar. 2011.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Purcell: 267.

²² Jackson, "Dialog Replacement 101":
[http://mixonline.com/recording/applications/audio_dialog_replacement/]. Accessed 1 Mar. 2011.

²³ Ibid.

²⁴ Ibid.

²⁵ My discussion of ADR practices is limited to live-action films. With animated films, since there is no production track to match, ADR professionals can mic actors according to their own tastes. However, the logic of practice among ADR supervisors is to mic actors for clean, close-up sound that can be later manipulated for environmental distortion during the final mix. For a discussion of ADR in modern animated films, see Barbara Schultz, "Capturing the Voices of Animation," *Mix* (September 2009):
[<http://mixonline.com/post/features/sfp-pixars-vince-caro-0909/index.html>]. Accessed 1 Mar. 2011.

²⁶ Convolution reverb is a process for digitally simulating the reverberation of a physical space. Essentially, it allows a "snapshot" of the acoustic characteristics of a location to be recorded and converted into a digital reverb pattern. See Alex Kemmler, "Acting on Impulse," *Electronic Musician* (June 2006):
[http://emusician.com/tutorials/emusic_acting_impulse/]. Accessed June 27, 2010.

²⁷ Jackson, "Dialog Replacement 101":
[http://mixonline.com/recording/applications/audio_dialog_replacement/]. Accessed 1 Mar. 2011.

²⁸ Purcell: 275.

²⁹ Ibid.: 211.

³⁰ Purcell: 216.

³¹ John Michael Weaver and Pete Elia, "An Introduction to the Audio Post-Production Process": 59.

³² Gianluca Sergi, "Actors and the Sound Gang," in Alan Lovell and Peter Krämer, eds., *Screen Acting* (London: Routledge, 1999): 136.

³³ One of the more interesting accounts of ADR technology and practice is found in Starr A. Marcello, "Performance Design: An Analysis of Film Acting and Sound Design," *Journal of Film and Video* 58.1/2 (Spring-Summer 2006): 59-70.

³⁴ Kaja Silverman, *The Acoustic Mirror: The Female Voice in Psychoanalysis and Cinema* (Bloomington: Indiana University Press, 1988): 43.

³⁵ Pamela Robertson Wocjik, "The Sound of Film Acting," *Journal of Film and Video* 58.1/2 (Spring-Summer 2006): 78.

³⁶ *Ibid.*: 80.

³⁷ Purcell: 175.

³⁸ Although the chains were eliminated from the original production track, Foley performers added the sound of Lawrence's chain restraints whenever he moved his body during the scene. Foley did not, however, add the sound of Sir John brushing up against the chains.

CHAPTER SEVEN

Footsteps with Character: The Art and Craft of Foley

One of the attendant features of modern Hollywood sound style is the heightened treatment to the smallest of sonic details, as if sound practitioners have enabled audiences to hear the unheard. These aural close-ups are not so much exaggerated from their real-world context but spotlighted to convey narrative details that would be otherwise lost in the din of a film's busy soundscape. An example can be found during the cafeteria jam sequence in *Fame* (2009) when a group of students spontaneously break out into a roughly choreographed song-and-dance number. Amidst a busy background track of crowd noise and an array of foregrounded diegetic instruments, including electric guitar, electric bass, drums, violin, and piano, we can also clearly hear the intricate movements of a tap dancer's shoes, the air *whooshes* that accompany his dizzying turns, and the cloth movement from his clothes. Replicating the basics of Hollywood sound space construction is a process already well known to contemporary sound professionals, but the level of detail and definition present in this example is endemic of something else that has occurred at the levels of modern sound style and practice.

Turning the smallest of sounds into large sonic gestures has been the domain of Foley since the conversion to sound period; however, developments in 24-track recording technology and digital workstations have transformed the aesthetic textures of Foley sound effects and the occupational ideologies of Foley performance and mixing in ways

that have reconfigured task structures and stylistic conventions. With regard to occupational identity, direct-to-picture professionals, as they were once known, have achieved a level of creative autonomy in the post-divestment era that many now consider themselves Foley *artists*.

At one level, the shift in designation from Foley “walker” to “artist” is representative of the broader institutional changes that accompanied the transition of sound effects editors from mechanical laborers to aesthetic decision-makers throughout the 1970s and into the 1980s. Indeed, it was not uncommon in the studio era to mistake a Foley practitioner for a sound editor, since the work of syncing sound effects to picture was similar, and, perhaps more significantly, many sound editors performed and cut their own Foley effects. At a deeper level, however, the degree to which performance and digital technology can be tied to the task structure of the Foley artist, together with a series of developments surrounding the representation of Foley professionals by Hollywood craft unions over the past decade, have signified a crucial shift in direct-to-picture sound recording and performance. According to John Roesch, “Now with digital advances, as far as sound quality goes, the playing field has been leveled somewhat. Really, the big determining factor is not technical anymore, it’s strictly artistic.”

In this chapter, I look more closely at modern Foley performance and aesthetics, giving special attention to the customized nature of Foley effects and the importance of creating sound with “character.” What interests me here is not only how Foley professionals have negotiated their role as sound artists, but also how the functional goals of Foley have shifted with the coming of digital audio workstations.

I also consider the rise of Foley artistry as an outgrowth of the flexibly specialized nature of modern Hollywood film production. In the past twenty-five years, Foley has become the site of significant technological and stylistic activity at the levels of recording, mixing, and performance. Whereas the artistic value of Foley has been historically defined by a rigid set of conventions, modern Foley effects and the professionals who design and perform direct-to-picture effects carry out tasks that emphasize the textural “feel” and emotion of an otherwise ordinary sound. In addition to providing synchronized effects that plug the dyke, modern Foley can be considered a performance art. In turn, the social and functional tasks of the Foley artist have expanded in ways that reflect their status as sound effects creators and performance artists. Despite the utopian attitudes expressed in trade publications about the newfound independence of Foley professionals, however, this development has not drastically redefined the boundaries of the sound chain, nor has it affected industry cutbacks and shorter schedules in the audio post-production field. Though their social and aesthetic tasks are similar those in sound editorial (effects, dialog, and ADR), Foley has also experienced a significant shift in occupational ideology that has become less about matching sync and more about capturing the emotional “feel” of sound effects.

Finally, I discuss a number of issues related to the representational nature of modern Foley effects. As a commercial standard of sound reproduction in radio, television, film, and videogames, Foley sound serves three broad functions: to replace and reinforce particular elements from the production track and match the sync to the original recording, to “sweeten” – this is, enhance – material that is otherwise not in the jurisdiction of sound effects editorial, and to ensure that filled music and effects (M+E)

track is available for foreign releases.¹ On an aesthetic level, I will explore how Foley serves the dramatic functions of the narrative by characterizing and dramatizing the smallest of diegetic sounds. These issues touch upon the broader representational functions of Foley as sound that distinguishes itself through its “heightened” clarity.

Jack of All Trades

During the silent era it was not uncommon for films to be shown with some sort of sound and music accompaniment. Indeed, the theory and history of early film sound techniques and practices have been well documented in recent scholarship, including the use of lecturers, organists, symphony orchestras, and sound effects. Stephen Bottomore has shown that from the early years of the twentieth century, films in the United States and Europe were often accompanied by sound effects, produced by skilled operators using a wide array of “traps” or sound effects machines. By the mid-teens, Bottomore suggests that audiences had become accustomed to the attendant sounds that filled out the audiovisual experience, and were critical of theaters that employed unskilled performers or utilized “inaccurate” sounds for particular imagery. He writes, “When commercial sync sound arrived in the late twenties there was already a tradition of both theory and practice to build on in working out how to make sound, and sound effects, mesh with the pictures.”² In many ways, the logic of practice that shaped early sound accompaniment would find a partner in synchronized direct-to-picture effects in the years to follow.

By 1929, Hollywood sound engineers had not yet completely solved the representational dilemmas of synchronized sound film. However, as James Lastra argues,

there was general consensus among engineers that certain sounds were best recorded not during production but after the film had already been shot and edited in a process that has come to be known as re-recording.³ In the first few years of synchronized sound filmmaking, Hollywood films rarely employed complex marriages of dialog, music, and effects, preferring instead to concentrate on dialog, non-diegetic music, and the occasional, narratively pertinent sound effect. However, the manner in which specific sound effects were recorded, and the logic concerning an effect's placement in the final mix, had not yet been concretized. One of the more challenging aspects of sound production in the conversion era was achieving accurate synchronization with particular effects, such as footsteps and hand claps. Since most actors had different walking cadences, it proved to be difficult for engineers to properly match a 78-rpm recording of footsteps with the picture.

In 1928, as Universal was preparing a large-scale silent adaptation of *Show Boat* (1929), the mass shift to synchronized sound was already underway at other studios. Midway through production, Universal decided to release the film as a "talkie" in an attempt to capitalize on the trending popularity of synchronized sound. Universal rented the Fox-Case sound-on-film system and reshot some sequences, including a lengthy prologue, and post-synchronized the rest of the film with added dialog, music, and effects. When the studio's sound engineers were having difficulty synching a variety of complicated visual gestures, a journeyman employee in the studio's prop department named Jack Foley had an idea to synchronize "live" sound effects to the projected picture. Foley and a small crew of engineers and props people "performed" a variety of

sound effects, including handclaps, footsteps, and background chatter while viewing the projected film during the orchestra's recording session.

Jack Donovan Foley was born in Yorkville, New York in 1891, and moved with his family to California after working a series of odd jobs on the New York docks. He began his career in the burgeoning film business as a stuntman in one-reel Westerns before assuming a variety of other creative and technical posts, location scout, screenwriter, and director of Benny Rubin shorts.⁴ Foley was resourceful and flexible, and applied himself to solve "the latest problem" brought on by new technologies and production techniques. By the late 1920s, Foley had found work at Universal as a prop master.

After *Show Boat*, Foley continued to perform sound effects for the early talkies, focusing on props and footsteps, and the occasional cloth effects to emphasize a character's clothing. As Vanessa Theme Ament suggests, direct-to-picture sound recording was invented "out of necessity," and did not fit into an established occupational role, or follow a set of established conventions.⁵ However, the functional specificity of Foley's performance techniques was not dissimilar from sound effects accompaniments in the silent era. Sound effects technicians would routinely take their cues from actors and moments that supported the dramatic textures of the narrative, adding both realism and emotional weight to the silent images. Foley adapted his techniques to the necessities of the film project: he used a single piece of cloth to mimic clothing rustle, and had a cane he used to create the illusion of more than one person walking at one time. Initially, Foley recorded to one track of optical film, which required him to perform a single pass of all effects elements.

Within a decade, every major studio in Hollywood developed their own systems of direct-to-picture recording, even though it would not be referred to as “Foley effects” until 1962 when Desi Arnaz and Lucille Ball’s Desilu television studio built their own direct-to-picture sound stage and named it the “Foley Stage.” During his forty-year tenure at Universal, Foley performed direct-to-picture effects that were considered more than mere technical accomplishments of matching sync. Foley became known for imbuing an artistic sensibility to the footfalls and cadences of certain high-profile actors. Jack Sikorsky, who worked with Foley at Universal, notes, “Jack emphasized that you have to act the scene. You have to *be* the actors and get into the spirit of the story the same as the actors did.”⁶ According to David Yewdall, “Jack referred to Rock Hudson’s footsteps as ‘deliberate,’ James Cagney’s were ‘clipped,’ Audie Murphy’s were ‘springy,’ Marlon Brando’s were ‘soft,’ and John Saxon’s were ‘nervous.’”⁷ There was a performative aspect to this work in addition to the technical job of matching sync; Foley articulated the aesthetic features of the actors’ gaits, and internalized certain qualities of the characters they played. In addition, Foley also performed character effects for Universal’s top female actors. He once noted in an interview, “Women are the toughest to imitate ... my 250 pounds may have something to do with it, but the important thing is their steps are quicker and close together. I get winded doing leading ladies. Jean Simmons is almost, not quite, the fastest on her screen feet in all of Hollywood. She’s topped only by June Allyson. I can’t keep up with her at all.”⁸

Given the complex, and often misunderstood, nature of direct-to-picture effects, Jack Foley remained at Universal but did not belong to a sound union or society; in a certain sense, his work could not be characterized as either editing or mixing and, thus,

“Foley” became an element of the sound chain unto itself. In 1962, Foley was given an honorary membership from the Motion Picture Sound Editors society, but at the time the question of where Foley performers fit into the existing labor structure of Hollywood sound production had yet to be addressed.

The Problem of Occupational Identity: Foley and the Labor Unions

Between 1919-1960, direct-to-picture sound was highly routinized, and practitioners worked within a fairly rigid system of conventions. Performers worked with teams of mixers, editors, and assistants on sound stages equipped with various ground surfaces (wood, concrete, dirt) and an extensive array of props to replicate the sounds of objects handled by characters. Out of the studio system came a structured training program for direct-to-picture performers that required an eight-year stint as an assistant sound editor before being allowed to edit and perform sound effects. In some cases, studios hired former dancers who were mostly female, since, as Vanessa Theme Ament notes, “the bias was that women were more coordinated.”⁹ However, with the development of the apprenticeship system, only experienced editors could perform direct-to-picture effects after spending time as an assistant, an editor, and finally as a supervisor in the studio sound department.

The formal training system was nearly abandoned when the major studios dissolved their post-production assets in the 1960s and into the 1970s, leaving many entry-level and assistant direct-to-picture performers without a stable work structure. With no formal training or apprenticeship system, the pedigree of modern Foley

performers has been decidedly diverse; to be sure, many have backgrounds in dance, sound editing, film directing, radio and broadcast engineering, and acting. According to one practitioner, “Foley attracts all kinds to its shores.” For this reason, the institutional rigor of Foley performance has come under scrutiny in recent years, as it remains a unique, if not entirely eccentric, aspect of the sound production process.

The basic network of Foley professionals has not changed very much since the studio era. Under most circumstances a modern Foley crew is comprised of two performers, a mixer, an editor, and a supervisor who may also be responsible for preparing the cue sheets. The supervising sound editor is generally the person who provides the stylistic direction of a film project to the Foley crew, as she or he is the liaison between the director and the Foley department.

The relationship between direct-to-picture performers and Hollywood labor organizations fared no better during this period. During the studio era, there were many direct-to-picture practitioners who were members of the Editors Guild, Sound Local 776 (re-named 700 in 1998); however, there were others, including performers with dance and choreography backgrounds, who were not represented by the two sound locals in Los Angeles, and remained outside the unionized structure of sound labor. Decades of collusion between the two sound locals and the major studios had forced several Foley practitioners to take up residence with the Editors Guild as “sound editors,” but none of their job duties came under the jurisdiction of what sound editors were responsible for doing. Not surprisingly, the situation worsened in the post-divestment era as sound production became a freelancer market. Consequently, while some independent houses employed Foley performers who also cued and edited their work, other sound shops

segmented the workflow, and would not allow Foley performers to cue and mix the track. The problem remained as to how to define the occupational role and function of a direct-to-picture performer, or “Foley walker,” as they came to be known in the 1970s; in other words, were these practitioners sound editors, mixers, performers, or some combination of all of these roles?

The question of professional identity has shaped the history of Foley performers in Hollywood on both practical and aesthetic levels. While I will explore the technical and aesthetic components of their professional identity later in this chapter, I am presently interested in the issue of labor relations between Hollywood craft unions and Foley performers. Up until 2006, Foley performers were not recognized by a labor organization in Hollywood as a distinctive unit of sound professionals; indeed, some performers were members of the Screen Actors Guild (SAG), others were part of the Editors Guild, and a great majority belonged nowhere. Even today there are fewer than one hundred working Foley performers in the film industry. With fewer than one hundred working Foley performers in the industry today, some have suggested that their small size coupled with the blurred nature of their job description – not quite sound editors, not quite actors – only added to the labor dilemma.

Throughout the 1980s and 1990s, a small group of sound professionals comprised of mostly Foley performers began work to secure union representation and codify a working job description for direct-to-picture practitioners. Following a 1998 meeting with International president Tom Short, Foley performers were initially not invited to join the Editors Guild due to the fact that the International Alliance of Theatrical Stage Employees and Local 700 could not properly define the role and occupational task

structures of direct-to-picture practitioners. According to Foley artist Alyson Dee Moore, Foley performers have historically been caught in an occupational “gray area” because they were not strictly sound editors, mixers, or actors. What was essentially at stake for Foley performers was a definition of tasks and duties that could be applied to the ways in which practitioners organized their workflow for a film project. Moore notes, “There was nothing to indicate who could do what. Where was the line? Could a Foley artist also cue and edit Foley?” In addition, the Foley group did not have the numbers on their side. With fewer than one hundred active performers in the industry, the group was petitioning on behalf of an extremely small sampling of non-unionized workers, some of who already belonged to the Editors Guild.

By 2002, attempts to court the Screen Actors Guild had fallen short since most Foley practitioners had no background in the performing arts. However, the Guild did represent ADR loop group performers, who fell under the jurisdiction of post-production sound, but this was not enough to convince SAG representatives that Foley performers were worth the investment. Then, in 2005, Foley representatives turned to the International Brotherhood of Teamsters, who offered them an opportunity to join their ranks even though the Teamsters did not represent any post-production practitioners in the film industry. Representing laborers and transportation workers in film, theatre, and television, the Teamsters were willing to work with Foley performers since it could potentially open up further opportunities in the post-production field. On the eve of a meeting between Foley representatives and the Teamsters, Local 700 informed the Foley group that they were claiming jurisdiction over all remaining direct-to-picture professionals who were not already in the Editors Guild. Industry observers have

speculated that the Alliance of Motion Picture and Television Producers intervened and pressured the Editors Guild to accept Foley performers into their local since the Teamsters did not have jurisdiction over laborers in post-production.¹⁰ Given that some Foley performers were already in the Editors Guild as “sound editors,” I.A.T.S.E. and the A.M.P.T.P. offered the remaining non-unionized performers an opportunity to sign I.A.T.S.E. authorization cards.

Negotiations between I.A.T.S.E. and the A.M.P.T.P. in the winter of 2005 led to an agreement with the Editors Guild in March 2006 with its members ratifying a pact that would include Foley performers as part of the sound editors’ local. The clandestine nature of these negotiations forced the Foley representatives to accept the terms of an agreement on which they had little input. As a result, in the summer of 2006 a group of fifty Los Angeles-based Foley performers filed a complaint with the federal government over “alleged misrepresentation” by I.A.T.S.E. representatives. At the time *Daily Variety* reported that I.A.T.S.E. forced upon them to remain in a union to which they did not wish to belong. The complaint read, in part, “We were pressured into signing authorization cards and joining Local 700 by being told that that would give them more power to negotiate on our behalf. Local 700 did not negotiate on our behalf. Local 700 didn’t even ask what we would want in a contract.”¹¹

The Foley group had not anticipated that joining an I.A.T.S.E. local would infringe on their salary norms; if anything, they had hoped union representation would clarify their job description and provide added employment benefits to one of the few non-unionized groups of skilled workers in Hollywood. However, there was serious resistance to the terms outlined in the 2006 Basic Agreement that stipulated that Foley

performers would receive a salary cut of 18 percent in order to place them on par with the sound editors' basic daily minimum of \$370 rather than their standard rate of \$450. The complaint concluded, "As a result, many of us are facing a worse deal than what we have before the so-called negotiations took place." Although I.A.T.S.E. representation would have meant that non-union projects would have to pay a minimum benchmark salary to Foley performers, the cuts seemed largely counterintuitive to the group's original demands.

Foley performers eventually accepted terms of the Basic Agreement and continue to be affiliated with the Editors Guild, even though issues of professional identity and representation persisted. With the transition of re-recording mixers to Sound Local 700, the Editors Guild employs a split pair of field representatives, one for the editors and another for the mixers. According to Alyson Moore, the question of who represents the interests of Foley practitioners remains a key issue as Local 700 becomes acquainted with the task structures and occupational identity of Foley practitioners. The Editors Guild remains the representative body for sound and picture editors, and the blurred nature of Foley performance has largely confounded the executive branch of the Guild who is not yet familiar with the needs of Foley practitioners.

That Foley was brought under the arm of the industry's largest post-production union can be seen as an effect of the flexibly specialized system of production. The freelance system of sound production in Hollywood has reconfigured the technical, creative, and social processes of production in ways that have encouraged independent practitioners to develop signature techniques and professional relationships that constitute a career in the sound industry. However, the history of direct-to-picture performance has

shown that its blurred task structures and inconsistent labor record has undermined the functional necessity of Foley and its creative role in modern films. Foley artist Gary Hecker says, “People have tried to do it on machines, but Foley is mimicking actions. Some of it you can do, but it doesn’t have that human touch and that human rhythm behind it. There is something organic about having a human do it.”¹² In many ways, the so-called “human element” has had a pivotal effect on the way in which technology has remapped the occupational ideology of Foley.

Technology and Practice: Foley Goes Digital

During the 1980s and into the 1990s, Foley recording and mixing went through a period of technological change that has come to define the practical and stylistic logic of their work. In the years following the collapse of the studio system, the sound industry continued to use magnetic film as its preferred stock for recording and editing effects. A holdover from the 1950s experiments with widescreen and stereophonic sound, magnetic recording offered improved audio quality and multi-track capabilities. Working with full-coat magnetic stock gave the Foley crew a total of three tracks with which to record effects; occasionally, mixers would “hang” a single stripe for a total of four tracks. While studio era “soundmen” would traditionally perform Foley effects in a single pass, it was not uncommon in the 1950s and 1960s for practitioners to separate specific effects and combine them later using multi-track magnetic stock. According to John Roesch,

Early on in my career, everything was done to mag, and if we wanted to get artsy, we’d fly something onto ¼-inch and speed it up or slow it down. Then the next was 24-track recording. The film business is usually at least 10 years

behind the regular recording business, so we didn't get to that point until about the mid-'80s. We used Dolby A mostly, then SR. The beauty of 24-track, of course, is that you had a lot more information available to hear back at one time versus mag.¹³

Given the conservative nature of technological adoption and diffusion in the film industry, it is not surprising that Foley experienced a lag in formats into the 1980s when the music industry was fully immersed in 24-track recording techniques.

In terms of aesthetic practice, 24-track recording represented an expanded template of creative options for Foley performers like Roesch. The expansion of tracks essentially gave Roesch and his peers the ability to include more elements with clearer separation. In addition, the value of 24-track in the freelancer market meant that independent sound shops could advertise themselves as having “state of the art” equipment. For example, throughout the 1980s Roesch's TAJ Soundworks billed itself as being one of the only Foley firms in Los Angeles with a Dolby SR multi-track system. Besides the technical cachet of the multi-track system, Roesch and his colleagues at TAJ were also establishing a unique Foley aesthetic using an array of new techniques to record and mix Foley effects.

Changes in technology and practice in Foley reflect the changing modes of collaboration in the music industry between 1965 and 1975, as described by Edward R. Kealy.¹⁴ Music mixers transitioned from being technical engineers to aesthetic decision-makers in the studio as artists came to rely on their technical expertise and artistic contributions. As already noted, the breakdown of a rigid “craft union” mode, brought about by a changing industry landscape of independent record labels and smaller studios, afforded mixers an opportunity to experiment with new concepts of “sound” that were

“quite unlike traditional forms of knowledge and practice associated with musical theory, performance, and composition.”¹⁵ To succeed in the new climate, music mixers needed to acquaint themselves with a theoretical and practical knowledge of signal processing, tape editing, and miking strategies that eschewed the segmented workflow of earlier eras.

Because of their own need to distinguish their work from other independent sound shops, Foley practitioners began to experiment with different miking distances, signal processing, and EQ. By the 1980s it was standard practice to employ two microphones for a basic setup: one close and one far away. As John Roesch explains, “The old thinking was to do everything pretty close-miked. Some people used to mike directly behind the [Foley walker]—six inches to a foot!—because that was going to get ‘good signal.’ But what you really got was a huge bashing footstep that had no detail to it.”¹⁶ Challenging this logic, Roesch and his colleagues established the practice of miking for two distances, and choosing among a range of microphone types to best capture a particular sound: “We’ll use a lavalier mic from time to time—an ECM 50—and that’s for some unusual effects. We can put down a shooshy, zuzzy Duvatyne material and we can spin the mic with our hands on it in a circle and create the feeling of wind or even fire if you spin it a different way. We’re definitely getting more creative all the time.”¹⁷ In an effort to dismantle the outmoded studio hierarchies of Foley performance and mixing, Roesch has developed a conceptual approach that ties the duties of the performer to the mixer, leading some to call him a Foley “director.”

What is most interesting about this development is that the acquisition of new skills, and the consideration of aesthetic properties, has not been limited to Foley

performers. While studio era Foley mixers were responsible for recording “clean” tracks for the final mix, modern mixers have begun collaborating with performers on a range of aesthetic issues that add “character” to otherwise dry recordings. MaryJo Lang, a veteran Foley mixer at Warner Bros., prefers to “sweeten” certain effects to bring “character to a character’s movements.” Lang has developed a range of techniques to add depth, reverberation, and weight to effects using specific miking strategies and processing methods. For example, Lang regularly blends the characteristics of the near and far microphones to give the sound a spatial signature without losing the detailed nuances of the effect. In this way, the mixer’s transition from engineer to artistic collaborator emphasizes the decentralization of sound production over the last thirty years. Lang and other mixers like her have been able to exert artistic influence over material that was once considered part of a formalized hierarchy of tasks. Now, mixers have added an evaluative role to their task structure that is guided by personal taste and aesthetic evaluation.

As already suggested, one reason for the increasing value of practitioners with specialized skills and styles is the emergence of the freelance employment structure in the sound industry. Even when the major studios re-established on-the-lot post-production services, the value of their freelancer staff was contingent on their career reputations, relationships with other filmmakers, and sense of personal style. In this way, the novelty of unusual miking strategies has encouraged performers and mixers to consider the “sound” of Foley as something that can be individualized and attributable to a particular stylistic choice. Foley engineer George Lara explains the practical logics of multiple miking:

We use different microphones for different types of things, but I mainly use the shotguns—the 81 Neumanns; I’m very happy with them. We use four of them. If Marko is one the exterior pit, we’ll have one mic [pair] on the pit and one on the other side of the room. So we’ll have two primary mics and two secondary mics, and then we also have another one mounted—the Schoeps stereo small-capsule [mic]—which gives us more ambience. By having all these mics mounted on both sides of the room, it makes it much easier to get different perspectives on-the-fly while recording. One some close-ups, where there’s also going to be a very detailed sound out front, I might use three different mics: left, center, right. I’ll make the two Neumanns a stereo pair, figure-8, and then use one of the Schoeps small-capsule for the center to get a fuller sound and record it on three tracks.¹⁸

It is important to remember that, while there are certain miking techniques that have become commonplace in the Foley world, most Hollywood mixers and engineers have developed signature combinations that emphasize a particular Foley shop’s aesthetic.

The transition to digital audio workstations in the 1990s did not so much reconfigure Foley workflow as it concretized the techniques and collaborative tasks that arose in the 1980s. Despite claims that digital workflow has provided Foley performers and mixers with more creative options, many techniques of the digital era had become fashionable in the 1980s and early 1990s when crews were still managing 24-track analog machines. Gary Hecker notes, “Digital equipment has given me more options. The equipment I use alters sound in certain ways, drops it in octaves, makes it bigger or gives it more depth to get giant, dynamic sounds that in the old days no one was doing.”¹⁹ In contradistinction to Hecker’s claim, manipulating the sound of an original recording was indeed characteristic of an approach that was borne out of the effects work of John Roesch and his work at TAJ Soundworks in the 1980s. Although the equipment has

changed, the fundamental concept of augmenting an audio track using reverberating, equalizers, and pitch shifting has not redefined the process.

However, digital workstations did have a profound effect on the workflow of Foley professionals in three fundamental ways. First, workstations offered mixers no concrete limits on tracks. Not confined to the limitations of a multi-track recorder, the workstation afforded Foley mixers the luxury of separating a complex series of effects and playing back the reel instantly. With film-based recording media, Foley professionals often performed two or more sets of actions on the same track, thereby necessitating the presence of two performers on the stage at one time. As a result, the marriage of two or more effects on the same track eliminated the need for mixers to separate every element on to its own track; however, this process placed a strain on the mixer to properly capture each sound in its proper perspective.

Consequently, limitless track counts and the speed of digital delivery have had an inverse effect on budgeting and scheduling. Although it is still common for high-budget releases to receive a 20-30 day Foley schedule, many smaller productions are faced with schedules lasting a week or less. Foley performer Marnie Moore notes:

The amount of time was established a long time ago when we used to work with 1,000-foot reels, which were about 10 minutes long. Generally, you would figure that for a full-coverage film, you have one day per 1,000-foot reel. That was pretty good, but unfortunately, we usually don't get that anymore. Now they have digital reels, which are like double reels basically, but they still think we should be able to do a reel in a day.²⁰

As a result, Foley professionals have stressed the importance of the relationship between Foley and the supervising sound editor, whose job it is to provide a cue list of sound

effect requests. Supervisors can earn the trust of Foley crews by delegating work that is proportional to the time given to complete the project. According to Alyson Dee Moore, Foley crews must be able to serve the needs of the filmmaker client but not at the expense of the budget and schedule. As with the other components in the sound chain, Foley practitioners manage social obligations in addition to the aesthetic demands of their job. In this sense, Moore's common refrain to filmmakers – "What do you want me to hear?" – comes at a cost of time and resources.

Still, the biggest change in Foley technology, according to industry journalist Michael Kunkes, has been in the control room, where "the positions of recordist and mixer have basically been combined into a single job with responsibilities, with the mixers (called engineers in New York) doing double duty, a move made possible by the advent of Pro Tools."²¹ While Pro Tools has provided mixers with a more organized work environment – a Foley mixer can call up a series of similar cues so that the performer can work through material by one actor or on the same surface at once – the downside, notes Leslie Bloom, is that "the studio now has a new library to pull sound effects from. Foley artists have no recourse or receive no residual from the re-use of our sounds."²²

Second, the post-divestment period and subsequent back-to-the-lot movement in the 1990s witnessed the emergence of a flexibly specialized marketplace dominated by independent sound shops and major studio post-production facilities. The relative portability and affordability of digital workstations has also meant that independent freelancers can set up an ersatz Foley stage and mixing console in their garage. Besides the major studio Foley stages, major film and television productions in Los Angeles have

come to utilize smaller stages operated by freelance Foley artists. In North Hollywood, the Ear Candy Post Foley stage is a small room with a complete Pro Tools setup, Foley pit, and shelves of props. In contrast to studio Foley stages, most independent operations employ only one Foley artist. Because modern Foley practices separate every sound element on to its own track, doubling up tracks with two or more actions is not necessary. Monique Redmond explains:

ProTools has been really good and bad for the industry. In some ways it's been great because you can redo a take very quickly. But it's also brought down the budgets because people are doing guerilla Foley in their garages.

When there were less tracks, we also worked in pairs because that way you could double up on things. Double up on footsteps for crowd scenes, double up on props, like somebody would get one aspect of a sound while the other person would handle another. Say it was a dining room scene and if you have very few tracks you could have somebody doing chair creaks of people sitting at the dining room table while somebody else is handling glassware or dishes and you can do it simultaneously. Now, with so many tracks, you keep everything on it's own track. Which is good in some ways but also it's a lot more for the mixer to contend with.²³

Third, the random-access nature of picture editing platforms has made it easier for filmmakers to experiment with the footage and produce multiple versions of a sequence; consequently, any many changes to a scene may require sound editorial and Foley to re-record certain effects. In this way, the Foley process has become far less streamlined than in the past. Even though digital editing tools have provided filmmaker with greater workflow flexibility, filmmakers are not locked into the cut of a film until much later in the process. Foley professionals, then, are working within a set of technical constraints

that, on the surface, appear to be tools that liberate certain creative options. Here,

MaryJo Lang contextualizes the constraints of digital Foley mixing:

In the days of [magnetic] film we used to get it towards the end. It was pretty much finalized, and the version we got was nine times out of ten the version that went on the screen. But these days with digital editing it can change daily. And it's a real trick to keep up with what the film editor and director are doing as far as the content of what we have to work with. So these days we get it in a fashion, put together, but even within the two or three weeks that we're working on it, it can change drastically. Also, with CGI becoming so much more prevalent, one scene can look one way and then two days later the CGI comes in and then it's "Oh my God – now that building's exploding!" It's challenging. So, when you've finished a project you're never *really* finished.

At the same time, the constraints of digital workflow have actually made it easier for Foley practitioners to define their work in concrete terms. Experiments involving innovative miking strategies and employing unique materials for specific effects that developed in the 1980s and 1990s have largely become the norm among Hollywood Foley performers and mixers.

"Custom Sound Effects," Performance, and the Foley Artist

Significantly, the move from "craft mode" to "art mode" by Foley performers was precipitated by the expanded role of sound editors in the late 1970s. Loosening the grip on the segmented work of sound professionals, editors such as Walter Murch and Ben Burt in San Francisco blurred the line between what was traditionally understood as sound editorial and Foley. On films such as *The Conversation* and *Star Wars*, these

editors recorded new sound effects in a variety of interior and exterior environments in order to provide signature sounds that could not be found in any library. Loosening the grip on the hierarchical work of studio era sound practitioners, Murch and Burt were combining the work of Foley with that of sound editorial by recording new elements and then “sculpting” them using signal processing tools, adding reverb, and slowing or speeding up the sounds in order to create an entirely original sound effect. Working outside the jurisdiction of the Editors Guild, these Northern California “sound designers” were not only inventing new ways of working with sound, but also conceptualizing a new sound chain.

In large measure, the expansion of sound editorial in San Francisco coincided with the growth of Foley in the Los Angeles sound community. For a long time, the task structure of Foley performers was limited to a narrow field of effects work. John Roesch notes, “there was an old guard that said, ‘Okay, we’ll do some footsteps here, some key jangle there, but we’re not going to do a glass break, we’re not going to do a body fall, we’re not going to do some rain effect on a window. It was never considered that Foley could fill those holes; they came under the category of effects.’”²⁴ In other words, there were not only highly codified ways of recording sound in the studio era, but also a rigid system of what the Foley department would handle. By the early 1980s, many of these strictures were loosened, and Foley experienced a dramatic shift in occupational mandate. Roesch suggests that Ben Burt’s work on *Star Wars* represented a “watershed moment in sound. That’s when an artistic customization in the Foley world started. You’d have Darth Vader walking and give him a more unique sound. That’s not to say it didn’t happen before, but it definitely became more pronounced.”²⁵

Of course, the expansion of Foley duties in Hollywood also came at a time when sound technology, namely Dolby Stereo, spotlighted the dramatic potential of sound effects with its multichannel speaker array and low noise floor. Not encumbered by studio mandates or union regulations, Los Angeles-based Foley performers expanded the domain of Foley into “hard” and “soft” effects; that is, in addition to the need for footsteps, Foley also handled intricate cloth movements or rain pitter-pattering on a window. This expansion in duties can also be read as a response to the flexibly specialized and freelance workforce of modern Hollywood. With the rise of independent sound shops and freelance Foley performers, finding a unique angle to the craft became a necessity.

One of the pioneers of this expanded Foley program was John Roesch. After studying at New York University and a Directing Fellowship at the American Film Institute, Roesch was asked to work on the sound for a low-budget film project, *Jackson County Jail* (1976). Roesch recalls, “I was the only guy who had sneakers on and they needed some Foley...and the rest is history!” In 1982, Roesch and two partners began TAJ Soundworks, which at the time was one of the only dedicated Foley houses in Los Angeles, and one that was actually designed *by* Foley practitioners. TAJ quickly grew to become one of the industry’s premier Foley houses, and John one of the industry’s leading Foley performers, working with high-level supervising sound editors such as Charles Campbell and Gordon Ecker, Jr. According to Vanessa Theme Ament, Roesch applied his directorial focus to the Foley stage and emphasized to colleagues the *artfulness* of Foley and its creative potential to affect the narrative in subtle ways.²⁶ For the past twelve years Roesch has been the lead Foley performer on the lot at Warner

Bros. Partnered with Alyson Dee Moore and mixer MaryJo Lang, Roesch maintains one of the busiest Foley stages in the industry.

In Roesch's view, modern Foley is about the creation of "custom sound effects" that function to provide characterization to human actions or natural phenomena. Roesch says, "There were some of us who didn't know there were limits to what Foley should do, and we did our own thing and had a lot of fun with it and, I guess, in the process helped expand the role of Foley a bit. Now, of course, it wouldn't be at all unusual for someone to request some rain pitter-pattering on a window."²⁷ Notwithstanding the continuities between classical and modern Foley practices, Roesch and his contemporaries have imbued Foley with the artistic decision-making attributes more common to sound editorial and design than with the functional "match-to-sync" attitude of earlier eras.

Throughout the 1980s, Roesch, with the encouragement of some directors and supervising sound editors, tailored what might be considered "functional" Foley effects to the demands of the narrative. On *The River* (1984), a film about a family struggling to save their farm, Roesch and editor Charles Campbell recorded many of the rain and water effects on the Foley stage. With the fire department on hand, Roesch used a fire hose and water tank to simulate the raging waters that plagued the farm after a severe rainstorm. On the first *Back to the Future*, also supervised by Charles Campbell, many of the film's original sound elements were created on the Foley stage, constituting what Roesch has called one of the first "all-in-one Foley shows," where the line between sound effects and Foley was essentially blurred. Sounds that were not the traditional domain of Foley – doors, complex weaponry, mechanical sounds, car noises, and so on – became a stylistic signature of Roesch's work. Amazingly, the entire opening sequence of *Back to the*

Future (1985) featuring the ticking clocks, mechanical dog feeder, coffee maker, and

Marty McFly's (Michael J. Fox) entrance was performed by Roesch and his Foley crew:

What is not necessarily communicated well is that Foley is custom sound effects. Not that what we do is better than field recording – not at all. It's just that there are times when Foley can be done potentially with a greater degree of accuracy. Or at least that ability to make the sound that is needed for that particular moment to be just right.

That is not to say that there haven't been any jurisdictional struggles between sound editorial and Foley.

Depending on budget, schedule, and the personal preferences of the supervising sound editor, Foley has not eliminated the need for and desire of sound effects recordists and editors to design custom sound elements. Consequently, the loosened structure of Foley work made it more difficult to separate what constituted the domains of effects and Foley. However, Roesch and his current Foley crew consider their work to be the raw ingredients of sound effects that will be “married” to other elements by the sound editors. On *Transformers*, Roesch and Moore supplied the basic raw materials for the metallic footfalls of the giant robots, which were later combined with other “moving metal” sounds by the film's sound design team. In this case, the metallic elements “sweetened” the effects editors' work by providing a tangible, textural quality to the transformers' footfalls.

The separation between Foley and sound effects editorial is, ultimately, tied to the needs of the particular film. Moore suggests that, typically, Foley will be responsible for most footsteps, costume cloth movement, props, and ephemeral elements such as debris, water, and dust. However, doors, explosions, weapons fire, and vehicle engines constitute

the domain of sound effects editorial. Moore might “sweeten” – i.e., enhance – an explosion with sounds of cascading rubble and cracking concrete; she might also add leathery creaks to a vehicle’s interior seating to help “sell” the age of the car.

In addition, Foley has not been immune to the same budget cutbacks and shrinking schedules that have affected the rest of the sound chain in the 1990s and 2000s. As Roesch stresses, “In the ‘80s going into the ‘90s, a lot of things moved from effects into Foley, and now the pendulum has swung back a little bit. Foley budgets are smaller on some films now, and where we had ‘x’ days previous, you can lop off two to four now and you will not have as much done in Foley or as much Foley time, except for large-budget films.”

More fundamentally, however, the expanded domain of Foley has widened the occupational mandate of Foley performers to the point where performers consider themselves artistic contributors to the sound design process. By the early 2000s it was not uncommon for Foley performers to be credited as “Foley artists.” The artist designation also acknowledges the level of technical skill and creative properties inherent to the job. Combining the resourceful and artful approach innovated by Jack Foley and the modern need to establish a professional style, the work of contemporary Foley artists have imbued their work with a performative rigor that is at once a natural extension of the actor, and a textural element that supports the dramatic functions of the narrative. The shift in practice is also symptomatic of a broadening of occupational ideology, whereby Foley artists not only perform the functional characteristics of a prop or character, but also endeavor to fashion an expressive character out of such effects.

When asked to describe their current task structures, many Foley artists emphasize three expressive components of their job duties. According to freelancer Shelley Roden, a Foley artist must first have an “instinct for what materials to use to create a specific sound without necessarily being literal about what they choose.”²⁸ Basic prop materials provide the basis for the Foley artist’s creative interpretation of a sound element, and its dramatic function within the narrative. In most situations, Foley artists approach the task of sound creation differently, choosing to imbue an on-screen prop with a signature sonic character. Despite the conventional wisdom that some objects sound better for certain effects, Foley artists balance historical convention with artistic innovation. A longstanding staple of the Foley trade is celery, which has substituted for bone snaps; laundry detergent has been used for anything goopy, including gruesome body horror effects; a piece of leather combined with jangling keys often passes for “cop gear.” Though many modern prop choices are trade secrets, Alyson Dee Moore confesses that one of her own signature sounds is using pinecones in conjunction with a wet chamois cloth to simulate the sound of cracking bones and gore.

At Warner Bros., John Roesch and his Foley partner, Alyson Dee Moore, have amassed an impressive collection of props and surfaces for their work. Stacked high on one wall of the Foley stage is a neatly organized collection of props separated by type in plastic containers: eye glasses, hinges, can openers, nails, wallets, jewelry, seatbelts, cell phones, dog chains, door knobs, guns and ammo, cigarettes and lighters, bowls and plates, umbrellas, currencies, brushes, and a wide assortment of paper and books. Other categories offer up an assortment of odd objects used for more unique sounds: cartoon props, fairy bells, and clicking objects. As much as Moore is interested in collecting new

props, she tends to rely on a stable of tried-and-tested materials that have worked on several films.

Second, Roden continues, “A Foley artist also should have the ability to achieve the delicate balance between intense concentration and the ability to let go during every performance.”²⁹ In other words, Foley is about the emotional and textural *feel* of a sound, and its relationship to the scene. Foley artists handle props according to the dramatic significance of the scene; in other words, there is an attention to an actor’s performance, the period in which the film takes place, and its genre. As Vanessa Theme Ament notes, “The attentive Foley artist will take into account all the character and dramatic purpose of the prop.”³⁰ David Fincher’s *Zodiac* (2007), which explores the story of the hunt for serial killer known as “Zodiac,” who killed several victims in the San Francisco Bay Area in the 1960s and 1970s, spotlights the cryptic letters the killer supposedly sent to the San Francisco Chronicle. Foley artists Alyson Dee Moore and John Roesch were tasked with emphasizing the *sound* of the infamous letters. Reproducing the sound of paper – newspapers, books, letters – is a common Foley element, but the Zodiac letters carried with them a certain dramatic weight that Moore and Roesch needed to convey as the film’s characters inspected them, touched them, and then passed them around a large conference table. As Ament explains, “One kind of paper cannot be used for all kinds of paper.”³¹ The paper cues needed to be precise and pronounced without being overstated.

Third, and perhaps most crucially, Foley artists place a practical importance on being able to “hit sync” and ensure the performance fits into the flow of the production track. However, as John Roesch insists, “Excellent sync comes from the performance.” The symbiotic values of feel and sync are often intertwined with the Foley artist’s talent

for “landing” a cue and placing emphasis on its dramatic dimensions. In many ways, digital workstations have eliminated the need for artists to be hit sync perfectly, since the Foley editor can tighten a cue and improve sync in Pro Tools. Ament agrees that digital editing platforms have eased the strict adherence to synchronization:

When a Foley artist is walking a cue, the performance is based on the character established by the actor and the flow of action created by the picture editor. The artist is changing surfaces, bridging awkward cuts, camouflaging changes in walking stride, and attending to the perspective of the character within the scene. At the same time, the artist is hitting the best possible sync so the least amount of editing will be required. One might wonder why the sync cannot just be cut in so the artist can let that part of the task go. The answer lies in remembering why Foley was developed as a craft. Footsteps do not have an impact that can be measured. Each actor has a different way of walking. The artist reproduces this performance sonically.³²

But the Foley artist is doing more than simply reproducing a way of walking, or the way a prop is used by a character; they are performing the *feel* of an action.

What distinguishes modern Foley practice is its emphasis on performance. More than anything else, Foley artists describe their work in emotional terms: the *feel* of a prop is performed, not edited. Ament suggests that filmmakers not be too preoccupied with the actual prop being used to simulate a sound, but instead concentrate on its sonic qualities: “The lesson is simple: watch the film and listen to the prop. Don’t watch the prop. It affects your perception.”³³ This particular logic of practice has influenced the inventory of sound cues provided by Foley in contemporary Hollywood films. What is particularly noteworthy about the kinds of sounds performed by Foley artists are the descriptive designations assigned to props. Keeping in mind that every film has its own unique set of Foley requirements, there is an assortment of props that appear with some consistency in

most films: chairs, paper, silverware, drinking glasses, clothing rustle, handguns, handshakes, hand grabs, foliage, and debris.

Modern Foley practices emphasize the resonance of even the most pedestrian of props in a method known as adding “life” to objects and materials. A basic wooden chair may creak and bend as a character moves around in it. In a comedy, “chair life” can be played for laughs to punctuate the weight of a character; in an interrogation sequence it can be used to amplify the tense exchange between characters. A “cup down” during a particularly sad moment may be treated more delicately than, say, if a greedy corporate executive places a glass of scotch on his desk. These intricate moments of prop life function on a basic level to provide audio-visual redundancy, but also work on a deeper level to dramatize a sequence based on the props handled by characters.

Characters wielding weapons of various sizes demonstrate a more overt instance of adding “life” to prop effects. “Gun life” is characterized by the rattling sound a weapon makes when a character picks up a gun and moves it around in his or her hands. Although most real guns make very few incidental sounds when handled properly, Foley artists use “gun life” to accentuate a weapon’s dramatic presence. In what has become a trope of action-adventure films, characters will dramatically cock their weapon as a show of impending force. In *Phone Booth* (2002), The Caller (Kiefer Sutherland) cocks his gun over the phone and says, “Now doesn't that just torque your jaws? I love that. You know like in the movies just as the good guy is about to kill the bad guy, he cocks his gun. Now why didn't he have it cocked? Because that sound is scary. It's cool, isn't it?” In certain situations, a character will “click hello,” announcing their presence by the sound of their gun. In *The Matrix* (1999), Neo (Keanu Reeves) and Trinity (Carrie Anne Moss) enter

the lobby of a high rise and proceed to set off the security alarms with their stash of weapons. After Neo takes out one of the security guards, the SWAT team arrives and a shootout ensues with every character cocking their weapon (sometimes more than once) before firing. Later in the film, Trinity greets an Agent with a “click hello,” followed by the line, “Dodge this,” before shooting him point blank in the head.

These are fairly brief moments of “gun life,” but Foley artists suggest that too much rattle can sound “absurd”; according to Vanessa Theme Ament, the “trick is to do just a little.”³⁴ In *The Dark Knight*, the Joker, dressed in a female nurse’s uniform, confronts Harvey Dent in his hospital room, and tells him to “introduce a little anarchy” into his life. He loosens the ties on Dent’s wrists, and places a loaded revolver into his hand. With the gun in Dent’s hand, the Joker points it at his own forehead, cocks it, and says, “Upset the established order, and everything becomes chaos.” Holding the gun in its place, Dent reveals his lucky coin to the Joker using his free hand. Dent’s determination to leave the Joker’s chances to fate is highlighted by his brief explanation to the Joker; showing him each side of the coin, Dent intones, “You live...you die.” The coin is flipped, Dent pauses, then looks back at up at the Joker as we cut to the next scene.

The intimacy of the scene is conveyed through director Christopher Nolan’s choice to use alternating close-ups on Dent and the Joker. This is significant because Nolan also invites the audience to examine the extent to which the left side of Dent’s face has been burned. With the visual emphasis on both Dent and Joker’s physical scars, and the critical dialog exchange between the two characters, prop “life” was used to emphasize the high stakes of Joker’s anarchy proposition and Dent’s decision to leave the Joker’s fate to chance. When the revolver is revealed, we remain aware of its presence

through its subtle rattles and mechanical clatter. In addition, Dent's coin flip is fairly pronounced, and manages to cut through Joker's heavy breathing and the undulating drones of the musical score.

The technique of wedging detailed sound elements into an already complex visual and sonic field are not uncommon in contemporary films, but this scene in particular spotlights the ways in which Foley can reinforce the dramatic weight and significance of the two key props. As more than mere ornamentation, the gun and coin serve as thematic counterpoints to each other; Joker's gun becomes "an agent of chaos," while Dent's coin is a symbol of choice and, more provocatively, anarchy. The Foley work in this scene "activates," in Bordwell's terms, our awareness to the significance of the two objects, forcing us to attend to the detailed nuances of prop life.³⁵ In the course of the scene, the two characters look intently at each other and remain motivated by the objects in their hands and their power to destroy, thereby making the props that much more dangerous.

Almost by default, modern Foley artists tap into an actor's performance to gain a sense of their character. Leslie Bloom argues that "Foley is a performance art. A person on the street who just won the lottery and walks five steps from a building to his car is going to walk with a totally different attitude than a person who ran those same five steps after robbing a bank."³⁶ Such an attention to character intention has set in the relief the value of Foley artistry over the use of a stock effect. Some have called this approach "method Foley," since the artist works to not only approximate the appropriate sync for footsteps, but also communicate an emotional tone with the actor's movements. Discussing the expressive qualities of modern Foley, Alyson Dee Moore suggests:

You could probably take five different Foley artists and give them the same scene and it would be similar but they would all sound a little different because everyone has a different ear. I think for me, I'm very conscientious about footsteps and getting into a character versus, "Oh, that guy's wearing tennis shoes...ok so I'm going to put on tennis shoes." Well, that guy may be wearing tennis shoes but he's kind of a thug and he might be dragging his shoes. It's something no one else would notice, but Foley artists do.

According to Moore, there is an added value to Foley performance that is as dependent on character as it is on recreating the representational aspects of floor and prop surfaces.

Ament instructs students to consider an assortment of aesthetic conditions before settling into a character performance. She argues that Foley artists must account for whether the character is "male, female, young, old, fast-paced, sluggish, a heavy walker, light and airy, rushed, plodding, anxious, happy, or encumbered ... We do not just put on a logical pair of shoes and start walking."³⁷ On *The Dark Knight*, Roesch and Moore chose silky fabrics for the Joker's cloth movement to offset the heavy plastic and leathery sounds of Batman's costume. The interrogation scene at the film's mid-point offers a study in contrasts: the brooding, lumbering textures of Batman and the light, almost slippery textures of the Joker's ensemble. There is a definable weight to Batman's movements contrasted with the slightness of the Joker, which are communicated, almost exclusively, by "cloth life." It seems an obvious choice to convey Batman as an overpowering threat, since he is after all trying to obtain crucial information from the Joker, but Roesch and Moore's choice to keep the Joker silky and light adds a level of frustration to the scene. The Joker is not about to give in to Batman's physical threats,

and seems genuinely unimpressed with his show of strength; instead, he acts like a slippery object that Batman cannot contain.

Cutting Through the Mix: Foley as Heightened Reality

Certainly the distinctiveness of each Foley artist's approach is revealing, but it would be an exaggeration to suggest that such artistic contributions are always perceivable. During the final mix, the re-recording mixer may bury Foley under layers of dialog, music, and other effects. Veteran re-recording mixer Richard Portman was known to eliminate most Foley tracks from his menu of sound options even before the final mix began. With scheduling and budget constraints as they are, however, Foley tracks on most high-level projects have been pre-approved by the sound supervisor, which implies that the effects are necessary components of the sound track. Alyson Dee Moore recalls how one sound supervisor could ensure that Foley footsteps and cloth movement would be integral to the final mix:

We did *Poseidon* [2006] with [Wylie Stateman] and I had never worked with Wylie before. He has a really interesting concept about doing Foley. If we were doing hand pats or footsteps, he wanted to hear the cloth to make it sound really natural. So he wants to hear cloth movement when you're walking; he wants to hear a lot of things in the same track together. His thing is that when it goes to the stage you have fewer tracks of Foley and more chance of it being played, because if you have that many tracks of Foley it's hard for [the mixer] to find everything. I really liked working that way because it really sounded natural.

Stateman's creative solution was aimed at ensuring that Foley tracks would not be lost in the mix, and that the sound track felt "natural." Going against the practice of separating every element on to its own track, Stateman worked with Moore to integrate character effects into a unified whole; indeed, this constituted a throwback, in Moore's view, to an earlier era of Foley practice.

"What we try to do," says Moore, "is have the sound cut through other elements in the mix." Because a scene may be layered with dialog, music, and other effects, Moore designs her Foley elements with an ear towards its place in the final mix. Take the Hong Kong extraction scene in *The Dark Knight*. Batman is perched high atop a Hong Kong skyscraper about to swan dive off the building and glide over to an adjacent office building in a risky attempt to kidnap and return Lau (Chin Han) to the United States to face prosecution for consorting with Gotham mob bosses. During the brief gliding sequence, which is interrupted by a cutaway to the interior of Lau's office, the sound track remains open and "airy" to emphasize the breadth and scope of the high-rise stunt, but Hans Zimmer and James Newton Howard's score punctuates Batman's drop with muted horn blasts and percussive ambiances. Cutting through the music is Batman's cape – a mixture of Foley and designed effects – that flutters boldly as he approaches the camera and banks past it.

The quivering character of the cape takes on a rich, close-up sound that essentially cuts through the mix and announces itself with pristine clarity. Commenting on the scene, MaryJo Lang notes, "Foley is heightened reality." In other words, there is nothing inherently "natural" about Foley (or cinema sound, in general) and its function on the sound track. The custom sound of modern Foley is designed by artists to work

effortlessly within the sound world of a film, but also punctuate and characterize certain elements such as prop life and character movements. It would therefore seem to be counterintuitive to emphasize both the “heightened” nature of sound with its close-up detail and its “natural” place within the sound world.

What creates balance between these two patterns of action is clearly related to the relationship between Foley as guarantor of reality and its role as an expressive enhancement. In one sense, Foley effects function to provide a certain kind of redundancy to the image: we see someone walking on pavement, we hear footfalls on the same surface. However, I argue that modern Foley practices offer creative opportunities beyond simply supplying credibility to the image; Foley can also punctuate props, clothing, and character movement with an expressive resonance that has grown out of the shift in task structures experienced by Foley artists over the last thirty years. John Belton argues that cinema sound does not have to conform always to reality: “Images attain credibility in the conformation to objective reality; sounds in their conformation to the image of that reality, to a derivative reconstruction of objective reality.”³⁸ In other words, sound is dependent on the “derivative reconstruction” of a particular reality that owes itself to the one created by the image, and, by extension, the narrative drama. The construction of a cinematic sound world is, thus, not always dependent on a faithful representation of reality.

At the beginning of this chapter I described the heightened nature of Foley effects in a scene from *Fame*. The cafeteria dance sequence represents a default case for the heightened nature of Foley as it spotlights the creative obstacles and solutions faced by modern Foley artists. This scene proved to be especially challenging for Alyson Dee

Moore who was tasked with finding an appropriate sound for when a tap dancer slides across the floor and hops on to a dining table. On a visit to the Foley stage, the film's supervising sound editor, Michael Babcock, asked Moore to devise an effect that was "cool and unconventional" for the toe-tap scrapes. To assist with the process, Babcock and Moore experimented with a grooved plastic lunch tray that would substitute for the cafeteria table. They smacked and rubbed the tray with a variety of metal and plastic objects to achieve a rough-hewn sound for the dancer's spirited move. Since the actor landed on the table in a two-step fashion, Moore tried mimicking a two-step – tat-tat – motion in sync with the picture. The supervisor suggested Moore record a wild take in order to focus more on "feeling than sync." Initially, Roesch and Moore believed the scene would be drowned out by the diegetic music, but the toe scrape and the rest of the dancer's moves ended up being highlighted in the final mix.

The heightened effect of Foley sound is regularly used as an identifying component. Supervising Foley editor Alex Joseph describes the role of Foley in *Green Zone* (2009):

We also approached the foley [*sic*] in a "gelling" way, bridging the gaps across quick edits to make the sound feel more continuous and "real-life". For example, in a big action sequence (which has different sound effects for every shot), foley [*sic*] can often bridge the effects together with a good movement track or a sound that relates to the characters. ... If, say, Jason Isaach's [*sic*] character Riggs was going to become the focus of an upcoming shot, having already established his identity earlier in the film, I could bring back his associated motifs and prime the viewer that he's coming. You don't necessarily need vocals calling out specific names to achieve this; if you set up sonic conventions early enough in a film, the viewer will take them in and associate them with the characters subliminally.³⁹

Even before a character appears on screen, Foley identifies a character's presence.

Joseph's strategy was based on a desire to "smooth out" the audio-visual experience by reinforcing character presence with signature Foley sounds.

In other, less chaotic, situations, heightened Foley effects can punctuate a specific aural action. Consider the Lake Berryessa scene in *Zodiac*. Cecelia Shepard (Pell James) and Brian Hartnell (Patrick Scott Lewis) are picnicking on the scenic peninsula known as Twin Oak Ridge when they are approached by a man wearing a black hooded outfit with an embroidered symbol resembling the cross-hair design that appeared in the cryptic Zodiac letters. The hooded figure asks for money and the couple's car keys, and forces Shepard to tie Hartnell's hands together with a rope. The man then ties Shepard's hands and feet together before he abruptly stabs Hartnell in the back with a small knife. Watching it all unfold, Shepard begins to scream as the assailant turns to her and begins to viciously stab her along her back and side.

This sequence, like the rest of the film, is shot with cool detachment befitting of Fincher's docudrama aesthetic. The scene unfolds in real time with no obvious visual embellishments, which actually makes the stabbings so startling. In many ways, Fincher fashioned a straightforward dramatization of the Lake Berryessa murder of Cecelia Shepard and assault of Brian Hartnell, but what is less obvious is the heightened detail of the Foley effects during the stabbings. Throughout the scene, there is an overall Foley presence that captures the heavy cloth movement of the killer's outfit, his lumbering footfalls, the rope tying, Hartnell's body slam on to the ground, and the pistol's bullet magazine being removed as the killer shows the couple that it is loaded.

The stabbing itself is quite brief, lasting less than fifteen seconds, but the sound work manages to convey a resonant feeling of genuine alarm in this short period. Contrasting against the Foley effects is a detailed background track filled with rather serene sounds of nature: bird chirps, cricket chirrups, and a gentle wind against tree leaves. As he begins to stab Hartnell, the knife thrusts are accompanied by the killer's own throaty grunts; at the same time, Cecilia begins to scream and partially drowns out the killer's mumbling groans. When the killer turns to Cecelia, David Shire's score creeps in with a sustained bass line that barely rises over the background ambiences.

What is particularly striking about the Foley effects is their ability to cut through the other layers with precision and clarity. The decision to highlight the stabbing sounds was made by director David Fincher and his longtime sound supervisor Ren Klyce, whose relationship with John Roesch at Warner Bros. goes back to Fincher's 1997 film, *The Game* (1997). Alyson Dee Moore explains the Foley requests for the stabbings:

I did the sound of the stabbing in the back and chest and it was very gruesome and bloody. Fincher called and said, "Sounds great, but now I want to hear the knife hitting her rib bone." So we did that. And then he said, "OK great. Now I want to hear the air escaping from her lungs." So we did that. That's something that I'm sure they cut it into something else, but we'll do sounds that will help sell the sound and put it over the top.

In a bid for historical accuracy, Fincher asked for detailed Foley elements that added credibility to the dramatization of the real-life crime; as it turned out the Zodiac's blade struck Cecelia Shepard's rib and punctured her lung. To hear the fine-grained sounds of metal hitting bone and air escaping through the stab wound, Moore produced a heightened effect comprised of several Foley layers that was eventually married to the

other tracks. Fincher's call for the detailed Foley effect supports the notion that Foley artistry is as much about reproducing a credible sound world as it is about intensifying that sound world in conjunction with the demands of the scene. The *Zodiac* sequence serves to produce a credible depiction of a stab wound in an intensified fashion.

Conclusion

The need to reevaluate Foley in terms of occupational ideology, task structure, and aesthetic practice is the outcome of decades of change in the technologies of sound reproduction and the institutional structure of Hollywood filmmaking. That this reevaluation is long overdue serves to confirm the enduring character of Foley artists and their involvement in the expansion of their craft from a perfunctory task in the studio era to a performative art.

By adopting an expanded task structure the occupational ideology of Foley practices also experienced an aesthetic expansion that were largely wrought from both the economic structure of the industry and changes in sound technology throughout the post-divestment era. The modern Foley stage has become a site of aesthetic innovation where "custom sound effects" and notions of personal style have reshaped what was once a detached and perfunctory role in the post-production sound chain. The process of adding detailed "life" to the smallest of sounds has as much to do with performance as it does with providing a fine-grained, almost subliminal, layer of what Gianluca Sergi calls "dramatic definition."⁴⁰ In *The Dark Knight*, Batman may be visually defined by the

contours of his costume, but the strength, weight, and force of his movements are, in part, conveyed by the Foley artist's attention to footfalls, cloth textures, and prop life.

The concentration on aesthetic textures and dramatic "feel" also supports the notion that in the age of the flexibly specialized sound professional, Foley occupies a larger role in the aesthetic decision-making process than ever before. With more high-level films calling for greater Foley coverage to augment or take the place of traditional sound effects Foley crews are adapting to increased demand on shorter schedules and lower budgets. While digital workstations have eased the strict reliance on matching synchronization, and given mixers more options to process the sounds, changes in sound technology have contributed to the shortening of schedules and expectations for greater coverage. At the same time, the "custom" effects label attributed to the pioneering work of John Roesch is fundamentally linked to developments in recording and miking strategies that are outgrowths of the transition from multi-track recording to the workstation.

Given the tumultuous history between Foley and organized labor in Hollywood, it is not surprising that the shifts in occupational mandate and ideology were concomitant with the belated recognition of Foley artistry as a unique craft by International representatives and the Editors Guild. Decades of misrepresentation and misrecognition among sound professionals strengthened the mandate of Foley practitioners to develop stylistic signatures that were unique and predicated on the artful and, as Roesch suggests, "soulful" reproduction of sound effects. In doing so, Foley underwent an occupational shift from direct-to-picture performer to creative agent with an eye towards matching

sync and an ear towards dramatic embellishment. As veteran Foley artist Robert

Rutledge says, “You have to get the feel right. You can cut sync. You can’t cut ‘feel.’”⁴¹

Notes

¹ Most Hollywood releases prepare a “music and effects” track for international releases that fully separate the dialog track from the mix, so that a film can be post-synchronized (or “dubbed”) in a foreign language. Since the dialog track will be scrubbed and any sound effects left on the track will also be lost, Foley effects attempt to recreate sounds from the production track including footsteps and cloth movement.

² Stephen Bottomore, “The Story of Percy Peashaker: Debates about Sound Effects in the Early Cinema,” in Richard Abel and Rick Altman, eds., *The Sounds of Early Cinema* (Bloomington: Indiana University Press, 2001): 129-142.

³ James Lastra, *Sound Technology and the American Cinema*: 110-115.

⁴ Vanessa Theme Ament, *The Foley Grail*: 7.

⁵ *Ibid.*: 7.

⁶ Blair Jackson, “You Don’t Know Jack,” *Mix* (September 2005): 54.

⁷ David Lewis Yewdall, *Practical Art of Motion Picture Sound*, 3rd ed. (Burlington, MA: Focal Press, 2007): 404.

⁸ “The Story of Jack Foley,” [<http://www.marblehead.net/foley/jack.html>]. Accessed 1 Mar. 2011.

⁹ Ament: 10.

¹⁰ Quoted in Dave McNary, “Foley artists sound off over union deal,” *Daily Variety* (July 25, 2006): 3.

¹¹ *Ibid.*: 3, 10.

¹² Quoted in David John Farinella, “Digital upgrades boost Foley range,” *Daily Variety* (January 5, 2007): A2.

¹³ Quoted in Blair Jackson, “Foley Recording: Film sound’s misunderstood art,” *Mix* (September 2005): 56.

¹⁴ Edward R. Kealy, “From Craft to Art: The Case of Sound Mixers and Popular Music”: 3-29.

¹⁵ Paul Théberge, *Any Sound You Can Imagine: Making Music/Consuming Technology* (Hanover, NH: Wesleyan University Press, 1997): 220.

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- ¹⁶ Quoted in Jackson, "Foley Recording: Film sound's misunderstood art": 58.
- ¹⁷ Ibid.: 58.
- ¹⁸ Ibid.: 58.
- ¹⁹ Quoted in David John Farinella, "Digital upgrades boost Foley range": A2.
- ²⁰ Quoted in Jackson, "Foley Recording: Film sound's misunderstood art": 60.
- ²¹ Quoted in Michael Kunkes, "Foley: They Make the Noises for the Talkies," *Editors Guild Magazine* 29.5 (September-October 2008): n.p.
- ²² Ibid.
- ²³ Quoted in Woody Woodhall, "Interview – Monique Redmond – Foley Artist," Woody's Sound Advice (14 July 2008): [<http://woodyssoundadvice.com/2008/07/14/interview-monique-reymond-foley-artist/>]. Accessed: October 15, 2010.
- ²⁴ Quoted in Jackson, "Foley Recording: Film sound's misunderstood art": 58.
- ²⁵ Ibid.: 58.
- ²⁶ See Ament: 96-97.
- ²⁷ Quoted in Jackson, "Foley Recording: Film sound's misunderstood art": 58.
- ²⁸ Quoted in Kunkes, "Foley: They Make the Noises for the Talkies": n.p.
- ²⁹ Ibid.
- ³⁰ Ament: 100.
- ³¹ Ament: 92.
- ³² Ibid.: 106.
- ³³ Ibid.: 99.
- ³⁴ Ibid.: 96.
- ³⁵ Bordwell repeatedly uses this term in his work to describe the ways in which a filmmaker utilizes particular cinematic devices to draw attention to a narrative or dramatic element. See, for example, Bordwell, *Figures Traced in Light*: 228, 238.

³⁶ Quoted in Kunkes.

³⁷ Ament: 76.

³⁸ John Belton, "Technology and Aesthetics of Film Sound": 66.

³⁹ Quoted in Jake Riehle, "Exclusive Interview with Alex Joseph, Foley Supervisor for 'Green Zone'," *Designing Sound* (April 22, 2010):
[<http://designingsound.org/2010/04/exclusive-interview-with-alex-joseph-foley-supervisor-for-green-zone/>]. Accessed: October 15, 2010).

⁴⁰ Gianluca Sergi, *The Dolby Era*: 153-156.

⁴¹ Ament: 14.

CHAPTER EIGHT

A Sound Designer By Any Other Name

Very few directors understand the contribution you can make here. They see it as a technical step they have to go through. But it's not only processing sounds, it's a creative process that allows you to evoke and create a mood.

– Mark Mangini¹

There has been a tendency in modern sound scholarship and industry practice to assume that the innovative spirit of creative sound work in the 1970s failed to reconfigure the Hollywood mode of production and its serialized labor structure. This tendency has been especially prominent in the writings of some historians and industry practitioners who claim that efforts by sound luminaries including Ben Burt and Walter Murch to revolutionize the occupational structure of the sound industry were essentially dead on arrival. The perceived failure of the “sound designer” concept has been a fundamental tenet of a broader ideological debate in both academic film studies and the sound industry that centers on a visual bias in the filmmaking process. In large measure, sound scholars have argued that the sound track is treated by filmmakers as nothing more than a compartmentalized “afterthought,” a decorative “embellishment” to the picture with a “small” narrative role to play in the overall cinematic experience.² The perceived bias toward the image has occupied a central role in meditations on the nature of sound design. It is precisely this audio-visual split that has inspired so much attention to the practitioner-as-designer concept.

Michel Chion, the French critic and composer, argues,

In continuing to say that we ‘see’ a film or television program, we persist in ignoring how the soundtrack has modified perception. At best, some people are content with an additive model, according to which witnessing an audio-visual spectacle basically consists of seeing images plus hearing sounds. Each perception remains nicely in its own compartment.³

According to Chion, the “additive model” accords no special treatment to the sound track as an active agent in the transmission of narrative information and dramatic spectacle. In a similar vein, Larry Sider suggests that there is a creative imbalance between image and sound in the way filmmakers approach the conceptualization of photographic and sound elements.⁴ He writes that sound waits “patiently in the background” for filmmakers to turn to “specialist technicians” who afford no real creative or material meaning to the edited picture. As an ideology, the assumption that sound has been relegated to a position of secondary importance has guided recent scholarly and industrial initiatives that aim to redress the perceived occupational and material imbalances.⁵

In a certain sense, scholarly efforts to bridge the gap between picture and sound have obscured changes in the social organization of sound professionals in the post-divestment and re-integration eras. The “sound designer” concept has been at the center of this debate, providing an illustration on how to “change the balance” and “create an awareness” of the value of sound in film.⁶ From the outset, sound design has been the focus of a largely utopian rhetoric of professional empowerment and personal style. At one level, the development of sound design as a mode of practice offers a concrete example of how sound practitioners have attempted to assert creative control over their work by describing themselves as “designers” of sound, akin to production designers who

devise a film's physical environments or a cinematographer who uses light to create a particular visual look. At another level, however, the term itself has become symptomatic of a larger movement within film studies and the sound industry that has needlessly complicated the functional role of the sound designer, and, as a result, contributed to its mystifying status.

One of the main causes of this confusion is the contemporary use of the term to express at least three different occupational roles in the sound chain. The "sound designer" designation has been used to describe the individual who is charged with planning and organizing the overall "sound" of a film, much the same way that a production designer designs a set. A sound designer has also been defined as an individual who creates special sound effects using original recordings or combinations of library tracks as a base with which to build an altogether "new" and unique sound for a particular vehicle, character, or moment within a film. Third, a sound designer has been posited as a combination of these two roles: a creative agent responsible for the architectural blueprints of a sound track, and its decorative embellishments.

When read in each of these ways, it is not surprising that the sound designer remains a particularly difficult concept to define. William Whittington suggests that sound design "represents the planning and patterns of the film sound track and the meanings that result from its deployment within the exhibition space."⁷ Whittington's particular model of analysis incorporates the examination of ideology, technology, and production practices involved in the creation of a sound track. In this sense, Whittington appears less interested in the social organization of sound designers than in developing a veritable taxonomy of theoretical frameworks by which "sound design" can be mined for

particular aesthetic and ideological effects. In addition, Larry Sider imbues the role of the sound designer with a utopian patina: the sound designer represents a figure in the production process that can correct the imbalance and assign sound a greater share of narrative and experiential responsibility.

Following on Randy Thom's assumption that the sound designer is more a "dream" than a functional reality, Jay Beck has made the provocative claim that "there is no sound designer" in contemporary Hollywood production practice.⁸ Beck writes:

The current continued use of the phrase "sound designer" has a tendency to cover over the lack of change between classical Hollywood's use of sound and sound practices in a Dolby Stereo era. In light of the fact that the designation of sound designer effaces this lack, it can be claimed that there really never has been a central figure constructing the sound in Hollywood.⁹

Beck's main point of contention with the sound designer title mirrors that of Chion and Sider who insist that there cannot be a central sound "auteur" if sound practices remain tied to the "narratively determined constraints of central character development at the cost and neglect of a progressive and experimental audio landscape."¹⁰

Beck's ideological argument can be read as an attempt to label the Hollywood mode of production, and its treatment of the sound track, as an inflexibly segmented system dictated by the demands of contemporary sound technology (particularly the Dolby apparatus) and the hierarchized labor structure of the sound chain. In his narrow application of the term, "sound design" represented a radical attempt to subvert the dominant representational mode of narrative filmmaking by a group of San Francisco-based filmmakers in the late 1960s, including Francis Ford Coppola, George Lucas, and Walter Murch.

While Beck maintains a conjectural commitment to the “progressive” expansion of the role of sound in the filmmaking process, his presumption about correcting a certain bias anchored in the segmented labor practices of the sound chain obscures the social organization of contemporary Hollywood sound practitioners and the changes in current labor practices and sound technology. By evaluating the sound designer concept on the basis of a prescriptive methodology, Beck prematurely shuts down a productive analysis of how sound professionals have organized themselves in the post-divestment and re-integration eras. Although he attempts to account for the pluralistic uses of the sound designer term, he appears more interested in assigning it a particular cultural definition that speaks to his larger argument about the narrative and industrial limitations of the Hollywood mode of production. Specifically, he sidesteps an analysis of how sound practitioners in the modern era consider themselves aesthetic decision-makers in the “design” process. That is not say sound professionals do not face creative and industrial constraints; indeed, as I demonstrate throughout this project, the sound freelancer faces a variety of constraints at the levels of technology and professional practice. However, Beck’s application of the sound designer designation focuses on the ways in which technology and the Hollywood “system” doomed it to failure in the 1970s before achieving any kind of mainstream status.

Moreover, by this logic, does it mean that contemporary sound professionals who call themselves sound designers are intent on subverting the Hollywood mode of production and its reliance on notions of classical narration? What is there to be gained from such a narrow definition if we ignore the occupational mandates and ideologies of contemporary sound editors? By valorizing such a restrictive interpretation of what has

become a complex and, some might say, over-determined concept, Beck forecloses inquiry into the ways in which task structures and notions of personal style continue to shape aesthetic choices and decisions in filmmaking practice.

It is precisely this aspect of the sound designer and its place within the modern production complex that this chapter explores. Although the term “sound designer” remains one of the most controversial and least understood aspects of the Hollywood sound chain, my goal with this chapter is to contextualize the pluralistic expressions of what constitutes a sound designer by examining how current sound practitioners organize and define themselves as designers of sound. While some have retroactively called the sound design “revolution” a casualty of cinema’s visual bias and the segmented labor practices of classical Hollywood, the term continues to be applied to a variety of sound tasks and argued over by sound professionals. By considering the technological and practical constraints and creative possibilities of this term in its current form, I spotlight the various logics of practice that inform how editors go about designing sound for film.

How Walter Murch Turned Hollywood on its Ear

Since the early 1980s, Randy Thom has been a vocal advocate of the term “sound designer” when used to describe the supervisory tasks associated with planning and devising a particular sound aesthetic for a film. It is also representative of what Thom calls a “holistic” approach to commercial filmmaking, “in which the movie is seen not as a collection of isolated crafts but as a complex collaboration among them.”¹¹ In Thom’s view, the sound designer designation is bound up with culturally and historically

determined notions of how sound functions within Hollywood narratives. He provocatively suggests that

Quite simply, sound is not taken seriously by most filmmakers ... We in sound have been told for so long that our labor is of secondary importance in the grand scheme of filmmaking that we have actually come to believe it. So even if we know that our creative work on a particular project has been crucial to the dramatic impact of the movie, we don't dare ask for credit at the beginning of the film, or be brazen enough to claim we "designed" anything. We are, according to the official code, only technicians.¹²

What Thom is referring to is the official designation by the Director's Guild of America that accords sound professionals the role of "technician" as opposed to "creative" practitioner. This description essentially limits the sound chain to "below the line" technical credits, which often appear at the end of a film, separate from the "above the line" artistic credits such as actor, writer, director, composer, cinematographer, and so on. Today the use of the sound designer label is partially attributable to Thom's outspoken actions that have sought to draw attention to the fact that filmmakers too often relegate sound to a secondary order that is needlessly separated from script writing, picture editorial, and music scoring. More than anything else, Thom's vociferous advocacy of the term is tied to his belief that to take sound seriously means not being "reluctant to let the visual images follow and complement the sound."¹³

This philosophical mandate can be traced to American Zoetrope, Francis Ford Coppola's production company that was based in San Francisco in the late 1960s. Described by Coppola as more a "lifestyle" than a film company, the Northern California team of filmmakers that included Carole Ballard, William Huyck, Gloria Katz, George Lucas, John Milius, Matthew Robbins, and Walter Murch fashioned a break from the

segmented labor practices of the Hollywood studio system.¹⁴ The collective environment, inspired by Coppola's own exposure to young European filmmakers at the time, meant that the production process on projects such as *The Rain People* and *THX 1138* was more integrated and collaborative than studio era practices had allowed. Walter Murch recalls, "Most people in Hollywood thought what we were doing was crazy. But it was the late sixties, it was San Francisco, it was all part of what we saw then as the beginnings of the technical democratization of the filmmaking process."¹⁵

The Zoetrope collective also placed an unusually high premium on the value of sound for film. As a film student at the University of Southern California, Walter Murch experimented with audio and was inspired by the experimental sound work of composers Pierre Schaeffer and Pierre Henry, the founders of the *Groupe de Recherche de Musique Concrète*. These "musicians of sounds" worked with magnetic tape to create musical rhythms out of ordinary objects in an attempt to break down the structured production of traditional music to its material essence. Murch was motivated by the idea that sound could essentially be removed from its everyday context and folded into something entirely new. Murch joined Lucas and the others at Zoetrope when he was hired to create sound effects and mix Coppola's independently financed film *The Rain People*, which was shot in Nebraska and posted in San Francisco.

Indeed, the germ of the sound designer concept was born out of Murch's early collaborations with Coppola and Lucas, with whom he co-wrote the script and sound edited *THX 1138*. Given that Murch was not a member of the I.A.T.S.E. labor union, he was prohibited from accepting credit as a sound editor or mixer on the film, and so he devised a term that, to his mind, encapsulated what he was doing: "sound montage."

Owing in spirit to the *musique concrète* concept, “sound montage” not only represented the linkage of sounds through editing (montage), but also the subjective interpretations that stemmed from Murch’s combination and manipulation of sounds. Throughout the 1970s, Murch continued to use the credit on films such as *THX 1138*, *The Godfather* (1972), *The Godfather Part II* (1974), and *The Conversation* (1974). What Murch had essentially created was a supervisory role in the production process for all matters related to the sound track: production mixing, sound editorial, Foley, and the final mix; in other words, sound from start to finish. Although studio era sound directors were tasked with following a sound track through multiple stages of production, their input was largely administrative, functioning more in a clerical capacity than a creative one. And because of the strict labor divisions between sound editorial and mixing, no single person had accepted credit as both.¹⁶ According to Murch,

That was the Zoetrope dream at the beginning – the whole concept of what turned into the sound designer in the Zoetrope sense – which is a director of photography for sound. Somebody who took on the responsibility of “auralizing” the sound for the film and making definitive, creative decisions about it. Someone the director can talk to about the total sound of the film the way he talks to the cameraman about the look of the film.¹⁷

The first time Murch used the sound designer title was in 1979 when he edited both picture and sound for Francis Ford Coppola’s *Apocalypse Now*.

According to Randy Thom, who apprenticed as a sound editor on *Apocalypse Now*, the coordinative effects of Murch’s approach represented an altogether new way of conceptualizing the sound track in conjunction with, and not limited to, what was being done with the picture:

This someone, they thought, would brainstorm with the director and writer in pre-production to integrate sound into the story on the page. During shooting that person would make sure that the recording and playing-back of sound on the set was given the important status it deserves, and not treated as a low-priority, which is always the temptation in the heat of trying to make the daily quota of shots. In post production that person would continue the fabrication and collection of sounds begun in pre-production, and would work with other sound professionals (composers, editors, mixers), and the Director and Editor to give the film's soundtrack a coherent and well coordinated feeling.¹⁸

Thom's definition is based, in part, on what Murch had achieved throughout the 1970s in this work with the Zoetrope band of filmmakers, which had reached its zenith with *Apocalypse Now*. However, Thom spins out the original conception of the term to encompass a wider philosophical perspective on the rightful place of sound within the production process.

It is interesting that both Murch and Thom appear to contradict Jay Beck's claim that the sound designer concept is rooted in a commitment to expanding, if not completely abandoning, the core principles of classical narration. Murch's commitment to new forms of audio-visual expression, influenced by the avant-garde sound work of Schaeffer and Henry, served to reinforce an emotional connection to characters and specific notions of storytelling. This is clearly articulated in Murch's discussion of conceptual resonance, where sound encourages the audience to see the image differently, which can also force a reinterpretation of the sound. As Murch notes,

Sound tends to come in the back door, or sometimes even sneak in through the windows or through the floorboards. It's in the house as much as anyone who came in through the front door, but you're not as aware of it, and so it's presence is more of a conditional presence—it tends to

condition the things you are consciously aware of.

The strange thing is that you take the emotional treatment that sound is giving, and you allow that to actually change how you see the image: You see a different image when it has been emotionally conditioned by the sound.¹⁹

With sound acting as an emotional guide-track, Murch devised innovative combinations of sounds to complement and contrast what was happening visually.

The connection to narrative and character development – two tenets of the classical paradigm – is most evident in Murch's treatment of subjective sounds. A good example of this can be found in the Do Lung Bridge sequence in *Apocalypse Now*. A sniper named Roach is called over to take out a Viet Cong soldier hidden in the trees, tormenting soldiers in the field with bullets and verbal taunts. As Roach takes his position, the sound of explosions and gunfire slowly drop away, leaving only the voice of the Viet Cong sniper. Even though we continue to see fireballs, weapons being fired, and soldiers screaming over the chaos, we hear only the distant taunts of the tree sniper. For this brief moment the audience hears the world according to Roach, a soldier who has been trained to echo-locate a voice amidst a sea of chaotic battle noise. Only after Roach kills the sniper with the grenade launcher does the chaotic sound world return. "The best sound is the sound inside somebody's head," Murch argues.²⁰

At the time, Murch was not the only sound editor experimenting with ways to expand the emotional dimensions of film sound. In San Francisco, Alan Splet was using rich backgrounds to evoke an industrial landscape in David Lynch's *Eraserhead* (1976). In Los Angeles, Frank Warner used a combination of slowed-down animal sounds to create a sonic subtext for the boxing sequences in *Raging Bull* (1980). In Santa Monica,

Frank Serafine created a range of electronic effects using a Mini Moog synthesizer for *Star Trek: The Motion Picture* (1979) and *Tron* (1982). In each case, sound was being used to enhance the dramatic impact of a scene, to enrich our understanding of a character, or add to the general “feel” of a film.

When Randy Thom began writing about the creative and dramatic importance of sound in film, the Zoetrope influence was evident. In his article, “Designing a Movie for Sound,” Thom proposes a series of opportunities for sound to influence the “meaning” of a scene. Sequences that “have been shot using slow motion, odd p-o-v’s, dim light, unusual visual superimpositions, black-and-white images, or transitions into and out of dreams or hallucinations.”²¹ What is also evident in this approach is Thom’s commitment to certain principles of classical narration. For example, hearing for a character, as Murch explained, can help audiences identify with that individual. In *Raging Bull*, Jake LaMotta experiences the full force of Sugar Ray’s steamroller punches, but we feel their impact because of Warner’s choice to embellish the sounds, thus creating an aural point-of-view for the audience. Likewise, Thom’s valorization of the creative work being done in the late 1970s served to reinforce a commitment to traditional narrative strategies, albeit from the perspective of a sound editor. Thom explains:

What does it mean to “take sound seriously”? Most importantly, it means being interested in exploring the storytelling capacity of sound, from the writing of the script through production and post-production. It means more than simply recording sound effects on location; it means considering the ways in those sounds can be used to make the characters and locations in the film more compelling.²²

In this way, sound design represented new ways for filmmakers to incorporate the functional characteristics of sound into the classical storytelling process.

Although it might sound provocative to suggest that the Zoetrope sound of the 1970s attempted to turn the classical paradigm on its ear and replace it with a more “experimental” method, nothing could be further from the truth. What was truly innovative about Murch’s design concept was its treatment of sound as an artistic element within the production process. Murch and his peers in San Francisco and Los Angeles recognized the expressive potential of sound to function within the classical paradigm. Likewise, modern sound design manuals instruct novices to treat sound as an evocative character capable of transmitting important narrative information, limiting the audience’s knowledge of certain events, and persuading the audience to sympathize or identify with a character. Author David Sonnenschein recommends that in addition to creating “the reality of a location,” sound designers should also listen for a variety of different “voices” when spotting a film: “sounds linked to people, objects, and actions on screen,” “environments that can be fleshed out with sonic ambiance,” and “moments of physical or dramatic transition.”²³

At the level of practice, the sound designer concept articulated by Murch and Thom has foregrounded the transformative effects of sound. While filmmakers had long experimented with the expressive potential of sound, here were two sound professionals who encouraged filmmakers to take the leap and treat the sound track with the same creative decision-making skills that cinematographers, set designers, costumers, and composers brought to their crafts.

The Pluralism of Sound Design

Throughout the 1980s and into the 1990s, the pluralistic functions of the sound designer label discouraged many Los Angeles-based sound professionals from adopting the designation. At Skywalker Sound, the sound designing culture originated by the Zoetrope filmmakers found new disciples in editors like Richard Beggs, Gary Rydstrom, and, of course, Randy Thom. The inclusive atmosphere of Skywalker's all-in-one facility encouraged editors and mixers to collaborate on film projects without the strain of segmented workflow that characterized the work of sound professionals in Hollywood. In addition, the successes of *Star Trek*, *Star Wars*, and *Tron* had spotlighted the creative treatment of sound effects by sound editors such as Ben Burtt and Frank Serafine. Almost by accident the sound designer had become associated with the creation of special sound effects for space vehicles and extraterrestrial creatures. Filmmakers began associating "design" with the specialized task of creating otherworldly effects using electronic processors.

To complicate matters, the sound designer designation was not an officially recognized role in the filmmaking process. The industry's major labor unions, guilds, and societies essentially did not acknowledge the supervisory task of a sound designer as being any different from the duties and responsibilities of a sound editor. Despite an attempt in the early 1980s by Randy Thom and Richard Beggs to explain the distinction to the Executive Committee of the Academy's Sound Branch on the basis that a sound designer exceeded the role of a traditional sound editor, the Academy did not move to establish a new award category for sound professionals.²⁴ Consequently, sound editors in

Northern California and in Hollywood applied the sound designer title in two different capacities. There was the sound designer as creative director of the sound track, and the sound designer of specialized sound effects.

The confusion over credit persuaded many Los Angeles-based sound editors to resist using the title altogether. Sound editor Mark Mangini called it “pretentious,” and Randy Thom admits that his efforts to establish a greater understanding of the title have created some unease within the sound community.²⁵ He notes,

Some of the queasiness about the word “design” in connection with “sound” must stem from the notion that we who request that credit place ourselves in some sense above all the others—that we believe we are doing something new or more sophisticated than what has been done before. Or maybe it just seems pretentious to imply that any one person would have the expertise to understand every aspect of the planning, fabricating, collecting and processing of sound in a film.²⁶

Its evocative and suggestive allure certainly kept some from adopting the title, but others embraced the romantic connotation of a sound practitioner who “designs” sound like a costumer might design a character’s clothes. According to Scott Sanders, “The people who have been sound editing for a long time resisted that term somewhat because it was new and a flashy term that carried more weight and had a better sound to it than ‘sound editor.’ So the newer guys coming in like to push themselves as ‘sound designers.’”

In large measure, the claim that the sound designer title has been co-opted by specialist sound editors is misplaced. The creation of the supervising sound editor role in the 1960s came in response to the near-collapse of the centralized mode of production. The emergent freelance structure of the post-production sound industry necessitated the creation of a supervisory role in the sound department that would see a film through the

major stages of production, including editorial and the final mix. The sound supervisor essentially became the liaison between the director and the sound crew the same way that the studio era “sound director” ensured a film was running on budget and the sound chain was coordinated.

Today, most supervisors are sound editors themselves who perform both administrative and creative functions. Mark Mangini suggests that while it is generally the director who provides the overall aesthetic approach for the sound track, their creative involvement can vary from film to film. He says, “There are directors who want to hear absolutely every single sound that’s going to be in their movie before it’s put into a track, and those who feel as though their time is better spent elsewhere.”²⁷ In either case, the supervisor is tasked with constructing the sonic palette of the film based on discussions with the director and their own artistic sensibilities. These discussions can also inform what aspects of the sound work need to be emphasized from a budgetary and creative point of view. Maybe the production track is largely unusable making it necessary to devote time and resources to a pristine ADR track. Or maybe attention needs to be given to the creation of creature sounds. In either case, the supervisor must negotiate the creative needs with the financial resources afforded to the sound track.

According to John Purcell, the sound supervisor is

Commonly the only member of the sound team hired directly by the production and usually selected by either the director or the picture editor. The rest of the sound team is often employed by the audio postproduction studio where the work is performed or is subcontracted by the supervising sound editor.²⁸

Purcell also highlights the bifurcated nature of the supervisor's role within the sound chain:

The supervising sound editor has the enviable task of bringing the film's sound to life, enhancing the narrative, developing characters, focusing the viewer's attention, and boosting emotions. He has the unenviable job of finishing the sound within budget, on time, and balancing the needs of the sound crew...the director... and the producer.²⁹

Thus, the task structures of sound supervisors reflect the administrative/creative split that defined Walter Murch's conception of a sound designer. However, few Los Angeles-based sound supervisors claim that title, even though they are performing the same administrative/creative tasks.

An exception to this trend is Richard King, a sound supervisor who works out of Warner Bros. Studios. On most films he is credited as both the Supervising Sound Editor and Sound Designer. King notes,

The two terms are sort of one and the same thing. I think what happened was that Skywalker started using the term Sound Designer. A lot of people down here [in Los Angeles] began to feel that directors who aren't getting a Sound Designer aren't getting something, an "artist guy," just the "nuts and bolts guy." It became a way of presenting the same front, we're doing the same work. In L.A. it's one person doing both of those jobs. So it just became a necessity to add that credit just to make it clear that the same work and attention was being given to the work; the same design sense was being brought to the work. Others just want the Supervising Sound Editor credit and think Sound Designer is a pretentious term. I use both because I feel I do both jobs.

When King speaks about the "nuts and bolts" aspect of the job, he is referring to the organizational elements that come with the supervisory role. When describing the

creative aspects of his work, he suggests that the large-scale approach of considering the sound needs for a film represents the true nature of sound design: “I’ve always felt that the macro part of the job is really where the artistry comes in; the micro is creating elements to add to the whole piece.” In terms of occupational ideology, King distinguishes between the administrative and creative tasks of the supervisory role as a way to acknowledge his commitment to the creative process of sound track construction.

King comes on board a film at the tail end of the shooting phase just as the picture editorial team begins to sort through the footage in preparation for a rough cut. Depending on the nature of the film, its budget, and his relationship with the director, King may also coordinate with the production sound mixer to ensure that certain dialog or wild tracks have been provided. Explaining his working style, he says,

I like to be able to provide material that the director can start getting accustomed to, and I can get feedback on. It’s much better when I can provide the material early rather than the picture editor pulling stuff from a CD library. And then the director gets used to hearing that. That way, the sound design process can work in tandem with the picture editing process. Sounds really do affect the way sequences and moments work. If you nail the right sound it can help; if you don’t it can hurt. It’s ideal to start at that time and work through the picture editing process, contributing sounds along the way.

King’s recurrent transactions with director Christopher Nolan have afforded him the ability to coordinate the sound track from a very early point in production. In fact, when Nolan was shooting *Inception* in the summer of 2009, King and his crew began recording a variety of effects elements, including gunshots, ski jumps and skids, and vehicles, that could be later edited into Nolan’s footage.

Accepting credit as both a supervisor and sound designer serves an ideological purpose. King understands the muddled history of the sound designer title, so he uses it in conjunction with the supervisory credit as a way to emphasize the artistic component of his sound work. While he oversees the other components of the sound chain, including ADR, dialog editing, Foley, and the mix, he is also a sound *artist* in much the same way that Foley performers now consider themselves artists.

Similarly, Karen Baker Landers, a supervisor at Soundelux, is brought on to a film during pre-production or, in some cases, as shooting commences:

Usually I'll get a phone call from either a director or a studio expressing interest in having me do a project. At that point if it's a new client we'll meet and chat. I've been very fortunate because I do a lot of repeat business with clients, so you have a shorthand and that's very simple. If it's a new client, there will be a meeting and we'll talk about the project. I'll usually get a copy of the script and read it before I meet them and get their perspective on what they're looking for as far as sound goes. After that, if we decide this will be a good team, then the first thing would be to make a budget based on the script and the needs of the director, and what I think the project will entail. This will give me a chance to sit down and think about what I will need and how long it will take. It's always based on the schedule, but I'll do the budget and when that's approved then it becomes about getting my crew together – I'm very fortunate to work with an amazing crew and have for many years. We all have a big meeting, watch the film even if it's only a reel, and I'll go over and tell them the idea beyond the film, and start pulling ideas and effects. It's like a think tank for sound people.

Two points resonate about her process. First, Landers outlines the administrative aspects of the job: she sets a budget, hires a crew (effects editors, Foley, mixers), and coordinates what kinds of sound materials will be necessary for the project (original recordings or

library tracks). In doing so, she positions herself as the chief coordinator of a crew of sound editors and mixers. Depending on a film's schedule and budget, Landers will return to the same effects editors, Foley artists, and re-recording mixers with whom she has worked before to take advantage of the professional "shorthand" established over a series of film projects. Second, Landers articulates the creative decision-making process that structures her role as a supervising sound editor. She meets with the director, reads the script, and holds a brainstorming session with her team to articulate the aesthetic needs of the sound track. In this way, Landers organizes her team as a way to ensure that the sound track remains consistent. Even if a group of sound editors with their own creative personalities work on different reels, Landers provides them with an aesthetic goal.

Having apprenticed for Frank Warner in the 1980s, Landers approaches her sound work with the aim of using sound as an expressive character within the narrative. Like other sound editors, Landers' exposure to the world of recorded sound came from experimenting with tape-based media as a child. While she may be best known for her Academy Award-winning sound work for *The Bourne Ultimatum*, Landers has worked on romantic comedies (*The Proposal*, 2009), historical epics (*Gladiator*, 2000), combat dramas (*Black Hawk Down*, 2001), and prestige dramas (*Ray*, 2004). On most projects, she organizes her sound palette the way an actor might prepare for a role: she reads the script to get any initial sound "impressions," then meets with the filmmakers to elicit input on what they want to hear on the sound track. Landers also consults with her team of editors to not only get their input on the script or a rough cut of the film, but also to strategize the best way to go about achieving their creative vision.

Typically, Landers stays on a project until the final mix is completed. Even if a director has moved on to another project, Landers takes full responsibility for the completion of a sound track in its various versions, and has even been known to spot-check the sound system of the theater that is hosting her film's premiere screening. In the final stages of a theatrical mix, Landers and the mixing crew will also complete the home video, airline, and television versions of the sound track after the principal theatrical mix has been print-mastered. According to Landers, this is a fairly recent phenomenon as studios had previously outsourced VHS and DVD mastering to Los Angeles-based video transfer companies. These facilities rarely consulted with a sound supervisor or director of photography during the mastering process, which resulted in sound mixes that were not calibrated for home systems, and images that were not properly color corrected and re-framed for pan-and-scan versions. With the growth of the DVD market, however, major studios began providing additional resources to the sound and picture crews to ensure that the home video mix and image met the technical and creative specifications of the supervisors.³⁰

Landers' professional emphasis on collaboration is not unique among sound supervisors, who seek to provide filmmakers with what they want, but remain open to their own creative tastes. Indeed, if a filmmaker hires a supervisor based on his or her previous film credits, then it reasons that there is a particular quality about their work that the director feels is suited to the project. The importance of recurrent transactions is also evident in Landers' experience, providing her with a steady stream of projects, and the creative flexibility inherent to any recurrent relationship. Moreover, Landers considers her role as a sound supervisor to include both administrative and creative dimensions

with the conceptual value of the “sound designer” built into the Supervising Sound Editor designation. Unlike King, however, Landers does not distinguish between the two terms, preferring instead to accept recognition under the supervisory title.

When director David Fincher moves ahead with a new film project, one of the first people to get the call is his supervising sound editor, Ren Klyce. The pair first met when they were both 18 years old and working a summer job for San Francisco-based filmmaker John Korty. Korty’s reputation as a director and animator who worked both outside and within the studio system attracted young filmmakers to his Marin County beachfront studio, which served as his home base even when he worked on studio-financed projects. Klyce and Fincher were both Northern California natives, and bonded over the fact that they were the youngest members of Korty’s summer staff. Klyce worked as an art assistant, while Fincher handled special photographic effects for Korty’s animated film.³¹ When Korty offered Fincher an opportunity to direct a short segment of the animated project, he collaborated with Klyce on the sound track after Klyce convinced him that he couldn’t handle both picture and sound duties all by himself. After a decade of working in commercial advertising, Klyce moved into feature filmmaking as a sound supervisor on Fincher’s second film, *Se7en* (1995).

Since 1995, the pair has collaborated on seven films, which represent more than half of Klyce’s entire filmography. While he continues to work in advertising, his other recurrent collaborator is Spike Jonze, with whom he worked on two feature films and multiple short subjects. Ren Klyce’s relationship with David Fincher has been characterized by *Mix* writer Michael Axinn as “unusual and unique” because of his involvement in the early stages of production.³² Klyce, whose Mit Out Sound facility is

based in San Francisco, will often read the script and work with the production crew, including the location sound mixer, to ensure his ideas for the sound track are not sacrificed during shooting. Admitting that it's a luxury to be involved as early as he is, Klyce notes, "It's to make sure that everything is set up for the filming properly so that we're not locked into something that may give us problems later on. And that happens a lot."

During pre-production and shooting, Klyce maintains an intermediary role between the director and the sound crew. He describes his role as a marriage counselor, since he must balance the needs of his own craft with the broader audio-visual decisions of the director. He says, "I've been blessed with the ability to get close to these filmmakers in a rational way. I'm just trying to get them to understand that it should be constructed in a certain way...so they don't paint themselves into a corner." Klyce recalls a scene in *The Curious Case of Benjamin Button* (2008) where Fincher wanted to shoot a dialog scene with Cate Blanchett with the sound of an accompanying source music cue blasting in the background. The production sound mixer noted to Klyce that the presence of the music would make it more difficult to capture a clean recording of Blanchett's dialog, but Fincher believed the "reality" of the scene would play better if Cate would have to shout over the source cue. As a compromise, Klyce suggested to Fincher that they try it without the music for the last two takes.

The recurrent relationship with Fincher has allowed Klyce the kind of professional collaboration that is highly valued by Hollywood craft practitioners. Since "most people don't know the value of sound," as Klyce puts it, a close collaborative relationship with a receptive filmmaker can add immeasurably to the work of sound

professionals at all levels of the sound chain. Throughout his career Klyce has accepted credit as both Supervising Sound Editor and Sound Designer, but insists that his organizational and aesthetic duties are essentially imbricated. Not surprisingly, Klyce's own description of his task structure is similar to those of other supervisors: he begins by reading the script in search of "sound moments" and "music moments." If, for example, a scene requires source music cues, he will consult with Fincher when making particular musical selections. In addition, he will complete a sound budget and go about hiring his crew of recordists, effects editors, Foley artists, and re-recording mixers who are based out of San Francisco and Los Angeles. Throughout the production, Klyce supervises the edit and the mix, and often participates in each process as well.

Klyce contends that his creative process begins when he reads the script. Consider the first scene in Detective Somerset's (Morgan Freeman) apartment, which occurs about three minutes into *Se7en*. Somerset lies in bed, staring off, exhausted. He can't help but notice the noise from outside: an argument, a barking dog, a car alarm, and a garbage truck. He puts his reading glasses down and reaches over to a side table to tap the arm of a metronome. It begins to sway, back and forth, with a soothing, rhythmic tick that grows in volume until it dominates the sound track. We cut between Somerset and the metronome – tick, tick, tick – until the sequence ends on a tight close-up of the metronome.

The film's original screenplay by Andrew Kevin Walker included several "sound moments," including this one. Klyce recalls, "Andrew wrote a general thing like 'the world that Somerset lives in is noisy; to meditate himself out of it he uses the metronome. So I read that and thought 'what is Somerset hearing?'" Klyce's first conversations with

Fincher solidified a general direction for the sound track: “David is very specific. What he wanted was this grittiness and this oppressive sadness in the sound. People were impoverished, not getting along, arguing, dissatisfied with their lives. That’s a tall request.” To accomplish this task, Klyce devised a way to emphasize the desolate and desperate ambiances that surround Detectives Mills (Brad Pitt) and Somerset: it was called “sad sound.”

Klyce’s solution to the abstract premise of “sad sound” involved creating a tangential sound world with its own stories, conflicts, and characters. Although the film remains anchored to the detectives and their search for the serial killer known as John Doe, the sound track probes deeper and explores a series of mini-narratives within the unnamed city. Although Fincher’s focus remains on the principal characters and the elaborate crime scenes, the sound track is allowed to drift outside and explore the city’s alleyways, apartments, and public spaces. Klyce hired a group of local actors and prepared a series of roughly hewn scripts that emphasized pain and despair for the inhabitants of *Se7en*’s fictional city. According to Klyce,

I hired actors and we went into alleyways to record. One was about a dad who had a drinking problem. He had a son who had money, but then the dad was taking his money. They were in an argument about whether or not he took the money. They’d improvise.

Since these capsule narratives would not receive prominent placement on the sound track, relegated instead to the ambient background track, Klyce emphasized the emotional value of the exchanges over the need to hear every last word. In other instances, broken down vehicles and machinery was spotlighted to signify a city in decay: cars whose engines wouldn’t turn over, honking horns from angry motorists, sirens, rusting metal fences,

creaky doors, and so on. “You can’t necessarily understand what they’re saying, but you get the emotion behind it.”

The metronome sequence foregrounds Klyce’s approach because it was already built into the original script. Somerset acknowledges the din outside his window by peering offscreen with a look of surrender on his face. As he lies motionless, listening to the aural chaos, we can make sense out of some of the ambience. There’s an argument between garbage collectors and a homeless person, which is compounded by the grating sound of the garbage truck’s gears. Agitated by the escalating argument, a dog begins to bark. A car alarm follows. Klyce’s script for the fight was loose and largely improvised, but his point was to create an altercation over the fact that the homeless person was obviously in the way of the garbage truck, and the driver was in no mood to deal with him in a reasonable manner. As the verbal exchange escalates into shouting, Klyce adds more layers to the background track: the dog, the alarm, and the siren. Then, they melt away, noise by noise, as Somerset loses himself in the rhythmic ticks of the metronome.

The sound of sadness boils over just outside Somerset’s apartment, out of sight but not out of earshot. In a certain sense, Klyce’s approach can be described as organically precise. There is a detailed precision to the film’s treatment of backgrounds that works in conjunction with Darius Khondji’s oppressively dark and color-drained imagery. The garbage truck mini-narrative extends the theme of a decaying city by building an offscreen sound world using real-world locations and improvised dialog. “I went out and recorded in the middle of the night hoping for a siren to go by. We even used real arguments from local tenement buildings. It was important for us to use the correct environments to avoid altering the spatial signatures after the fact.” At the same

time, Klyce's early involvement afforded him the extra time necessary to prepare and record these sound stories.

As Michael Axinn notes, Klyce's approach can be considered unique among major Hollywood sound supervisors, but the task structure remains the same.³³ With a smaller clientele than most supervisors in Hollywood, Klyce has created an enviable working style where recurrent transactions have contributed to an impressive body of work. His relationship with David Fincher has accorded him a high degree of creative flexibility and the economic resources to participate in the earliest stages of pre-production. Indeed, the three supervisors spotlighted in this section embody the collaborative and conceptual demands of the sound designer title as theorized by Walter Murch. What these sound supervisors can tell us about the status of the sound designer in modern Hollywood is that the recurrent nature of some relationships have fostered and, in some sense, expanded the Zoetrope vision of a "director of photography for sound."

The modern sound supervisor has largely absorbed the conceptual rhetoric associated with the sound designer title. Along with the administrative tasks of organizing a sound crew, sound supervisors by the likes of Richard King, Karen Baker Landers, Ren Klyce, and others, also consider themselves the chief creative agents responsible for the original design of the sound track. By assigning themselves the "sound designer" credit, King and Klyce are making a distinction between the technical and creative elements of their job. We might assume that as sound designers King and Klyce perform additional tasks or are given additional responsibilities than sound supervisors, but ultimately the organizational and aesthetic components of their work have been internalized by most Hollywood supervising sound editors, even though they

choose not to use the evocative “sound designer” appellation. Alan Splet, noted by many to be one of Hollywood’s first “sound designers,” noted in 1989: “I’ve gone back to using ‘supervising editor’ because so much of the job has to do with things other than just coming up with sound effects. There’s supervising of crews, checking on the Foley ... The sound design is only a part of it.”³⁴

A Specialized Role: Designing Sounds for Film

Despite its broad-based application within the Hollywood sound industry, the holistic function of the sound designer title was not the only way sound professionals defined the term in the post-divestment era. When, in the early 1980s, sound editors were beginning to be recognized as “sound designers,” it was largely because the art and craft of sound effects had reached a level of popular cultural saturation. While Ben Burtt had not become a household name, his sound work for the *Star Wars* trilogy was instantly recognizable right alongside John Williams’ thematic score. There was Chewbacca’s garrulous yawn, R2D2’s emotive electronics, the wailing cry of the TIE Fighter, Darth Vader’s mechanical breathing, and the electro-magnetic pulse of the lightsaber. Each of these sound effects has become iconic in the way they captured a certain essence of character and place, and for the innovative ways Burtt created them. Sampling library tracks and recording original elements, Burtt compiled a catalogue of sounds and went to work combining, augmenting, warping, and blending them. Ultimately, Burtt’s design work punctuated the creative aspect of sound editing: distorting real-world sounds into something altogether “new” to fit the emotional tone of a narrative.

During this period, “sound design” became associated with a very particular occupational role: the specialist sound editor. There was a distinction being made among Hollywood sound editors between “hard” effects and “sound design.” Hard effects were characterized by their functional character, and remained the domain of Foley and sound effects editorial. Door slams, footfalls, birdsong, sirens, weapons fire, and a host of other pointed effects had always been the essential elements of sound editorial, but the wave of science-fiction and fantasy films in the late 1970s and early 1980s spotlighted an emerging niche market. While traditional sound editors fitted “hard” library tracks to picture, specialist sound editors were tasked with creating entirely new effects for objects, characters, and backgrounds. More than simply providing sounds for alien spacecraft and otherworldly ambiances, specialist sound editors were often hired to “sweeten” the sound of real-world objects in a way that would enhance a unique set piece.

In 1989, Frank Serafine was hired on to *The Hunt for Red October* to provide scene-specific “design” elements that would work in tandem with the “hard” effects work being done by the editorial team. According to Serafine,

Authenticity was a chief concern for Paramount supervising sound editors Cecilia Hall and George Watters II, but accuracy alone does not excite audiences. *Red October* was filmmaking on a grand scale. It was this “bigger than life” quality that Hall and Watters recognized the need for a sound team that could go “where no man has gone before.” They called Alan Howarth and myself, reuniting the team that created the warp drive stretch/suck/explosion for the Enterprise and other sounds for the *Star Trek* movies.

Even when working on sound for a film with a strong reality base, you have to embrace the fact that people will not be going to see a documentary on nuclear submarines. Fantasy plays a part in all aspects of moviemaking and sound is no exception to the rule. For every underwater

shot, we needed that ominous ambience that places you deep below the ocean surface. About ten total elements went into the underwater ambience, some of which came from slowed-down bubbles and water entering Hall's pool through a garden hose.³⁵

Serafine's role as a sound designer meant that he was tasked with creating sounds that did not exist in nature, and to enhance them to fit the emotional weight of a particular scene. This involved the recording, editing, and processing of material that would be fitted to the existing effects track with Foley and other ordinary effects elements. Although Serafine was working on a film with a "strong reality base," he and Alan Howarth approached the project with the same conceptual methodology that informed their work on the *Star Trek* films; that is, they recognized that certain ambiences and effects needed to evoke a particular tone or emotion that could not be captured by fitting an existing library track to the picture.

Throughout the 1980s and 1990s, the jurisdiction over sound effects was blurred by the inclusion of specialist sound editors, or "sound designers," on certain higher-budgeted projects. Some freelance sound editors, who had cut their teeth on editing car doors, punches, and Foley elements, became designers of specialized sound effects. Consequently, the occupational ideology of sound editing was splintered by the suggestion that traditional sound editing was "functional" while sound design was "artistic." Moreover, the sound designer title had transformed from a holistic expression of "sound director" into a specialized role within the sound chain. Sound shops in Hollywood began hiring "sound design specialists," and independent freelancers began marketing themselves as such to supervising sound editors and post-production facilities in the Los Angeles area. At the same time, post-secondary institutions and trade schools

began offering degree programs in “sound design,” which were composites of recording arts and film post-production programs. A cursory glance through the issues of *Mix* through the 1990s and 2000s found advertisements for schools such as the Savannah College of Art and Design that told prospective students to “prepare for a career in film, television, animation and interactive games” with their B.F.A., M.A., and M.F.A. degrees in sound design.³⁶

Reacting against the re-branding of “sound design,” Randy Thom suggested that the designation had come to be associated with “using specialized equipment to make ‘special’ sound effects.”³⁷ Digital audio workstations such as Pro Tools and the array of additional plug-in applications had indeed made it convenient for sound editors to sample a particular effect and process it electronically. In addition, the portability of these digital applications encouraged editors to work from their own home studio using a notebook computer and some basic outboard gear. Given the freelance structure of the sound industry, it was not uncommon to find special sound editors working out of their home or small professional studio in order to complete a project.

What can be read from Thom’s assessment of the sound design dilemma is an overvaluation of technology and the “specialized equipment” of sound editors. The emphasis on technology reinforces the notion that specialist sound editors are only as good as the equipment they use. In large measure, this attitude is replayed and amplified in the pages of *Mix* and other tech-savvy publications that place a premium on the tools of the audio post-production trade. In addition to profiling film sound track and the editors and mixers in the sound industry, *Mix* editors make a point of asking professionals how certain effects were achieved, and what equipment was used to create

them. To non-professionals, the interviews and editorials can quickly devolve into tech-speak. Describing his technical process on *The Hunt for Red October*, Serafine says, “I used the Emulator III to access the field recordings from a Pinnacle 650MB read/write optical drive. With the E-III, I was able to ‘decelerate’ the turbines to a halt, even though the original DAT recording never slowed from its steady, functioning status.”³⁸ Despite the article’s attention to mechanics, Serafine actually spends more time describing the aesthetic functions of his sound work within the narrative, and the emotional characteristics of film sound.

By focusing on the fetishization of specialized audio equipment, Thom appears to ignore the flexibly specialized labor force of contemporary sound professionals. With the disappearance of studio-sponsored apprenticeship programs and training protocols within the sound industry, novice sound editors must distinguish themselves from the competition by emphasizing their capacity for creative decision-making. While the freelance market rewards practitioners who are versed in workstation technology, filmmakers rarely hire specialist sound editors based on the equipment they use. Rather, they are hired for their ability to work within a budget and timeframe, and create sounds that match the impressions of what filmmakers have in their mind’s ear.

At Ear Candy Post, Scott Sanders is the company’s resident sound designer. A trained musician and recording engineer, Sanders joined Perry Robertson’s sound editorial firm after spending a number of years with Soundelux as a sound effects editor. Coming up in the 1990s, Sanders gravitated towards the role of the specialized sound editor because of the potential to work “outside the box.” Cutting sound effects on films such as *Any Given Sunday*, *The Perfect Storm* (2000), and *The Patriot* (2000), Sanders

developed a penchant for creating “subjective sounds” out of ordinary effects materials. “When you get down to utilitarian sound editing, like putting in the sound of a car door, you want to add character to mundane sounds.” When Sanders uses the term “subjective,” he is referring to sounds that do not have their basis in objective reality, but are instead heightened in some way to emphasize character psychology or emotion.

When Sanders joined Ear Candy in 2005 he assumed the role of the special sound effects designer, while Robertson held the position of supervising sound editor on most of the company’s projects. When asked to describe his role in the conceptualization of a sound track, Sanders notes,

My job as a sound designer is to come up with subjective sounds. Directors will look to me to develop a sound by giving me the emotion they want to elicit. The job of a sound designer is something that requires a little more thought and work, and a little more creativity than editing typical sounds out of a library. It could be combining sounds out of a library, but really for me it’s beyond that. It’s really making subjective sounds that you can’t find anywhere else that don’t occur naturally.

Sanders makes the distinction between the sound designer as the “sound director” and someone who creates special sound effects. Although he suggests that filmmakers have recently adopted the sound design term to denote the whole sound production process:

I recently discovered that it’s been applied to basically the post-production sound job, so it becomes a “sound design” job. A filmmaker might come to us and say, “We’re ready to start the sound design,” and I realize that they just mean the sound work, the whole process. It’s evolved from a specialty job to a general one.

Although he feels the sound designer designation has shifted over time, Sanders is comfortable with his specialized role. As a core member of the Ear Candy staff, Sanders

comes on to a project when the picture editor has begun work on a rough cut. At that point he and Robertson will hold a spotting session with a director and picture editor to explore how sound will function within the film.

After the spotting session Sanders collects the sounds he will need for a particular effect by culling elements from an effects library or recording original elements in the field. Once he has a palette of sounds with which to work, Sanders begins experimenting. Using a Pro Tools workstation and an array of plug-ins, Sanders will refine an effect by adjusting pitch, tempo, reverb, and equalization. He will modify the length of a track, combine one element with various other tracks, and add low-end “sweeteners” to dramatic effects such as gunshots. What is interesting about Sanders’ process is that he does not always work with picture. During the design process, Sanders will use the image as a reference point, but will perform the bulk of his work without a visual reference. After he is satisfied with a particular effect he will marry it with the picture to match for sync. With several Ear Candy projects, Sanders and the editorial team will often begin work earlier than usual in order to provide picture editorial with mock-ups and effects work for the rough cut. According to Sanders, “That way, they can live with it for a while, and by the time we get to the [mixing] stage, they’ve pretty much heard everything we’re trying to do.”

Sanders’ design work can be productively grouped into three types. Depending on the nature of the film project, he may be asked to add “character” to ordinary sounds like a gunshot. He is also asked to create unique sounds for specific characters or locations. Finally, he is asked to create tonal sounds to evoke a mood in a scene. As he notes, “Sometimes I develop sounds that must work with score, sometimes functioning as

score.” In this last case, sound design takes on the aesthetic textures ambient music as opposed to hard effects.

In addition to designing, editing, and pre-mixing the battle sequences in *Rambo*, Sanders was tasked with creating sounds for the film’s many weapons, from a Compound bow and arrow to Claymore mines to a variety of sub-machine guns. One of the film’s signature weapons is a massive .50 BMG Rifle carried by an SAS-trained soldier named School Boy (Matthew Marsden). Attached to the .50 caliber barrel is a sound-suppressing silencer, which manages to muffle some of the weapon’s supersonic payload. Director Sylvester Stallone manages to convey the size and weight of the weapon with exaggerated wide angles, and School Boy struggles to carry it through the Burmese jungle.

The sound of the rifle needed to have a signature quality to match its unique physical design. It was also important that it retain a distinctive report in the reverberant mountainous terrain. Sanders began with a foundational gunshot element pulled from his library. He then layered a heavier, fuller gunshot into the main sound to “beef it up and give it some weight.” These two layers were then married to a large explosion that was itself comprised of two firebomb elements. Finally, Sanders added a heavily processed element made up of a compressed gas canister to signify the silencer attachment. Described by Sanders as a “sci-fi element,” the sound-suppressing attachment provides the gun with its aural signature, since its high-pitched squeal cuts through the low-end impact of the actual blast. With the amalgamated element, Sanders then created the report by using the envelopes of the explosion elements and gun tails along with some added reverberation to “sell” the echo effect.

Rob Zombie's reimagining of *Halloween* (2007) posed several challenges to Sanders and the Ear Candy sound team. In the film, as in the original, serial killer Michael Myers says very little, but as he stalks his victims we hear him breathe through his rubber mask. Sanders felt the breathing needed to convey Myers' physical size and imposing frame without sounding too labored. Upon listening to the production track, Sanders found that although Tyler Mane, the actor portraying Myers, was miked, the breathing patterns were not consistent with what Sanders wanted to achieve. So, as a solution, Sanders recorded himself breathing into his hands and into different types of Halloween masks: plastic, rubber, and paper. According to Sanders, these experiments resulted in textures that were interesting, but he wanted something duller and more generic to match the grittier, used world of the film. Continuing to try different approaches, Sanders ended up with a Venti Starbucks cup and four napkins. He placed the napkins over his lips and angled the cup toward his mouth, which produced the dull, hollow sound that Sanders was after.

In both of these cases, Sanders designed unique effects to perform a certain dramatic function that could not otherwise be created using standard library tracks. While arguably utilitarian, the rifle and breathing effects provided functional character to otherwise mundane sounds. Sanders' attention to sonic textures and dramatic function is most evident in his work with ambiences. In many ways, the concept of "sound design" has come to be associated with tonal drones and atmospheric textures that fall outside the scope of traditional film score. There is a tendency to call these passages "musical" because of their adherence to a thin structure of rhythm and compositional form.

One of the major challenges on *Halloween* and its sequel, *H2: Halloween 2* (2009), was in creating tonal ambiences to work alongside Tyler Bates' original score. In the case of *Halloween 2*, music and sound design are virtually indistinguishable. When spotting the film, Sanders made notes on where he could develop atmospheric cues to embellish a suspenseful scene or punctuate a surprise murder with a stinger. Sanders found that upon listening to the OMF track, Bates had already temped certain sequences with similar design textures, so Sanders was able to work with the existing score. "I did my sound design to his music, so if he was staccato, I was smooth; if he was smooth, then I was staccato. We tried to stand apart from each other, but work in concert," Sanders says. "The end result should be indistinguishable score and sound design."

Ear Candy's close relationship with director Rob Zombie afforded Sanders a great deal of creative flexibility to develop interesting design textures. The death of Annie (Danielle Harris) provides a useful illustration of how Sanders' creative work shapes a pivotal scene. Having survived an attack by Myers in the first film, Annie finds herself alone in her house, and is startled to find Myers waiting in her bathroom. As she turns to run, Zombie cuts to a wider angle and slows the film to half-speed. In slow motion, Annie's run is almost balletic as she dives out of the way and turns a corner, out of frame. The screen goes black. Myers gives chase, catches Annie, and kills her, but we see none of it.

Sonically, the scene begins with a repeating figure resembling the analog skip produced by a vinyl record needle at the end of a side. The pulsating drone sets a tone for the score, which hits a sync point on the cut to Annie leaping out of the way in slow motion. Bates' music is amorphous and thick, which plays against the higher register of

Sanders' pulse. When *Zombie* slows down the action, the rest of the sound track drops out, ensconcing the music and design around the darkening frame. When the screen goes black we then hear the sounds of a struggle: Annie's screams, Myers' grunts, furniture being toppled, and a series of violent stabs. From a design perspective, the sequence is representative of how Sanders and Bates structured all the murder sequences in the film: Sanders developed a series of different rhythmic patterns, each resembling a beating pulse, to accompany Myers' assault on the residents of Haddonfield.

Sanders' design ambiances are abstract and diffuse, but remain anchored to the dramatic action in the same way that score can work to underline specific narrative details. In Sanders' case, design ambiances can work above the other sound elements, including score, dialog, and hard effects. As one of the conceptual planners of the sound track, Sanders is able to work with score, dialog, and effects when designing tonal elements. Depending on what the other components are doing, Sanders can mold his ambiances around the existing tracks, including score. Annie's death is particularly instructive in the way Sanders builds a repetitive figure out of the brassy drones from Bates' score and the voice and effects.

The ambient cues created by Sanders serve a very specific function within the sound chain: to create a particular mood that is built around the existing sound components. In all three cases of Sanders' design work, his primary role is to provide directors with a sound that will elicit the emotion of a scene. Taking a narrower approach to the "sound design" concept, Sanders fulfills a function that not all traditional sound editors perform; that is, to work with sound effects in a way that accounts for the other major sound components. In this sense, Sanders' work mirrors that of Richard King or

Ren Klyce, but without the administrative duties of a supervisor. In addition to the holistic conception of the term, Sanders and others have applied the same conceptual logic in a narrower capacity.

In a 1993 interview with *Mix*, Gary Rydstrom outlines the fine-grained distinction between the two conceptions of the term. Rydstrom, who has received credit as both Supervising Sound Editor and Sound Designer, suggests that while he normally oversees the sound effects editing and Foley, he does not assume all of the administrative duties of a sound supervisor. He notes, “There are some things that I do that are not traditionally a part of the supervising editor’s job,” including working with a director on specific sound ideas, personally creating specialized effects, and mixing the effects himself.³⁹ Indeed, pre-mixing has become a valuable tool to self-described sound designers like Sanders and Rydstrom.

As I argue in the following chapter, the loosening structure of the sound unions and the creation of a national sound local, Editors Guild Local 700, encouraged editors to assume some of the occupational duties of re-recording mixers. In an effort to control the decisions made during the editorial phase of production, sound editors have begun pre-mixing elements in Pro Tools, and arriving on the mixing stage with a pre-fabricated sequence. This may not mean much to a sound editor who is tasked with fitting car door slams to picture, but to Scott Sanders and his design work, it has become a way to ensure that the finely balanced design element is not manipulated during the mixing sessions. Since Sanders’ sound design work is about the combination of materials, there is a large mixing component involved in the process. As a specialist sound editor, Sanders is ultimately judged on the quality of his designs, which must retain their structure after the

editorial process has been completed, and the final mix fuses together the remaining parts of the sound track.

“What do we hear?”: The Performance Value of Sound

The two competing models of sound design approach the organization of sound work differently, but they share a fundamental perspective on the dramatic function of sound effects. As Richard King argues, “You’re presenting a story. You’re going to have to hear something if it’s dramatically appropriate.” The question of what to hear is one of the first questions any sound supervisor or sound designer asks him or herself. Mark Stoeckinger, a sound supervisor at Soundelux, adds, “You have to bring your own sensibilities to the project. Every film is unique. You need to ask yourself, ‘What needs to be supported in what ways?’ And then make your decisions based on that.” In this way, the occupational ideologies of sound editing and sound designing are very similar; practitioners describe the tasks of creating and fitting sound effects to picture as a reactive task.

Whether editors are performing utilitarian functions with sound effects culled from an existing library or designing textured ambiances with original field recordings, they routinely speak about reacting to the dramatic spirit of a screenplay, a director’s suggestions, the vocal performance of an actor, and the edited picture. Mark Stoeckinger suggests, “Sound has to react. As an editor you’re going to react to how a picture editor paces a scene, a production designer creates an environment.” Some critics may read Stoeckinger’s statement as an admission that film sound is, in the words of Michel Chion,

nothing more than “added value.”⁴⁰ However, Stoeckinger is suggesting that as creative decision-makers, sound professionals *react* in order to determine what is dramatically appropriate for a scene. The reaction may come from reading the shooting script, speaking with a director, or from the picture editor’s rough cut of the film. What remains consistent throughout the editorial process is the first question that anchors the work of sound editors: *what do we hear?*

This question has essentially framed the discourse around the sound editor’s transition from technician in the studio era to creative agent in the flexibly specialized world of modern sound production. While sound designers have been accorded a certain artistic status within the film community, the sound effects editor has not completely overcome the technician label, even though their work is structured by an appeal to the creative potential of sound. As an ideology, sound editors who have not adopted the “sound designer” designation approach each sound event with the same sense of creative engagement. Embedded in the question “what do we hear?” is the ideological function of modern sound editing: sound as performance.

In his analysis of sound effects recording, Michael Axinn suggests that “there is no such thing as the right sound.” In other words, if you were to ask three sound editors to record a rocking chair, they would likely produce three different interpretations of a rocking chair. Each editor would inevitably give the sound a personality, a sense of character, and an emotional texture based on their interpretation of the scene as a whole. Mark Stoeckinger articulates the methodology most precisely when he says that upon recording and editing a particular effect, a sound editor wants the “performance value of

sound, not just the sound itself.” The performance value of sound is intimately tied to the dramatic function of a sound event.

Performance value is also tied to a sound editor’s general approach to a sound event. The freelance structure of the modern sound industry has necessitated that sound effects editors not only show a proficiency with workstations and the technical ability to fit sound to picture, but also be able to interpret the dramatic function of a sound event. Quite often, sound effects editors are delegated particular sequences in a reel – or, in some cases, an entire reel – to edit. The sound supervisor has provided some basic instructions on the tone of the film, and has also set the palette of sound by providing a library of tracks from which to work. Working within a set of creative limitations is a reality for most editors, since they are not afforded the same level of autonomy and artistic flexibility that a supervisor receives. Depending on budget and schedule, sound editors may ultimately perform the functional tasks of fitting sound to picture, but maintain an artistic sensibility about their work and the expressive qualities of sound. Ren Klyce stresses,

It is a job. People are making a living doing this. Try to make it interesting for the film and for yourself. It’s a lot of work. Some people are only given two weeks to edit sound; they’d love to go out and record but they haven’t been given the budget to do.

The workflow demands of modern sound editing are well known to Peter Staubli, a freelance sound effects editor at Soundelux. The Swiss-born Staubli was trained as a music engineer in the 1980s and began his career in film sound with Swiss and German television projects before moving to Los Angeles in the late 1990s. A veteran of large-scale blockbusters and tent-pole projects, including *Black Hawk Down*, the *Bourne*

trilogy, *American Gangster* (2007), and *G.I. Joe: The Rise of Cobra* (2009), Staubli is usually one of several effects editors hired on to a film. In fact, he has been a member of Karen Baker Landers' brain trust at Soundelux for nearly a decade. Given the tight turnaround time of most films, Staubli and the other editors are assigned reels with which to edit after meeting with the sound supervisor to discuss the aesthetic demands of a particular project. Having also developed a relationship with Perry Robertson and Ear Candy Post, Staubli was hired in the summer of 2009 to edit reels on *Halloween 2* as they arrived from the film's picture editor, Glenn Garland.

As Staubli began work on editing sound effects, the rest of the Ear Candy crew was busy working on other components of the sound track. Scott Sanders was designing ambiences, Barney Cabral was editing dialog and ADR material, and Perry Robertson was finalizing the film's post-production schedule even as director Rob Zombie continued re-shoots across the country in New Milford, Connecticut. Staubli was working with a fairly complete cut of the film, and was asked to provide final – as opposed to temporary – effects elements, which would ultimately make it into the final release print.

In Staubli's view, this particular job was fairly straightforward. Each reel was reviewed without sound in order to absorb the editing rhythms and pacing, and to determine where effects were required. Though the reels contained the OMF, which included the original production track with dialog, Staubli generally avoided it unless dialog was an important component of a scene. Staubli's edit bay was equipped with a Pro Tools workstation, a left-center-right loudspeaker array, and a preview monitor. The palette of sounds was retrieved from Ear Candy's extensive library. Given the tight schedule for the film, Staubli was afforded a high degree of creative flexibility in his

editorial decisions. In addition to receiving credit as a sound effects editor on the film, Staubli was also credited as an additional sound designer. One sequence in particular illustrates the methodological similarities and differences between the two tasks.

During a morning edit session, Staubli scanned through the footage of one reel and came upon a night scene where Michael Myers kills Howard (Jeff Daniel Phillips), the manager of the Rabbit in Red strip club. Howard exits the club's back entrance and dumps some garbage bags into a large trash bin. Turning around to go back inside, his path is blocked by Myers, who startles him. Frustrated, Howard insults the oversized killer and warns him that he's in no mood for Halloween pranks. He begins to walk away, but Myers steps to the side, blocking his path. In total disbelief that someone would try to intimidate him, Howard reacts. He takes a swing at Myers and nearly topples over from the force of his own blow, but Myers doesn't flinch. Howard bends over in pain, clutching his wrist, and Myers pushes him to the ground. We hold for a beat before Myers approaches and uses his boot to smash Howard's face into a bloody pulp. He repeats the action four more times until Howard's face caves in completely.

What do we hear? Staubli began building the sequence with a series of pointed effects that caught his eye on his initial silent review. The first shot of the sequence is a wide master of the rear of the club. Staubli spotted a utility generator hanging above the door where Howard emerges with the garbage bags, so he added the sound of an older-model generator as a background element. Howard takes a drag off his cigarette before flicking it away, so Staubli added a pronounced effect of burning cigarette paper. There was also the creaky industrial door and the trash bags rustle, each received their own library effect. Although Foley would handle Howard's footsteps and cloth movement,

Staubli was responsible for the rest of the effects track. Next came the confrontation with Myers.

Staubli scanned through the library and collected sound elements for the head crush. He accounted for the low-end boot stomp, a variety of bone crunches, and the spongy blood ooze. Working with the assumption that the impact needed to reach beyond “realism” and convey a heightened sense of violence, Staubli built the effect to be distinctive and exaggerated. He notes, “This kind of violence is not my personal taste, but this is the style that they’re going for.” After choosing the key ingredients, he synchronized them to picture. The initial impact carries the weight of Myers’ boot, followed by the bone crunches, and then the viscous *squelch* of blood and tissue. He continued to refine the sync points and sharpen each of the subsequent impacts. In all, Staubli combined five library elements to create the split-second head crunch.

Staubli’s work on this particular effect resembles the task structure of the specialist sound editor who “designs” a new and unique sound out of a variety of recorded materials. But this definition does not fully explain the ideological structure of Staubli’s work as a sound effects editor. As an occupational ideology, sound editors approach their work with the aim of not only fitting sound to picture, but also creating a sound to fit the emotional needs of a scene. Describing the performance value of sound effects in *Halloween 2*, Perry Robertson, Scott Sanders, and Peter Staubli all expressed the enormous size and intimidating stature of Michael Myers, which were qualities that needed to be conveyed by sound effects. Indeed, one of the primary functions of the head pound effect was to express the massive force of Myers’ blow, a technique that the editorial team repeated in the other major kill sequences. To accomplish this, Staubli used

low-end impacts as the foundational for the boot attack. Tom Russo, writing for the *Boston Globe*, noted the extreme aural assault in his review for the film: “The copious violence, as always, is an assault – even aurally, as every thudding knife strike is made to sound like a boulder dropping on the theater.”⁴¹

In this particular case, the performance value of the boot stomp is meant to elicit the weight and brute force of the serial killer. Whereas in previous installments of the *Halloween* series, Myers is portrayed as a killer who silently stalks his victims and then attacks them with an effortless stillness, Rob Zombie’s Michael Myers is cruel, sloppy, and strident. When he attacks, the impact is not simply heard but felt. Perry Robertson, who guided the direction of the sound track, explains:

He’s a big guy and when he walks you want to feel the weight of him coming along, as opposed to Laurie. You want the perception to be that he’s bigger than Laurie. By that account it makes him more menacing.

Not surprisingly, Staubli’s design work on the boot stomp emphasized Myers’ physical presence, and the extreme harm he inflicts on his victim.

More generally, performance value can also be linked to non-design elements as well. While Staubli was recognized for his unique combinatory work with library elements, the bulk of his sound editing on *Halloween 2* engaged with more functional, but no less creative, aspects of the editorial process. In determining what should be heard, Staubli searched for library elements that emphasized the dramatic performance of a sound, not simply the sound itself. In two fairly routine sequences, sound effects were needed to anchor and embellish certain visual cues. Reacting to the silent footage, Staubli

made a few notes about what was needed, and then scanned the library for suitable accompaniments.

The first scene consisted of Annie racing to pick up an older model kitchen telephone. Staubli studied the phone – it was a beige wall-mounted rotary model with a long cord. He sampled several ring-types by scrolling through a list of “old phone” effects before hitting on one that sounded right. There was a well-worn quality to the library track that Staubli liked. Next, he added a generic hand-grab element when Annie picks up the phone, and then a rotary-style “click” when she takes it off the metal cradle. In an aside, Staubli noted that in some cases his effects work would be covered by Foley, but he was providing “safety” options to the filmmakers in case time constraints or budget restrictions prevented Foley from covering certain elements.

In another sequence, Staubli made specific determinations for objects and scenery that was not entirely visible. Laurie strolls down a downtown street in Haddonfield and wanders into a local bookshop after spotting a window display for Dr. Loomis’ (Malcolm McDowell) new book on Michael Myers. Zombie frames Laurie entering the store in medium close-up. In a bid to infuse “a bit of character” to the mundane shot, Staubli added the sound of an antique bell that rings when Laurie opens the door. We presume the bell is attached to the top of the door, but because we do not see the doorframe Staubli had the flexibility to add the small touch. It doesn’t exactly change the meaning of the scene, but it does connote the small-town charm of Haddonfield, and works to juxtapose the heaviness and grit of Myers’ scenes.

These ephemeral moments provide Staubli with the greatest creative flexibility, since they are not germane to the main plot. In some cases, Staubli must base his

decisions on what he believes is an appropriate effect, either because the filmmakers have given him room to exercise his own aesthetic style or because the image is obstructed in some way. Throughout the spotting session, Staubli often paused the image and inspected certain shots for sound clues: what type of floor is that character standing on? What kind of camera is that character using? Is that chair metal or wooden? Beyond a desire for “realism,” Staubli was also interested in capturing a certain sonic character with each sound element. Although this work qualifies as functional sound editing, the occupational mandate is remarkably similar to the bifurcated role of the sound designer. Finding “performance value” in sound effects has historically been the domain of “sound designer” discourse. At the level of practice, however, aesthetic decision-making is a chief characteristic of the occupational task structure of both editors and designers. Essentially, “what do we hear?” is a question of function, but also, more fundamentally, one of aesthetic preference and choice.

Throughout the editorial process of *Halloween 2*, Staubli’s decisions were informed by his reaction to the footage and the sound direction of Perry Robertson and Scott Sanders. Assigning his own stylistic imprint on the work allowed Staubli to assert his own specialized artistic viewpoint without losing sight of what the filmmakers wanted the sound track to communicate. By remaining flexibly specialized, Staubli’s work is an example of how the concept of “sound design” remains a difficult term to label, much less define. In a 2009 e-mail to sound practitioners, Randy Thom answered his own question about what defines the work of a “sound designer” in modern Hollywood. His statement read, in part, “The most important part of the work that Editors and Mixers do is making creative decisions. The word ‘design’ makes it easy to distinguish us from

engineers and administrators, whose work is extremely important but not focused on artistic creativity.”

Conclusion: The Inclusiveness of Sound Design

The post-production schedule for *Halloween 2* is instructive in yet another way. Having already provided sound services for Rob Zombie’s first Halloween installment, the producers of the second film assumed they understood the length of time that would be needed to complete the sound editorial and mix for the second film. Perry Robertson notes, “The producers have seen shows done fast, so they want this show out in a shorter amount of time than any other show we’ve done before.” Robertson handed over the film to his crew in the spring of 2009 and Dimension Films, the distributor, had already set a release date of August 29, 2009, which meant the turnaround time was essentially four months. “Do you want it fast, good, or cheap? You can have two out of three. But not all of the above,” Robertson says. “You can have it fast and cheap, but will it be good?”

To be sure, tighter schedules and budgets are an economic reality, and Robertson has adapted to this environment by finding ways to maintain a sense of professional integrity without going over schedule and over budget. “We don’t ever want to do something that is less than our standard of doing something. We’ve lost money on projects because we want to do the best job we can. It’s very hard for me to leave something that’s not done to the very best that I can do it. That goes for everything [at Ear Candy].” Consequently, Robertson concedes that his role as a sound supervisor is more administrative than creative. “If you’ve got the time, it makes a difference. I love

working in that capacity, but these days those are getting farther and farther in between,” he says. “With most of our stuff we go hard and fast.”

Not surprisingly, sound technology has been a fulcrum in this debate. On one hand, digital audio workstations allow professionals like Scott Sanders and Peter Staubli the ability to edit, premix, and design material with a greater degree of speed and efficiency than Moviolas and analog electronic processors permitted. Digitized sound libraries have made it possible for editors to find thousands of effects elements with a few keyboard strokes. Ironically, some libraries have become so large that some editors prefer to go out and record a new sound rather than sift through hundreds of options. The technical compatibility between picture and sound departments has also encouraged a greater interchange between picture and sound editors. In some cases, sound editors are providing early mockups of effects to picture editors during the assembly process, which has the benefit of involving the sound supervisor earlier in the post-production process.

As Richard King attests,

Film sound is evolving in the sense that most American movies sound great; the bar is continually rising. Digital technology has allowed us so many tools and so much flexibility that you can do a great track and deal with all the picture changes and all the hurdles thrown at you; you can just work so fast.

On the other hand, the conveniences afforded by digital technology have not been lost on studio executives and line producers, who reason that post-production schedules can be shortened because of the speed and efficiency of digital editing tools. As Robertson notes, budgets determine the editorial and design process, and no matter how fast an editor can scan through a sound library, time is needed to conceptualize the

aesthetic and narrative demands of the sound track. “It doesn’t seem like we get the chance to let something sink in,” he adds. Despite the shrinking resources available to large firms like Warner Bros. and Soundelux, and mid-level firms like Ear Candy Post and Ren Kylce’s Mit Out Sound, the occupational mandate and ideology of sound editing and design remain fitted to the performance value of sound effects, and their dramatic functions within the narrative. Sound design is reactive, but not in the way Chion or Sider would suggest; instead, the work of sound designing asks sound editors to react to what they read, see, hear, and feel to properly assign a sound to an image and, as a result, create something more realistic, emotional, or dramatic.

The flexibly specialized world of modern sound production has resulted in a community of practitioners who are defined by their ability to remain flexible to the changing demands of film production, but also retain a unique creative voice. The unfolding discourse on the nature of what it is to be a sound designer in the post-divestment and reintegration eras has, in some ways, overshot its trajectory and, as a result, forestalled an inquiry into the creative work of sound supervisors, specialist sound editors, and sound effects editors. At one time or another, each of these designations have flirted with the “sound designer” label, but few practitioners have used the term with any real consistency over the last thirty years. Consequently, the tendency among some historians and industry professionals to mourn the death of an artistic “sound director” has been at odds with the practical realities of sound editing and supervision in modern Hollywood filmmaking.

While some may claim that “there is no sound designer” in the modern production complex, this chapter has attempted to demonstrate that if we consider the practical

exigencies and task structures of sound supervisors, specialists, and effects editors, then we can begin to see how creative decision-making strategies among sound professionals have reshaped the debate entirely. The path to independence has been a difficult one to realize for the advocates of the “sound designer” designation in all of its forms. The designation remains bound to divergent debates on what it means to be a creative decision-maker in the area of film sound. It matters less that we define the term against what it is not, and instead recognize how the sound designer concept as innovated by Walter Murch and advocated by Randy Thom structures the logic of practice for modern sound professionals – supervisors, specialist editors, and sound effects editors.

Sound supervisors and editors work to negotiate the practical demands of modern sound production by internalizing the codes and conventions of the classical paradigm, and the economic realities of post-production schedules. At the same time, these practitioners express a signature style and aesthetic approach that will ultimately define their position within the industry. The broad-based application of “sound design” in contemporary sound practice has spotlighted the dramatic and emotional functions of sound effects within classical narratives. “Design is not just about creating sounds for things like space ships and creatures,” Richard King suggests. “It’s also about placing sounds in a natural environment to create a feeling or a mood.” Designing sound for film, in all its complexity, is a creative task that is borne out of the work of practitioners who begin each project with the same question: what do we hear?

Notes

¹ Quoted in Spotnitz, "Stick it in Your Ear": 45.

² Larry Sider, "If you wish to see, listen: The Role of Sound Design," *The Journal of Media Practice* 4.1 (2003): 6.

³ Chion, *Audio-Vision*: xxvi.

⁴ Sider: 7.

⁵ See especially Gianluca Sergi, *The Dolby Era*, and Jay Beck, *A Quiet Revolution*.

⁶ Sider: 7.

⁷ Whittington, *Sound Design and Science Fiction*: 27.

⁸ See Randy Thom, "Designing a Movie for Sound": [http://filmsound.org/articles/designing_for_sound.htm]. Accessed March 1, 2011).

⁹ Jay Beck, "The Sounds of 'Silence': Dolby Stereo, Sound Design, and *The Silence of the Lambs*," in Jay Beck and Tony Grajeda, eds., *Lowering the Boom: Critical Studies in Film Sound* (Urbana and Chicago: University of Illinois Press, 2008): 75.

¹⁰ Ibid.

¹¹ Thom, "Sounding Off in a 'Visual' Medium (or, Confessions of an Occasional Sound Designer)," *Mix* (May 1992): 89.

¹² Ibid.: 88.

¹³ Ibid.: 88-89.

¹⁴ Coppola quoted in Michael Ondaatje, *The Conversations: Walter Murch and the Art of Editing Film*: 52.

¹⁵ Quoted in Ondaatje: 15.

¹⁶ See Ondaatje: 20-21.

¹⁷ Quoted in Tom Kenny, "The Search for Order in Sound & Picture": 20.

¹⁸ Thom, "Designing a Movie for Sound": [http://filmsound.org/articles/designing_for_sound.htm]. Accessed 1 Mar. 2011.

¹⁹ Quoted in Kenny: 18.

²⁰ Ibid.: 21.

²¹ Thom, "Designing a Movie for Sound":
[http://filmsound.org/articles/designing_for_sound.htm]. Accessed 1 Mar. 2011.

²² Thom, "Sounding Off in a 'Visual' Medium": 88.

²³ David Sonnenschein, *Sound Design: The Expressive Power of Music, Voice and Sound Effects in Cinema* (Studio City, CA: Michael Wiese Productions, 2001): 3.

²⁴ E-mail from Randy Thom to sound practitioners, entitled "An Argument for Reinventing the Term 'Sound Design,'" published on the Sound Article Group List, available at [<http://groups.yahoo.com/group/sound-article-list/message/4577>]. Accessed 1 Mar. 2011.

²⁵ Mangini quoted in Spotnitz: 45.

²⁶ Thom, "Sounding Off in a 'Visual' Medium": 85.

²⁷ Quoted in John Michael Weaver and Pete Elia, "An Introduction to the Audio Post-Production Process": 58.

²⁸ John Purcell, *Dialog Editing for Motion Pictures*: 43.

²⁹ Ibid.

³⁰ The transfer process itself is completed on a near-field 5.1 monitor system, which provides, as Tomlinson Holman suggests, a "real-world" check of a mix on smaller loudspeakers. The sound crew either imports a close-field system to the mixing stage or relocates to a smaller mixing room to complete the transfer. Aesthetically, the crew will normally make minor adjustments to dynamics and volume level for the home video mix, but rarely is a film completely remixed at this stage. Landers notes that dialog volume levels (center channel) are usually raised to compete with levels in other channels (music, effects, backgrounds). See Tomlinson Holman, *5.1 Surround Sound: Up and Running* Second Edition: 50-53.

³¹ The John Korty film in question is *Twice Upon a Time* (1983).

³² Michael Axinn, "Sound WITH Character," *Mix* (September 2000):
[http://mixonline.com/mag/audio_sound_character/]. Accessed 1 Mar. 2011.

³³ Ibid.

³⁴ Quoted in Spotnitz: 45.

³⁵ Frank Serafine, "Sound: The Unseen Actor in 'Red October,'" *Mix* (September 1990): 48.

³⁶ See especially the Savannah College of Art and Design advertisement in *Mix* (November 2007): 52.

³⁷ Thom, "Designing a Movie for Sound":
[http://filmsound.org/articles/designing_for_sound.htm]. Accessed 1 Mar. 2011.

³⁸ Serafine: 47.

³⁹ Quoted in Weaver and Elia, "An Introduction to the Audio Post-Production Process": 68.

⁴⁰ Chion defines "added value" as the expressive and/or informative value of sound that enriches the visual image. Accordingly, added value can give the impression that sound merely duplicates the meaning of an image, making it unnecessary. See Chion, *Audio-Vision*: 6-7.

⁴¹ Tom Russo, "'Halloween' sequel has few treats," *The Boston Globe* (August 29, 2009):
[http://www.boston.com/ae/movies/articles/2009/08/29/halloween_sequel_has_few_treats/]. Accessed 1 Mar. 2011.

CHAPTER NINE

Blurring the Edit and the Mix: Organized Labor and Occupational Mandate in Sound Editorial

I think the trend is that if editors don't think that they're mixers now, they'll *become* mixers, because they'll be mixing for the sake of their editing.

– Gary Rydstrom¹

During the studio era there was a carefully constructed labor hierarchy in studio sound departments. The “sound director” supervised the major administrative and engineering requirements of a film, beginning with production tracks and ending with release prints. In addition to ensuring that equipment functioned properly, the director or “unit recording supervisor” was the studio’s liaison in all matters concerning sound editorial and mixing. There was also an artistic component to the sound director’s duties that coincided with the goal of a “thoughtful” and balanced final mix. The sound director also supervised an apprenticing system that ensured a consistent workforce and workflow among sound engineers, editors, and mixers. Novice editors and mixers would essentially work their way up through the studio department after cutting their teeth on basic engineering and editing duties.

With the dissolution of the major studio sound departments, and the reduction of motion picture production, the supervisory role of sound director and the apprenticing system were largely abandoned. James G. Stewart, a re-recording mixer who began his career at RKO during cinema’s conversion to sound, has noted that one of the most

significant changes to occur in the post-divestment era has been the fragmentation and compartmentalization of the sound chain.² According to re-recording mixer Richard Portman, “The system they had was in place and working, and they tossed out the wrong part. They decided that they didn’t have to own a construction company to build a house, and that was the last thing they should have done.”³ While the freelance market virtually eliminated the apprenticing structure of the sound industry, independent sound shops adopted a similar system for novice editors and mixers. Assistants were still needed to archive and transfer sound and picture materials, operate the machine rooms, create edit lists, and perform other entry-level tasks. In the digital era, software technicians and server operators have replaced machine room engineers and film-to-tape transfer jockeys.

The decentralized nature of modern sound production has meant that the sound chain is composed of independently skilled freelancers with different philosophical and aesthetic attitudes on sound for film. Risking stylistic inconsistency on the sound track, James G. Stewart has said of contemporary sound mixers, “The people who are actually sitting at the re-recording console with their hands on the knobs often have never seen the picture [they are mixing] before. In many instances, they become merely an extension of the hands of the director.”⁴ At the same time, the collapse of studio sound departments freed the sound professional in many ways from the strict approach of the studio sound director and the habitual practices of the sound staff. In effect, modern sound editors and re-recording mixers became “free agents” who were able to experiment with sound in ways not condoned by studio policies, and adopt stylistic signatures that set their work apart from other practitioners.

While the sound industry has become an interdependent network of freelancers in a market dominated by major studios, large independents, and mid-level boutique firms, the complexion of the labor market has been reshaped by the economic, technological, and aesthetic changes in film sound practice. The strict hierarchical structure of the Hollywood production system has continued to find favor among filmmakers and practitioners who were familiar with or nostalgic for studio era machinations and policies.⁵ But the digital era has imposed new freedoms and constraints on the organization of sound practitioners working in Hollywood that began to take shape with the dismantling of the studio system, the rise of freelance sound professionals, and technological advances such as the Nagra III tape recorder and 1/4-inch tape, and digital non-linear editing systems.

During this period of unprecedented change, the labor union system that represented Los Angeles-based sound professionals was also reacting to how these actions affected the ways in which sound was recorded, edited, and mixed. This chapter explores the blurring occupational roles between sound editors and re-recording mixers in the digital era. Specifically, what follows is a consideration of how organized labor in the sound industry changed as a result of the introduction of digital audio workstations.

Sound Locals 695 and 776

In many ways, the history of modern sound practice can be expressly tied to the developments between the two major labor unions representing Los Angeles sound practitioners: Locals 695 and 776 of the International Alliance of Theatrical Stage

Employees (I.A.T.S.E.). Two major issues facing organized labor in the digital era has been the growth of computer-growth assisted editing tools, and the explosion of independent boutiques and the return of major studios to the post-production landscape. These concerns reached critical mass in the late nineties as labor leaders began reassessing the shift to workstations and the state of sound production in the Los Angeles community. In 1998, Joseph Aredas became the new international representative of the West Coast branch of I.A.T.S.E. just as the digital transition was reconfiguring the task structures of sound and picture artists and technicians. According to Aredas, the move to non-linear platforms had an adverse effect on the freelance structure. Although the portability and cost effective nature of computer editing systems resulted in the growth of boutique sound shops in and around Los Angeles, these same companies can operate with fewer staff because of the equipment's perceived ease-of-use. In an interview with *The Motion Picture Editors Guild Newsletter*, Aredas conceded that shops that once employed dozens, if not hundreds, of skilled laborers could feasibly operate today with half as many staffed employees.⁶

The primary goal of Hollywood craft unions in the post-studio era became securing employment for their members under fair conditions despite a rising tide of technological and institutional factors that threatened to disrupt a system that had been running steadily since the cinema's conversion to sound. As sound editors and re-recording mixers began incorporating non-linear DAWs into their workflow, the labor unions responded by examining the role and function of the production and post-production sound professional. In his study of sound practices of the 1960s and 1970s, Jay Beck suggests that the collapse of the studio system and the emergence of a "farm

system” of independent sound houses dramatically redefined the role of the labor union in Hollywood.⁷ At the time, portable recording devices such as the Nagra III and “runaway productions” precipitated the reduction of production mixing crews, and the growth of boutique shops led to smaller post-production editorial and mixing crews.⁸ As deleterious as the studio system was, it did provide its artists and technicians fairly stable and secure employment. In the 1990s, the transformative effects of digital workstations and studio reintegration became evident to the sound unions, and left Locals 695 and 776 faced with an identity crisis.

Established in 1928, Local 695 is the oldest sound union in Hollywood, and at one time represented location sound mixers, boom operators, technicians and recordists, television engineers, studio projectionists, and re-recording mixers. In the first years of synchronized sound films, the major emphasis had been on production sound, which was the purview of 695 and its members. James G. Stewart has suggested that little thought was given to the possibilities of improving the sound after the original recording had been completed.⁹ This placed Local 695 and its members in an enviable position of being the key players in the production of sound tracks. However, in the years following the dissolution of the studio system, Local 695 contended with a variety of institutional and technological shifts, including a reduction in the size of a production sound crew from four men to two men, and the introduction of new technologies such as ¼-inch tape. These measures were precipitated by the tumultuous economic situation among major Hollywood studios and the burgeoning independent film scene in Los Angeles and San Francisco, in the 1960s.

The biggest challenge facing location mixers in the digital era has been the shift to solid-state recording equipment, particularly the switch from tape-based media to hard-disk recorders. In addition to the traditional demands of production audio, location and re-recording mixers have had to adapt to the technical requirements expected by post-production personnel. Specifically, because SMPTE timecode has become standard protocol at every stage of picture and sound editorial, location mixers are now expected to synchronize their recordings to timecode. John Coffey, a location mixer and son of longtime union activist for Local 695 Jack Coffey, outlines the changes to the mixer's task structure in an editorial for his trade magazine, *The Coffey Files*:

The politics and high strung egos on the sets are tough enough to deal with, but in this day and age of making film and TV products, you now have to be ready for anything and everything technical. You never know when a new twist will come at you. It wasn't always that way. For many years, the mixer's job was straightforward: we all used essentially the same gear, the same way, day after day, year after year. We all concentrated on getting the actor's voices – it was never about the workflow. No one needed to be very technically inclined.¹⁰

Coffey laments the loss of a more simplified task structure, which extends well beyond the digital era and includes the industry's transition to 1/4-inch tape, video assist, wireless radio microphones, and multichannel recorders. As the business agent for Local 695 from 1968-1977, Jack Coffey was a vocal opponent to these technical and institutional changes that he deemed unsuitable for Local 695 members. As Jay Beck notes, "Specifically, in almost every regard, the actions of the union resulted in the quashing of a number of sound 'advances' that were seen as threatening to labor concerns."¹¹ Coffey, Sr. fought

the Association of Motion Picture and Television Producers (A.M.P.T.P.) for nearly a decade on matters ranging from hourly wages to the restoration of three-man sound crew.

Despite the efforts of Coffey, Sr. and I.A.T.S.E. Local 695 to challenge the actions of the producers union, the industry was moving in another direction. The innovation and diffusion of Dolby Stereo in the 1970s had a profound effect on the sound industry, and reconfigured the production process for sound professionals for years to come. The reintroduction of multichannel sound shifted the spotlight away from the nuances of production audio towards the job of the sound editor. The Dolby format and certain “Dolbyized” films such as *Star Wars* and *Close Encounters of the Third Kind* placed increased value on sound effects and the role of the sound effects editor in the creation of a film’s original sound track.¹²

Consequently, the other major sound union in Hollywood did not have the same public face or notoriety as Local 695. The Film Editors Local 776 was started in the summer of 1944 as the official trade union for all editors in Los Angeles, picture and sound. However, throughout the studio era the professional standing of sound editors was in contradistinction to that of Hollywood picture editors. Considered a form of mechanical labor, sound editorial was routinely marked as a basic skill where effects were cut to synchronize with the picture. With optical and magnetic film-based sound editing, editors would apply particular stock effects from a studio library. The task of choosing specific effects to match the picture sync were usually first auditioned at a mixing session as part of the pre-dubbing or “first assembly” process. Indeed, prior to 1982 the Academy did not recognize sound editorial with its own award category. Special sound effects honors were awarded periodically to films with “outstanding” achievements

in sound effects editing. Prior to the collapse of the studio system, sound editors were rarely given screen credits; in most cases, the “sound” credit was shared by the location mixer (known then as the production recordist) and re-recording mixer.

In an attempt to redress the balance between picture and sound editors, the Motion Picture Sound Editors (M.P.S.E.) group was created in 1953 as an unofficial trade society that promoted the art and craft of sound editing to the film industry.¹³ In fact, Jay Beck argues that the M.P.S.E. was created, in part, to make the job of sound editor more visible to filmmakers in other fields, even though the group did not have any impact on contract negotiations with studios. The M.P.S.E. was billed as a special trade organization that gave out its own awards (The Golden Reel) for achievements in sound editing and later published its own newsletter (Editors Guild). As the studio system slowly unraveled, union leaders and M.P.S.E. representatives such as Raymond Bomba sought to enhance the image and professional standing of sound editors by spotlighting the artistic contributions of sound editors to the creation of a sound track, and the dramatic functions of a well-placed sound effect.¹⁴ The coming of Dolby and the widespread acclaim of sound “designers” certainly helped sound editors gain a stronger foothold within the union and among filmmakers looking for editors with an ear for aesthetic detail and nuance.

Having made the transition to magnetic film-based editing in the 1950s with the coming of widescreen and stereophonic sound processes, Local 776 in Los Angeles had not been faced with any serious technological upheavals in decades. Cutting sound on a Moviola and, later, the KEM flatbeds, was a universally accepted norm within the domain of sound production. The introduction of computer-based editing systems was

slow to catch on among practitioners who had been trained on film-based media.

Between 1989-1991, *Mix* ran a series of columns that speculated on the future of digital systems given the widespread use of the Moviola among veteran and apprentice editors, not to mention the trained service technicians for film-based editing platforms.¹⁵ Though the tone of the editorials expressed a general conservatism toward an all-digital future, senior editor Tom Kenny remained mindful of the growing popularity of random-access systems. By mid-decade the tide began to shift as more sound shops began experimenting with various non-linear platforms, and the reality of a non-linear future was coming into sharper focus.

In 1995, Local 776 began offering training courses on digital editing platforms, which were sponsored, in part, by the producers union. This was an attempt to ensure that both veteran members and novice editors could obtain the basic operational skills needed to work computer-based systems. The measure also provided Local 776 with a necessary foothold on the jurisdiction of digital audio workstations, meaning that training protocols and technical information could be overseen by the same union representing the majority of DAW users. According to then I.A. president Tom Short jurisdiction over DAWs was awarded to 776 in the fall of 1996, paving the way for the guild to offer seminars and training sessions for workstations and relevant software.¹⁶

As Local 776 maneuvered to provide its membership with training programs on digital systems, union leaders were also targeting smaller mid-level sound shops that employed non-union editors and assistants. The swell of independent sound and picture houses following the closure of the majors' post-production facilities had double-edged effect on the editors' local. The expansion of mid-level post houses around Los Angeles

increased the demand for editing staff, but it also created a scattered marketplace with post facilities hiring non-unionized laborers. As late as 1999, Joseph Aredas expressed concern over the degree to which boutique facilities contract with non-union freelancers:

Even with the Editors Guild, which has a pretty good handle on the editorial community, there are a lot of new companies that have sprung up all over the place. Many of them are just boutique houses that deal with tape editing and other post services, but they are virtually unchecked. It's our aim to assist Local 700 in trying to overcome that and organize these companies and get them under contract.¹⁷

After two decades of rapid growth in the independent market, I.A.T.S.E. eliminated roster restrictions that required a minimum number of years of service before members could become full-fledged editors. The move was designed to strengthen union representation among non-union freelancers and facilities by expanding their membership base.

Local 700 and the “New” Editors Guild

The relationship between technology and organized labor was crystallized in 1997 when, after years of informal discussions with I.A.T.S.E. leadership, the post-production members of Sound Local 695 were transferred to the editors local in a bid to strengthen bargaining and organizing efforts. The General Executive Board of I.A.T.S.E. voted to transfer approximately 700 post-production craftspeople, including re-recording mixers, from Local 695 to the Editors Guild. Non-audio members from 695 were then shifted to other locals representing cine-technicians. In effect, Local 695 membership was reduced to location sound mixers, technicians, video assist technicians, and studio projectionists.

At the same time, I.A.T.S.E. began talks that would eventually lead to the merger between the East and West Coast branches of the Editors Guild – 771 and 776, respectively – in order to create a national local for sound and picture editors. In 1998, Los Angeles Sound Local 776 became known as Local 700 and, as of this writing, is home to over 6,200 members.¹⁸

While Editors Guild representative Ron Kutak emphasized that the membership move from Local 695 to Local 776 was designed to foster better relationships among audio post-production members, there were signs that the decision reflected a concern over post-production technology and the widespread acceptance of digital audio workstations by editors and re-recording mixers. After the transition Kutak told *Variety*, “It will allow us, under a single local, to organize post-production that’s not already organized, and will end any and all jurisdiction disputes in post-production. It will also allow us to bargain for all post-production employees as a single local.”¹⁹ The jurisdictional disputes mentioned in Kutak’s statement allude to discussions among Guild members as to whether sound editors should be represented by 695, the home of sound recordists and mixers, or 776, the home of sound and picture editors. Leading up to the transition, sound editors began to question the very nature of their role in the post-production sound chain. In other words, Guild members had to ask themselves if they were *editors* or *mixers* of sound.

At issue for Los Angeles-based sound editors was the perceived shift in task structure with the coming of digital editing platforms. The Editors Guild had been accustomed to the technological and occupational demands of magnetic film-based editing for nearly half a century, and despite a concerted effort by Guild officials to

spotlight the artistic component of sound effects editing, the job remained a mechanical process of fitting stock effects to picture sync. According to a 1997 survey of sound editors, several respondents suggested that the task structure of sound editing was undergoing a paradigm shift.²⁰ In a certain sense, sound editors had begun to conceive of their work in terms more familiar with re-recording mixers than picture editors. The growth of package productions and independent sound shops helped to collapse the boundaries between divisions in the sound chain, which fostered a greater sense of collaboration among post-production practitioners. What was at stake was a redefinition of the role of sound editor at time when technology was helping to secure editors with an expanded job description.

The distinctions between re-recording mixers in Local 695 and editors in Local 776 can be traced to a dispute over pay equity at the end of the 1970s. Following the commercial success of Dolby's 4-channel stereo-surround process and the popularization of sound effects editing, sound editors had some momentum heading into contract negotiations with the producers' union. Despite the growth of the Editors Guild throughout the post-divestment era, supervising sound editors circulated a petition in 1979 demanding parity with re-recording mixers in Local 695. At the time 695 members still commanded higher contract wages than top-level sound editors.

The Guild ultimately won their bid for parity with re-recording mixers, but the decision ultimately served to reinforce existing jurisdictional boundaries between the two roles. In published attempts to secure equal pay with mixers, Guild members outlined the primary creative and technical duties of the sound editor that served to distinguish their work from that of mixers.²¹ According to Jay Beck, the aggressive attempts to achieve

parity made it nearly impossible for one practitioner to work in both fields.²² Indeed, I.A.T.S.E. regulations stipulated that no member could be active in more than one local, which meant that Guild members could not work as both an editor and re-recording mixer on a film project. As Beck notes, “Because of this simple fact, the entire Los Angeles-based film industry was closed off to the possibility of creating a new role in film sound, where one individual oversaw the entire production of the soundtrack from start to finish.” Even as sound editors made significant gains in the wake of studio disintegration, the segmented nature of sound production continued to be the industry norm throughout the 1980s and into the 1990s.

When the Editors Guild absorbed the post-production branch of Local 695, sound editors and re-recording mixers still retained an informal jurisdictional boundary between each other. Seventy years of segmented sound production and specialized training protocols were not erased when two union locals merged. In fact, the transfer of post-production practitioners to the Editors Guild, including re-recording mixers, was described as a measure designed to maximize bargaining efforts and manage the dissemination of new technologies among picture and sound professionals. There was no effort to bridge the occupational mandates of each job, nor did the Guild set out to revolutionize the way post-production sound was produced. Reconciliation seemed too strong a word for what really happened. Significantly, the transfer move did not eliminate the jurisdictional struggle, leaving many entrepreneurial sound editors confined to the fragmented norms of the system. However, the merger did serve to crystallize an occupational shift among sound editors that gained traction with the proliferation of digital audio workstations.

Blurring the Occupational Gap: Sound Editing Comes of Age

A 1997 survey in *Mix* asked a panel of feature film sound editors if there was an emerging trend of editors becoming more involved in the art and craft of mixing.²³ Local 776 had not yet absorbed the re-recording mixers from Local 695, and I.A.T.S.E. had not yet combined the two coastal branches to form national Local 700. Los Angeles-based sound editors had already begun to question the viability of the jurisdictional boundaries between sound editing and re-recording. Given the strict hierarchical structure of sound post-production, editors were not dramatically redefining the occupational structure of the industry, but they were beginning to challenge the preconceived boundaries that separated the two similar but distinct roles. Faced with the economic realities of modern film production, shorter post-production schedules have had a marked impact on the way sound editors go about conceptualizing their work. Non-linear workstations have softened the scheduling burden by affording editors the ability to record and cut sound more efficiently than on film-based systems. However, the flexibility of digital systems has come at a creative cost.

With accelerated costs in the financing and distribution of motion pictures, sound practitioners and other members of the post-production chain have coordinated their efforts in ways that have reconfigured jurisdictional boundaries among sound editors, picture editors, and re-recording mixers. Sound editor Mark Mangini has suggested that the biggest obstacle to the work of a modern effects editor is the amount of picture changes that are made on most current releases. Throughout the post-production process,

a film may be re-cut several times in order to satisfy the demands of the director or the requests of the studio based on feedback from test audiences. Citing the influence of the Avid Media Composer and digital picture editing tools, Mangini notes, “In picture editing, what seems to be happening is that more and more versions of a cut are being generated, which means that they’re working later and later and making more last-minute changes, and it’s driving everybody crazy.”²⁴ In a similar vein, Gary Rydstrom suggests that the “old-fashioned” way of waiting for the picture before sound editorial can begin work conforming audio to the cut is “inefficient,” and sacrifices valuable time.²⁵ Achieving a more streamlined post process has been a difficult one; most certainly, others have shared Rydstrom’s view, but sound editorial is still very much at the mercy of picture editorial.

The impact of tighter schedules and shrinking post-production budgets has had a more significant effect on the relationship between editor and re-recording mixer. A re-recording stage can cost a production thousands per day in rental fees. The upscale mixing consoles and architecture of a major studio facility coupled with the premium fees of a mixing crew have forced filmmakers to find ways to keep costs down in post-production. As one sound editor told me, “Because mixing is one of the last parts of the process, it’s typically the time when everybody’s short on money.” The solution for many sound supervisors has been to prepare a film’s sound track in advance of the final mixing sessions to ensure that valuable time is not lost on the stage searching for a particular element or making certain editorial choices.

In dealing with budget constraints, Ear Candy sound editor/designer Scott Sanders has developed a working style that reflects what he describes as the new reality of sound post:

My room here is a full 5.1 setup much like the mix stage. To make those decisions on the stage would be costly. The stage is one of the most expensive parts of the process more so in this day and age. There was probably a time in the past when those decisions would be made on the stage when films could be there for a month or two, but nowadays with the way budgets are, we try to minimize the time on the stage. It requires us to do much more upfront work.

Most of the mixers I deal with embrace the work I bring to them. If they can start with a thing already pretty much there, the whole mix goes faster. Almost every time, almost every mix we're involved with – you can't get it done fast enough.

Sanders designed, cut, and premixed the large-scale battle sequence at the end *Rambo* in this manner. Sanders mapped the sequence using the 5.1 setup as his reference point, and was able to make decisions about the spatial characteristics of the soundscape before stepping foot on the dub stage. In addition cutting sound effects and background elements, Sanders conceptualized the sound space of the sequence by balancing aural perspectives of gunfire and crowd din. Aside from basic volume changes, the final version of the sequence was a near carbon copy of Sanders' earlier mock-up. Sanders also held consultations with the film's other supervising sound editor, Perry Robertson, and the film's director, Sylvester Stallone, in his Ear Candy studio in order to settle on particular editorial and mixing choices earlier in the process. Working from Stallone's specific direction to make the sequence "stressful" for the audience, Sanders made

particular spatial and volume decisions during his pre-mix in order to fulfill the director's request. Traditionally, these tweaks and other mixing choices would be made by the-recording crew.

In this way, digital workstations for picture and sound have streamlined the editorial process without destabilizing the hierarchies of the post-production chain. Even though post schedules faced stricter timelines throughout the 1990s and into the 2000s, the task structure of sound editors was growing, not shrinking. Accustomed to the densely layered and rich sound tracks of early Dolby films, producers and directors in the modern era expect sound editors and mixers to showcase the sonic potential of digital systems, and create a full-bodied soundscape. In dealing with the task of working with a combination of original field recordings, library tracks, and the design of new sounds using existing material, sound editors have found a way to overcome the editing/mixing dichotomy, and the workstation has been their tool of choice.

It would be an overstatement to suggest that digital audio workstations have changed the complexion of labor relations between the two sound locals. According to sound editor Stephen Hunter Flick, the purpose of film sound editing is to "prepare for the mix, and the purpose of the mix is to bind it all into a seamless and dramatic experience."²⁶ These occupational designations appear to contradict the movement toward integrated editing and mixing, but in the same survey Peter Bergren, a film and television sound editor and mixer, had this to say:

Digital workstations allow as many as 24 channels to be heard simultaneously, and since they also allow fades, crossfades, setting playback levels of individual files, digital EQ, time and pitch compression, and microsurgical level management, these tools are used to move the material close to our conceptions—and make it easier

to mix. Are we not, in a sense, *premixing*?²⁷

The interlocking of editing and mixing protocols has been guided by the sound editor's expanded role in the creation of particular effects. With Pro Tools and other automated systems, editors still edit – that is, make creative choices about what sound works best with picture – but the workstation has encouraged the practice of premixing raw sound elements into polished sounds. Editors have called this process “in-between” mixing, where choices are made before the mix, which are fine-tuned on the mixing stage.

Workstations have also expanded the role of the Foley editor, whose primary task is to cut and sync Foley elements. Now, editors are often asked to cut a sequence and premix the elements to save time later in the re-recording process. Vanessa Theme Ament suggests, “While this is a time-saving practice for the dub, it imposes the perspective of the editor onto the mixer.”²⁸ In the days of magnetic film, Foley editors could not audition every unit of Foley as a composite track on the Moviola; the editor would have to wait for the final mix to hear the tracks together. The convenience of workstation software has made it possible for editors to not only work faster and experiment with different creative options, but also to enlarge their job responsibilities.

To a certain extent, editors are making certain decisions at the editorial stage that would otherwise be made by a separate crew of re-recording mixers. Tracks are equalized and balanced in a manner that resembles the work of mixing, where raw tracks are smoothed and married to disparate elements. This process has become essential for sound editors tasked with designing new sounds from existing stock or original field tracks. Editors now have the option of sending a premixed track to the mixing stage without the raw elements, so the mixer does not have the option of changing the track to suit his or

her own tastes. Mangini has stated that editors should exercise their creative potential and make firm decisions about how something should work in a mix. However, he added, “A good editor will know when to mix elements and when to give me the option of unwinding something.”²⁹ To this end, Mangini and his editorial staff prepare sequences in advance of the final mix as a way of controlling how the elements are manipulated on the stage. Mangini notes, “Now, because I’m working on digital workstations, the work that I bring to the dubbing stage has a higher degree of preparedness; I am effecting the levels of the material within the workstation, so that there is less work to do by the re-recording mixer, or that work has been pre-thought and makes their work easier.”³⁰

In the same survey that gauged the extent to which sound editors were participating in some form of premixing, Gary Rydstrom took a bolder stance on the future of the sound editorial and design:

I think the trend is that if editors don’t think that they’re mixers now, they’ll *become* mixers, because they’ll be mixing for the sake of their editing. You can make more choices than you were able to before, when hundreds of tracks would go to the mix stage and the editor and the mixer would be left to sort out a lot of material. Editors should use the digital workstation to make as many choices as they can, as early as they can, and then listen to those elements at the level that they think they’re going to play. That’s a major advantage of digital editing: You can hear so many things at once, and you can hear them in proper perspective.³¹

Rydstrom’s comments reflect the philosophical mandate of what has become known as the San Francisco School of Sound with its emphasis on design and collaboration among the various roles in post-production sound. The approach was borne out of Walter Murch’s early non-union work with Francis Ford Coppola and George Lucas in Northern

California in the late 1960s. On films such as *The Rain People* (1969) and *THX 1138* (1971), Murch would take on the duties of the picture editor, sound editor, effects recordist, and re-recording mixer. This approach later inspired the workflow structure at Skywalker Sound, where Rydstrom held the post of Sound Design Director through much of the 1990s and early 2000s. Rydstrom's editor-as-mixer philosophy has filtered through the industry from Skywalker Sound in Northern California to the reintegrated studio system in Los Angeles.

Significantly, Rydstrom's statement neatly summarizes the two distinct but interlocked factors that have brought modern sound editors to expand their task structure and begin integrating simple mixing strategies into their work. On one side, post-production budget shortfalls have hybridized the editorial and mixing process as sound editors attempt to expedite their workflow and save time on the re-recording stage. Such financial constraints have encouraged editors to take on more creative and technical responsibilities, which have blurred the lines between the edit and the mix. Indeed, the imbricated nature of this arrangement has been termed a matter of survival for Hollywood freelancers: "There has been a melding of sound editor/mixer. Almost all good sound editors now have to have some mixing skills to survive," Scott Sanders concedes.

On the other side, some editors have embraced the creative flexibility that has grown out of the accelerated costs of production. Scott Sanders, who will normally work on a film for months on end, will trust the mixer to assist in the decision-making process, but he reserves the creative right to take away some of those decisions from the mixer because of his familiarity with the material. He says, "I have had more time to play with

[the track] than he does. And so some of those decisions I make here.” Similarly, Flick, Mangini, and Rydstrom all acknowledge the artistic value of controlling one’s sound work, even if it means encroaching on the traditional role of the re-recording mixer. As Stephen Flick notes, “By being able to work with such predesigned sequences, the mixer can spend more time on truly difficult problem-solving, which is to do the final mix, where level relationships are set between music, sound effects and dialog.”³² In their view, editors are not redefining the edit/mix relationship, but are instead augmenting the particulars of the sound design process.

Digital audio workstations have, in large measure, provided editors with the technical capabilities needed to merge the two fields. In a highly ironic way, however, the proliferation of portable computer systems and cubicle studios have led some to question whether the rise of workstations have played a key role in fleecing most sound budgets. Of course, editorial choices can be made faster and with greater precision: creative options can be auditioned almost instantaneously from a sound library on hard-disk, and edits can be endlessly reconfigured without the wasteful cost of processing magnetic film. The double-edged nature of the workstation has meant that editors can work faster with more polished results, but it has blurred the occupational distinctions between editor and mixer to a point where editors have broadened their tasks, and mixers have become problem solvers for the integration of dialog and music into the designed elements.

Premixed sound elements are a benchmark of the modern era because of the complexity of contemporary mixes. Classical films were traditionally mixed down from 16 tracks to a single mono channel, whereas today editors prepare hundreds of individual sound elements that must first be premixed into designated groups (creature sounds;

backgrounds; Foley) before they can be combined into the final track layout. Larry Blake writes, “What you cut went direct to the final composite mix; a separate pass was needed to make the music and effects master for foreign dubbing. Thus ‘track layout’ was simply a matter of keeping everything under 20 or so tracks.”³³ By having editors and mixers premix the sound groups into manageable units, the re-recording process is inevitably shortened, and costs can be reduced.

To be sure, the transfer of re-recording mixers to the Editors Guild helped to facilitate the occupational crossover described thus far, but the sound locals have yet to address the impact of these changes on the job descriptions and duties of editors and mixers. Even as some editors have embraced the aesthetic control that comes with mixing duties, others are beginning to question the legitimacy of the move. On a strictly contractual level, editors are not compensated for mixing their own material, nor are mixers compensated for any lost revenue on projects that come to the stage already premixed. What has occurred since the 1997 merger is a blurring of boundaries and task structures that have largely been precipitated by the economic realities of the post-production environment in Los Angeles. Scott Sanders notes, “There was a strong separation in the past but because we all need to work and budgets are shrinking, it’s really no longer the case.”

The occupational blur between the edit and the mix crystallized in 2009 when, for the first time in Academy history, the awards for Outstanding Achievement in Sound Editing and Sound Mixing went to the same individual. Supervising sound editor and mixer Paul N.J. Ottosson walked away with the two major sound awards for his work on Kathryn Bigelow’s *The Hurt Locker* (2009), which also won for Best Picture of the Year.

With Ottosson's win, eighty years of jurisdictional boundaries and labor segmentation momentary collapsed. In interviews, Ottosson, who received training as a mixer in the music industry, has acknowledged the unique position of being the supervising editor and mixer on a major Hollywood film, suggesting that Bigelow asked him to supervise both ends of the sound track because of his familiarity with the material. Ottosson has said, "I do come from a background of recording and mixing music, and Kathryn was very happy with the sound design that we had, so she asked me if I would mix the movie." However, the experience highlighted to him the advantage of workflow segmentation: "There is something to be said though for having a fresh set of ears to mix the movie with perhaps some new ideas."³⁴

It is for this reason that re-recording mixers have not taken action against sound editors encroaching on their occupational territory. The participants of the 1997 *Mix* survey acknowledged that while the labor lines were blurring, the boundaries themselves have remained fairly distinct. In most cases, editors are not making the same kinds of choices that define the role of the mixer, namely the marriage of dialog, effects, and music. Sound editor Ron Bochar highlights the difference in approach:

And the mixers that I've worked with who have let me be part of the process at the board at the predub, and even at the final, have benefited, too. They're not worried about whether they can hear the footsteps I've cut running across the screen; they're worried about the dialog. But I've made sure we can still hear those footsteps as we work on the dialog in a certain area.³⁵

Put simply, editors prepare for the mix, and mixers bind the material together. This philosophical and occupational split has governed over eighty years of labor relations between sound locals, and the value of this tradition has not been lost on sound editors

who have ventured into the world of mixing. Mark Mangini has said, “Mixers are not a dying breed. When you have the time and money, I enjoy the luxury of the interaction with a new human being. I like the new input, and the new ideas.”³⁶

While traditional boundaries have arguably been maintained in the age of the digital audio workstation, there is no doubt that what was once considered heresy has become an industry norm. Although there is a tendency among filmmakers to continue the traditional labor structure of hiring specialists for each job, the economic realities of audio post-production have reshaped the dynamics between the edit and mix, producing a kind of occupational decentralization. In addition, the occupational mandates and task structures of each role have undergone changes that have been characterized by the available technology, the aesthetic of “premixing,” the job responsibilities of the sound editor, and the financial constraints placed on post-production schedules and budgets. These interlocking factors were precipitated by the creation of I.A.T.S.E. Sound Local 700 as a home for all post-production professionals, which eased the division between the two roles without entirely sacrificing the autonomy of one or the other.

Conclusion: A New Understanding of Sound Editorial

Throughout this chapter, I have argued that the processes of editing and mixing sound have undergone significant changes and developments since the 1980 agreement that gave parity to sound editors and served to further demarcate the occupational duties and ideologies of editors and mixers. The incorporation of digital editing and mixing tools, in conjunction with post-production economics, characterizes the shift in

collaborative modes that took place in the post-divestment era. The development of a small network of independent sound facilities and the “back to the lot” program of studio reintegration has often been ignored as an important factor in the social and aesthetic task structures of Hollywood sound professionals. Undoubtedly, the most significant factor contributing to the modern labor situation between the two sound locals was the decision to transfer all post-production mixers from Local 695 to the Editors Guild. Among the more immediate effects of this decision were the blurring of the occupational mandates and a renewed sense of jurisdictional conflict between the two roles. Sound editors responded to the transition by expanding their duties to include premixing citing the technological convenience of workstations and the restrictive and costly nature of post-production economics.

As intriguing as labor relations among Hollywood craft unions may be, the main focus of my inquiry here is how a triumvirate of factors has ultimately shaped the modern institutional environment of sound production. The financial constraints leveled on filmmakers by major studios and independent production companies were eased somewhat by the introduction of digital audio workstations and the growth in stature and jurisdictional authority of the Editors Guild. As Gary Rydstrom says, “The fight for money and time gets harder every year. Schedules and budgets are under downward pressure, while expectations are as high or higher. We have to keep proving through the quality of our work that it's worth spending the money.”³⁷ Emboldened by the creative control offered by this situation, sound editors have experienced an evolution in the social and artistic organization of their work that mirrors the transitional effects of collaborative modes in the recording industry.

Most broadly, the film sound community has experienced a reorganization of sorts that began with the near-collapse of the old studio system. When the majors sold off their back lots and dissolved their post-production facilities, labor relations among the two dominant sound locals and A.M.P.T.P. were strained as they fought against changes in workflow, compensation, and the general reorganization of the industry's mode of production. After two decades of labor strife and jurisdictional conflict between Locals 695 and 776, and at a point when digital audio workstations were remapping the aesthetic functions of film sound, sound editors achieved a level of artistic flexibility when I.A.T.S.E. transferred re-recording mixers to the Editors Guild and engineered a nationalized sound local that sought to streamline the jurisdictional authority of the Guild on issues dealing with technology, wages, and job descriptions.

The illumination of modern labor practices in the sound industry illustrates the ways in which sound editors have largely moved from the realm of technician to artist. Throughout the 1990s and early 2000s, sound supervisors began to emphasize the aesthetic nature of their task structure. As I have shown, the partial annexation of sound mixing has had a profound effect on the professional relationship between editor and mixer, and the growth of sound editing as a recognizable artistic contribution to the filmmaking process. Because of economic pressures on the mode of production, sound editors have benefited professionally and creatively from the expanded role, but re-recording mixers have not disappeared; certainly, the sound chain still clings to the traditional hierarchies established more than half a century ago. More than anything else, however, the labor situation among sound professionals points up the elevation of sound editors to the level of aesthetic contributor, which, in the sound chain, was previously the

domain of re-recording mixers. Indeed, Howard Becker has argued that the transitional sequence from craftsperson to artist is typical in other collaborative art forms, including clothing design and furniture making, when practitioners become interested in shaping their craft beyond a purely functional purpose.³⁸ The results of which have afforded sound editors a degree of stylistic control over their work.

In the flexibly specialized world of modern film production, sound professionals participate in an occupational structure that emphasizes the uniqueness and originality of the individual film project. Although several components of an editor or mixer's job are rooted in the conventions and routines of the past, practitioners are called on to express a stylistic signature and artistic sensibility that will add to a film's overall aesthetic value. The technologies available to editors have facilitated this transformation, but it has come as a result of more significant changes to the labor structure in the sound community, and the general economic outlook of the major studios and independent production companies who finance and ultimately control the means of production.

The transformation of sound editor from craftsperson to artist has been accompanied by the loosening of labor union regulations and the blurring of occupational duties between editor and mixer. The lines have not been erased, but the routinization and segmentation has given way to a collaborative network of sound practitioners who perform specialized tasks in a manner that suits the one-off nature of modern Hollywood practice.

Notes

¹ Peter Bergren, "Blurring the Lines Between the Edit and the Mix: New Trends in Audio Post-Production," *Mix* (March 1997): 88.

² See John Michael Weaver, "Post-Production Pioneer James G. Stewart": 77.

³ John Michael Weaver, "Master Re-Recording Mixer: Richard Portman": 27.

⁴ Quoted in Weaver, "Post-Production Pioneer James G. Stewart": 77.

⁵ A comprehensive discussion of the post-divestment era's continuation of the production hierarchies of the studio system is found in Jay Beck, *A Quiet Revolution*: 230.

⁶ See Keith Lissak, "An Interview with Joe Aredas: The New Head of the West Coast IA Office Looks Forward to a Time of Growth," *The Motion Picture Editors Guild Newsletter* 20.1 (January-February 1999):
[http://www.editorsguild.com/v2/magazine/Newsletter/JanFeb99/int_iahead_aredas.html. Accessed 1 Mar. 2011.

⁷ See Beck: 266-285.

⁸ "Runaway productions" are films or television shows that are intended for release and exhibition in the United States but are produced and filmed in another country.

⁹ See Weaver, "Post-Production Pioneer James G. Stewart": 77.

¹⁰ Jack Coffey, "Coffey's Brew: A Letter from the President," *The Coffey Files* 21.4 (2009): 3.

¹¹ Beck: 234.

¹² See Beck, generally, and also Gianluca Sergi, *The Dolby Era*, generally.

¹³ Similarly, the Cinema Audio Society, which was founded in 1964, sought to facilitate communication among film and television mixers (production and re-recording), and promote the art and craft of production and post-production mixing to the Hollywood community. In 1994, the Society held its first Awards ceremony honoring Outstanding Achievements in Sound Mixing in film and television. As with the M.P.S.E., the C.A.S. has no bargaining power with the A.M.P.T.P. but has become the visible representative body for sound mixers in Hollywood.

¹⁴ Raymond V. Bomba, "What Does the Sound Editor Do?," *Our First Year* (Los Angeles: Motion Picture Sound Editors, 1954): n.p.

¹⁵ See, for instance, Blair Jackson, "Digital Post: Southern California Sound Designers and Editors Talk About the First Generation of DAWs," *Mix* (September 1991): 44-46, 49-55; Tom Kenny, "Audio Technologies for Film, Part One: Production Sound," *Mix* (January 1993): 141, 146, 148; Mel Lambert, "Digital Audio Meets Digital Video," *Mix* (April 1993): 68-74; Mel Lambert, "Digital Dubbers: Random-Access Replay Technology for Film and Video Post-Production," *Mix* (September 1995): 32-40.

¹⁶ See official website of the Editors Guild for a timeline history: [<https://www.editorsguild.com/Guildshistory.cfm>]. Accessed 1 Mar. 2011.

¹⁷ Quoted in Lissak, "An Interview with Joe Aredas: The New Head of the West Coast IA Office Looks Forward to a Time of Growth": [http://www.editorsguild.com/v2/magazine/Newsletter/JanFeb99/int_iahead_aredas.html]. Accessed 1 Mar. 2011.

¹⁸ See official website of the Editors Guild: [<https://www.editorsguild.com/Guildshistory.cfm>]. Accessed 1 Mar. 2011.

¹⁹ "IATSE shores locals in shift," *Variety* (October 8, 1997): [<http://www.variety.com/article/VR1116674653?refCatId=1066>]. Accessed 1 Mar. 2011.

²⁰ Bergren, "Blurring the Lines Between the Edit and the Mix."

²¹ "Sound Editors Ask Parity with Mixers," *Daily Variety* (April 18, 1979): 1.

²² Beck: 285.

²³ See Bergren: 84-90.

²⁴ *Ibid.*: 90.

²⁵ *Ibid.*: 90.

²⁶ *Ibid.*: 89.

²⁷ *Ibid.*: 87.

²⁸ Vanessa Theme Ament, *The Foley Grail: The Art of Performing Sound for Film, Games, and Animation* (Burlington, MA: Focal Press, 2009): 137.

²⁹ Quoted in Bergren: 89.

³⁰ *Ibid.*: 89.

³¹ *Ibid.*: 88.

³² Ibid.: 89.

³³ Larry Blake, "Track Layouts, Part 2: Delivery to the Stage," *Mix* (April 1997): 13.

³⁴ Video interview with Paul Ottosson by David Poland. Available at [<http://moviecitynews.com/2010/02/the-hurt-locker-sound-paul-ottosson-and-ray-beckett/>]. Accessed March 1, 2011).

³⁵ Quoted in Bergren: 89.

³⁶ Ibid.: 90. See also the chapter in this dissertation about how re-recording mixers have responded to technological, economic, and aesthetic changes in sound production.

³⁷ Tom Kenny, "Gary Rydstrom," *Mix* (February 2004): [http://mixonline.com/recording/interviews/audio_gary_rydstrom/]. Accessed 1 Mar. 2011.

³⁸ See Becker, "Art as Collective Action": 866.

CHAPTER TEN

Knowing the Room: Re-Recording Mixers, Intensified Continuity, and Building the Final Track

Hundreds of mixing decisions are made relative to what has and is going to occur. We constantly make subtle and almost subliminal moves, affecting the transition of one sound to the next. The essence of mixing still lies in a mixer's intimate connection to the material, to the character of the film.

– Gregg Rudloff¹

One of the most common assumptions about Hollywood sound production is that the final mix is where the sound track takes shape.² In a certain sense, re-recording is where all the sound materials collected and recorded for a film are “married” to the picture and, for better or worse, each other. Since the early 1930s, re-recording mixers have been tasked with creating a cohesive sound track out of the disparate elements prepared by production mixers, ADR and dialog editors, Foley artists, composers, and sound effects editors. As Gregg Rudloff explains in the above quotation, mixing is about making choices about how particular sounds function within a film, and organizing hundreds of separate sound elements with the aim of clarifying the larger dramatic and narrative goals of a film.

When asked to define her role in the sound chain, re-recording mixer Lora Hirschberg explains that mixers, like chefs, are given an assortment of ingredients with which to make a particular dish. A chain of editors, performers, and designers has prepared the ingredients, but the mixer must be able to combine them in a way that

successfully interprets the goals of the director and the supervising sound editor. As an intermediary between filmmaker and audience, Hirschberg suggests that, above all, mixers are organizers and interpreters of pre-existing sound elements.

It is not uncommon for mixers to describe their work in gastronomic terms. During a visit to Stage 2 at Todd-AO Hollywood, Beau Borders, an independent re-recording mixer and occasional race-car driver, took a break from his mixing duties and pointed to an LED display of different sounds on his Euphonix console and called them his sonic “food groups.” The categories of different pre-mixed effects elements included “Weapons,” “Animals,” “Foley,” and “Backgrounds.” Each one contained dozens of choices that were previously mixed and readied by Borders and the film’s supervising sound editor for that day’s mixing session.

Borders continued with the food analogy, “You really don’t want to empty the fridge out when you’re building the track.” In other words, crowding the recipe with too many flavors or dominating it with only one or two can tip the balance in the wrong direction. Referring to an action sequence he was preparing to mix, Borders noted that too many arrowhead *swooshes* can sound thick and undefined; too much background ambience can drown out dialog; too many Foley footfalls can offset the animal groans that punctuate the scene.

The recipe metaphor suggests a kinship between human senses. Our sense of sound, like that of taste, is extraordinarily sensitive to the dynamics of different elements. For a mixer like Borders, balancing the sonic “food groups” requires attention to the visual components of the scene, the overall narrative goals, and – perhaps most fundamentally – the relationships among the other aural components. When perceived in

this way, the sound track is a complex system comprised of cues that influence the image, shape the narrative, and set other sounds in relief from each other. Randy Thom suggests that mixers work to “focus” the narrative the way a cinematographer racks focus or uses a light source to highlight a particular object.³

On an institutional level, the final mix can also be a site of potential jurisdictional conflict where dialog, music, effects, and Foley intersect. With so many elements involved, the re-recording mixer faces the challenge of sorting out the pre-mixed components and blending them to create a single, comprehensible track. Mixers must also negotiate the demands of filmmakers, studio executives, and sound supervisors with their own professional practices and tastes. Given the cellular nature of the sound chain, with each group of practitioners working independently of each other, the mix often represents the first time when directors, producers, and sound supervisors can audition the amalgamated track. The hope for all involved is that the final track is greater than the sum of its parts – an intelligible, dynamic, and multiplanar mix that not only supports the narrative but also enlarges and intensifies the drama (or comedy, as it were).

As with the other major components of sound production, modern re-recording practices are organized by a fairly rigid task structure and occupational ideology that has gone largely unchanged since the classical era. In large measure, mixers work to emphasize narrative intelligibility, but the route of going about achieving these goals is amazingly flexible. In working with the multiple planes, or layers, of a sound track, Randy Thom insists, “Every film has to be approached as a unique experience. Of course, there are commonalities between films, but it’s very foolish to assume that a given creative or logistical sequence will work well on film Y because it worked on film X.”⁴

In addition to working within the “bounded alternatives” of classical filmmaking, most mixers – like anyone else in the flexibly specialized world of sound production – work to distinguish themselves with unique professional strengths and artistic skills. Independent mixer J. Stanley Johnston suggests that re-recordists are encouraged to develop individual approaches to sound mixing but not at the expense of the filmmakers’ vision. “Often, we’re asked to match our own style to the picture we’re working on,” Johnston notes.

At the same time, the conventionalization of re-recording practices does not rule out the mixer as a creative decision-maker. Howard S. Becker suggests that artists choose conventions in the context of their participation in the art world in which the works are made. As an interpretive craft, sound mixing can thus profitably be seen as a series of aesthetic choices that are shaped by stylistic norms and the social organization of the Hollywood sound chain. Becker notes, “The choice could always have been made differently and everyone who works in these trades knows what the range of possibilities was and what might have motivated the particular choice that was finally made. Even if many or most of the choices are made in a conventional or routine way, they are still choices.”⁵ Most artworks, including films, are some combination of conventional choices and unusual choices made in what Becker calls the complex social context of “artistic activity which constrains the range of choices and provides motives for making one or another of them.”

Such an analysis of mixing choices can explain what Becker calls the “constitution” of the range of aesthetic possibilities and social conditions that inform the decisions that are ultimately made.⁶ A full understanding of a finished mix means

understanding what choices were made, and under what conditions. It is precisely this notion of “choice” that governs the work of re-recording mixers. Although everyone who participates in the sound chain has some influence on the finished work, mixers are unique among other sound professionals in that they spend their day making decisions about how to organize the pre-arranged collection of sounds. Many of these choices address the large-scale, or “macro,” features of the sound track: how one scene flows into another; how story information is conveyed through dialog, music, and effects; how background ambiances work to provide characterization to locations; and how source music and score are woven through the narrative. Other choices are more fine-grained, or “micro,” and address decisions about building reverberation into dialog and effects, panning sounds across the multichannel sound field, and isolating particular moments using spotlighted effects or music cues.

Still other choices are motivated by the social context of the mixing session. Control of the choice of what constitutes the final sound mix is seldom left to the mixer alone. More typically, several people including the sound supervisor and director make decisions about the overall shape of the mix. Re-recording mixer Anna Behlmer describes her role in social terms when she says,

There are daily battles with sound supervisors and directors. We all have a certain style. You try to interject that as much as you can. The [sound supervisor] and you collaborate and make decisions together. You try to give it your own best shot. And then you help the director realize their vision and try to give suggestions, and if you don't agree with something, make a case about it or don't.

Given that, in many cases, sound editors spend months cutting and pre-mixing effects, dialog, and Foley, re-recording mixers, who routinely have less than ten weeks to

complete a mix, routinely negotiate their own stylistic impulses and range of aesthetic possibilities with the unique demands of the other filmmakers. Sometimes these demands, including the time and budget constraints that accompany much of the post-production process, impose limitations on the mixer's range of creative possibilities and, at other times, encourage the mixer to test the limits of conventionalization in search of "new" ways to weave sound with picture.

In this chapter, I explore some of these choices as a means of understanding the social organization and stylistic practices of current re-recording mixers in the Hollywood sound chain. The typical sequences of action and change that govern most mixing decisions illustrate the contingent, as opposed to inevitable, nature of sound production, and tell us something about how the interactions of mixers and editors lead to the innovative and conventional treatment of sound for picture. A place of collaboration and conceptualization, the dubbing stage is also a site of experimentation, improvisation, and – more often than not – routinized programming.

In addition to linking the mixer's artistic role to the social functions of sound re-recording, I examine the artistic processes and stylistic character of modern mixing technique. Specifically, I explore the idea of a sound track that is "built" from an assortment of individual recordings. At issue here is not simply the technical means by which mixers assemble the final track, but the underlining methodology that influences the sound choices that are ultimately made. In sound mixers' language, specifically, is a variety of metaphor and slang that describes the assembly of a track and its organizational logic. Returning to the "food group" analogy, I demonstrate how the concept of a "sound

build” is closely tied to other characteristic phrases and intuitive practices that seek to support and deepen the picture.

Characteristic of modern Hollywood visual style is the use of what David Bordwell calls “intensified continuity,” or the amplification of classical staging, framing, and editing techniques.⁷ A hallmark of the action and adventure genres, the intensification of classical principles, including the use of tighter framings, handheld camerawork, and rapid-fire editing, has saturated much of mainstream filmmaking practice, not just in Hollywood. One film to spotlight this technique and receive extended commentary over its use of severe close-ups, a constantly roving camera, and hurried cuts is Paul Greengrass’ third installment of the Jason Bourne series, *The Bourne Ultimatum*.

In the final section of this chapter, I delve into the sound world of the *Ultimatum* and the work of its supervising sound editors, Per Hallberg and Karen Baker Landers, and re-recording mixers, Scott Millan and David Parker. In particular, I examine its highly innovative, yet surprisingly “classical,” sound mix, which has largely been overlooked in discussions of the film’s stylistic verve. Most intriguing is the mixers’ decision to offset the visual kineticism with a sound track that is bold and evocative but also focused and economical. Most critically, I hope to articulate the sound of intensified continuity through a study of the *Ultimatum* by exploring how the sound mix guides our experience of the film from moment to moment.

Track Layouts, Pre-Mixing, and Random Access Excess

The re-recording process has been a constant in Hollywood film production since the transition to synchronized sound in the late 1920s. In the first years of sync sound, however, re-recording practices were limited to the mixing of music and intermittent sound effects with an unaltered dialog track. According to James G. Stewart, who began his mixing career at RKO in 1930, the rationale for not having more elaborate re-recording practices was based on the fact that many film sound engineers were transplants from the radio industry, where transmissions were broadcast “directly over the airwaves” without much alteration.⁸ However, the focus on direct sound recording lasted only a few short years and by 1935 the dubbing mixer had attained a level of professional status and rank equal to that of the picture editor. By the late 1930s, directors and producers considered re-recording an indispensable part of the production process.

Unlike sound editorial, which clamored for screen credit and artistic recognition throughout the studio era, re-recording mixers, along with the production sound unit, were widely considered to be the creative and technical force in Hollywood sound production. This change in rank and status was largely precipitated by the growing complexity of sound tracks. Indeed, the “cubist” or “heterogeneous” approach to Hollywood sound production required a mixing professional to synthesize the various pieces of dialog, music, Foley, and effects and shape them into a coherent and continuous track.⁹ In addition, the establishment of sound Local 695 in 1928 served to reinforce to filmmakers the highly artistic and technical attributes of a dubbing mixer.

In the article, “Inventing the Cinema Sound Track: Hollywood’s Multiplane Sound System,” Rick Altman, McGraw Jones, and Sonia Tatroe examine the interrelationships among sound components in early sound filmmaking when mixing was not yet a codified practice. The authors suggest that as sound engineers came to grips with the needs of satisfying realism and narrative intelligibility, dialog, music, and effects were ordered and mixed in a way that complemented these needs without sacrificing comprehensibility. Many of the same principles that were adopted in the late 1920s continue to govern the mixing protocols of contemporary sound tracks. Consider, for example, the group’s conclusions regarding early sound mixing strategies:

Guaranteeing reality and fidelity through a nearly continuous but backgrounded effects track, the new mise-en-bande assured intelligibility through a foregrounded but intermittent dialogue track (which no longer had to assure scale-matching fidelity because the effects had taken up the cause of realism).¹⁰

In the group’s analysis of *Lights of New York* (1928), they found that scenes featuring prominent diegetic music, such as an on-screen orchestra, were mixed at a lower volume to accommodate character dialog.

Volume analysis of this kind can underscore the ebb and flow of the early multiplane sound track, but it also emphasizes the narrow spectrum of choice available to mixers in the early sound period. Acknowledging that the sound track was essentially born out of a “clash among separate sound elements, and the resulting negotiations among rival claimants,” Altman concedes that early mixes were largely governed by a foregrounded dialog and music track, leaving effects and other ambiences to occupy a far more narrow and intermittent space on the optical track.¹¹

Between 1928-1950, film sound mixes were almost exclusively monophonic and recorded to optical tracks. Most studio consoles did not exceed 16 inputs, which meant that all dialog, music, and effects elements for each 10-minute reel were fed through 16 separate tracks in order to be mixed down to the single-channel 35mm optical composite track. As Altman's analysis confirms, mixing decisions were often limited to keeping character dialog floating above the continuous background track and the din of source music or score.¹²

The introduction of stereophonic sound in the early 1950s, along with the transition to magnetic film stock, increased the number of total outputs and the general audio quality of sound tracks. The Westrex consoles in use by MGM, Todd-AO, and Twentieth Century Fox advertised theirs as the "World's Largest Console," boasting 16 6-channel groups for a total of 96 input channels.¹³ The input expansion principally benefited original music scores, which were recorded using multi-track methods and then reproduced using the 4- or 6-channel stereo processes. In effect, mixers could divide different sections of the orchestra – brass, strings, and percussion – on to dedicated input channels to better control the loudness of the entire cue. In Larry Blake's analysis of studio mixing consoles, he found that the Westrex consoles "had approximately 20 faders that could control up to a 6-track piece of mag, and, as a result, 120 tracks at the final mix."¹⁴ Indeed, console size reached a veritable peak during the industry's brief dance with stereo, returning to 32 or fewer single-inputs per reel throughout the 1960s and 1970s.

By the time Dolby Laboratories introduced its patented noise reduction technology and 4-track Dolby Stereo format, Hollywood sound editorial was in the

process of expanding its professional and artistic role. Although most high-level mixes in the 1970s and early 1980s continued to be performed on smaller consoles, there was a sense among mixers that sound editors were preparing more material than the consoles could handle. Ironically, three of the most lauded sound mixes of the “sound designer” era – *Star Wars*, *Apocalypse Now*, and *Raiders of the Lost Ark* – were mixed on consoles with 32 or fewer total inputs.¹⁵ By the early 1980s, however, mixes were “severely constrained by console limits,” leading to a variety of solutions to accommodate the “overflow” of sound elements. According to Gregg Rudloff,

Soon additional consoles started showing up on the dubbing stage. These outboard consoles (also referred to as “sidecars”) were used to handle the overflow of mix material. Most needed to be fairly small (typically around 24 inputs) so that they could fit somewhere close to the mixers. On a busy show, it was common to have three or four of these extra consoles surrounding the mixers. While satisfying the need for extra faders, these consoles made for awkward mixing. Most were placed to the side or even behind the mixer. Trying to keep a proper stereo image while way off to the side or facing away from the screen is not easy. The constant twisting and turning also led to sore back and necks.¹⁶

In many ways, the professional development of sound editorial throughout the 1980s and the standardization of multichannel release formats such as Dolby Stereo led to a reorganization of mixing strategies.

One of the most significant changes to mixing workflow has been the way in which mixers organize sound material. Although innovations such as “back up and punch-record” technology, noise reduction, and console fader automation meant that more sound material could be accommodated, mixers also found new ways to make sense of their growing tasks.¹⁷ As Larry Blake notes, “The goal is always to make final mixes

go as smoothly as possible, which in the real world means keeping material separate enough to allow the director to change her mind.”¹⁸ The “pre-mix” was the answer to their collective problem.

Pre-mixing represents an opportunity for mixers to organize the bevy of sound materials, including effects, music, and dialog tracks, into accessible and orderly groups before the final mix. In many ways, the pre-mix affords the crew control over the sound elements in a way that makes sense to the overall goals of the film. According to sound editor and mixer Erik Aadahl,

When laying out units for [pre-mixing], always ask “what do I want individual control of all the way to the final mix?” Keep those elements separate. I generally think of predubs as “food groups.” Keep your potatoes separate from your sauce and separate from your meatballs and separate from your garnish.¹⁹

Again, the “food group” analogy is particularly useful when considering the ways in which mixers divide their tasks and organize the disparate sounds. Pre-mixing can offset an expansive sound effects track by ensuring that a selection of choices from each “food group” are cut, mixed, and prepared for use in the final track. In effect, each of the sound groups contains the very best selections of sounds since they are auditioned and prepared in advance of the final sessions. Lora Hirschberg notes that pre-mixing strategies “are that way for a very good reason,” suggesting that it would be “completely foolish and impossible to include hundreds of tracks and play them live.”

Although pre-mixing, or “pre-dubbing,” had been a part of the re-recording process for decades, the complexity of track layouts in the 1980s and 1990s forced mixers to escalate its use on most films. In the studio era, pre-mixing was limited to

particularly “busy” sequences that required multiple passes to ensure that all the necessary elements were in place, meaning that “track layout” was effectively about keeping things under 20 tracks. Under normal circumstances, a sound editor would cut and prepare sounds for the final composite mix with the total number of tracks and inputs in mind. Throughout the 1980s, however, the growth of sound editorial as a site of creative expression and artistic experimentation meant that specialist sound editors were preparing more sounds for each reel. Reacting to this practice in *Mix*, Larry Blake states,

[The old system] seems inconceivable now, with today’s style of mixing deriving from directors and producers demanding more and more choices, along with the ability to change their minds later. Crews were able to get away with so few inputs in the past by careful planning that involved knowing exactly which units would be tied together during premixing and even which premixes would be combined prior to the final mix.²⁰

The situation was exacerbated in the 1990s when track limits were all but eliminated and “overbuilding” became a chief worry among mixers.

With the once compartmentalized space of re-recording now more fully connected with sound editorial, thanks in part to the expanded use of digital audio workstations by sound editors and the transition of re-recording mixers to the Editors Guild, the introduction of non-linear mixing consoles in the late 1990s actually did very little to improve the situation. At various points in the history of Hollywood mixing, re-recording mixers have been faced with certain technological and budgetary barriers that prevented their sound work from being overbuilt. On the mixing stage, these barriers usually related to console size, inputs, and time and budget constraints. Gregg Rudloff explains, “Each stage had a set number of machines to work with, so no matter how many source tracks

you started with or how many pre-dubs you ended up with, there were always a finite number of tracks a mixer could receive at the console.”²¹ Working within these parameters, mixers arranged pre-mixes with the express purpose of finding the appropriate elements and clustering them in like-groups.

Rudloff argues that this “happy balance” was destroyed by the introduction of digital recorders and non-linear consoles:

Digital recorders have allowed us to break the physical limits on track depth that mag recorders enforced. Now, an ever-increasing number of compact and portable digital dubbers and workstations can be used to play back hundreds of audio tracks. And as consoles have expanded to accommodate all those new tracks, the number of faders made available to mix the soundtrack has exploded.²²

To be sure, digital mixing meant more tracks, more faders, and more choices. But the explosion of available tracks only stiffened mixers’ resolve to keep the final track about clarity and intelligibility. In a certain sense, mixing in the digital age required mixers to be far more selective than at any other point in the past since non-linear, solid-state systems could accommodate an unlimited number of virtual inputs.

In an interview with *Editors Guild Magazine* in 1996, re-recording mixer D.M. Hemphill points to the bottleneck problem of random access mixing, which, to that point, had only begun to infiltrate mixing protocols. Hemphill identifies track overbuilding as a key concern given the technical ease with which sound editors can access entire sound libraries on the stage. According to Hemphill:

There’s still certainly a degree of over-building that occurs on a lot of shows by some editors. However, the delivery requirements have meant that they have to – the time schedules being so short, especially on some of the initial

temps which are very important – they feel they have to overbuild in order to cover the various directions the mix might go. They have to be able to come up with alternatives in short order, that’s possibly part of it. However, when we get into final mixes, we’re seeing a lot of sound effects tracks coming in that are slightly pre-built. They’ve come from libraries or other shows where they’ve already been pre-combined or pre-panned on workstations.²³

Thirteen years later, in 2009, Hemphill confirmed that pre-mixing strategies, not the perceived “ease of use” offered by digital workstations, had brought overbuilding under control.

That sound editors began mixing more of their material to the chagrin of some re-recording professionals has been considered a necessary move by sound editorial to bring the scope of mixes under a modicum of control. Faced with the expense of a costly mixing stage and re-recording crew, editors make certain decisions about what tracks to bring to the stage in order to avoid the bottleneck. Erik Aadahl stresses, “When I cut, I try to make things sound the way I think they should sound. This means not waiting until the dub stage to get it sounding right. It’s best to make it sound right editorially, so that the mix can elevate the material to the next level rather than wasting time sifting through too [many] elements to make it ‘play.’”²⁴

More significantly, however, digital delivery has reconfigured the decision-making priorities of re-recording mixers. The amazing flexibility of non-linear consoles and workstations has meant that sequences can be randomly accessed through hard drives and servers without wearing down or destroying the work print. Any part of a reel can be accessed with a single keystroke, resulting in a mixing culture that some call “frame fucking.” Instead of mixing in a series of “passes,” reels are mixed frame-by-frame.

Mixers can drop into any section of a reel to make the smallest of changes, or “tweaks,” to a series of frames that amount to only a few milliseconds. In this way, there is a tendency to mistake the forest for the trees and assume that tweaking the volume level of a few frames will ultimately matter to the general flow of the sequence.

The skepticism of digital delivery is most acute when mixers speak about the ability to delay decisions until the eleventh hour. One of the consequences of random access mixing is that filmmakers are making more choices on the stage. While some editors have acclimated to working with fewer options and bringing only a selection of material to the stage, one high-profile mixer suggests that the “inherent flexibility” of digital mixing has resulted in editors and mixers who are not confident with making “real decisions.” This particular mixer misses the “gutsy” decisions of the past, when the mixing crew “made a commitment” and “trusted their instincts.” Gregg Rudloff expands on this point:

Directors expect immediate and total access to everything. In the past, if a director asked for a new sound or a different take, the editor took a unit off the stage into a change room, made some transfers, cut the new material and raced back to the stage. Simple changes took half an hour or more, if you were lucky. Most times, the work on stage would continue and the fix would wait until the next time the reel was hung. Today, editors must not only be ready to audition a dozen options for the director; they must also be ready to rebuild entire sequences in just a few minutes. Of course this means the mixers need to be able to handle a lot more tracks at a moment’s notice.²⁵

The net effect of Rudloff’s assessment is that more decisions are being made within a narrow time frame. As he says, “Hundreds of changes are made to hundreds of tracks and no one seems amazed by it.”

Not surprisingly, the speed and accessibility of digital editing and mixing platforms has, in the view of many re-recording mixers, increased the need for more pre-mixing even though more time and resources are not always available. Speaking about the perceived speed and efficiency of digital editing and mixing, sound editor Michael Silver notes, “Folks think that because we’ve got these digital editing tools, we should be able to work that much faster.”²⁶ However, the time it takes to satisfy a director or sound supervisor has not changed. That is to say, the gains in speed and efficiency of non-linear platforms have been counterbalanced by the social demands of the mixing process. That there are, in another sound editor’s words, “so many different solutions for a problem” has created an intense social and aesthetic dynamic in re-recording, where mixers are tasked with integrating more tracks than ever before.²⁷

“An Intense Social Pressure Cooker”

In many ways, the professional network of re-recording mixers in Hollywood resembles the freelance structure of sound editors and other members of the sound chain. Studio reintegration and the growth of semi-independent sound shops have provided some mixers a home base from which to work and develop relationships with directors, producers, and studios. Most high-profile mixers hold contracts with major studios and independent facilities like Wildfire Studios and Todd-AO Hollywood, and work on “in house” projects in addition to other work gleaned from relationships with recurrent clients. There are others, however, who remain independent from post-production facilities and studios, and prefer instead to book themselves on a project-to-project basis.

Interestingly, mixing culture in Los Angeles has remained fairly stable across periods of technological change, industrial reorganization, and stylistic innovation. One stable feature of Hollywood mixing is the professional partnership between mixers. It's highly uncommon, though not impossible, for mixers to work alone on a project given the many tasks and deadlines associated with a final mix. In the days before console automation, teams of three or more mixers were assigned to different components of the sound track. Working side-by-side on a console, mixers divided the work along simple lines: one person mixed the music, another the dialog, and another the effects. This breakdown of duties survived the studio era and the transition to digital consoles with most current mixers identifying themselves as mixers of music, dialog, or effects.

Such craft specialization has fostered a network of mixing partnerships that is common among Los Angeles-based re-recording mixers. Given the uneven nature of transactional work between post-production professionals and filmmakers in the reintegration era, mixing teams represent a stable and reliable component of post-production sound culture. However, it would be an overstatement to assume that all Hollywood mixers have developed longstanding partnerships with other mixers. Though a common practice, many mixers remain unattached and regularly work with different crews.

Since the introduction of console automation, the three-person mixing team has been reduced to two. According to mixer Paul Massey, "It used to be dialogue, music and effects as three-person teams. That trend evolved in the mid-1990s to two-person teams."²⁸ Depending on budget, a film may employ several mixers, but in most cases one person tackles effects and Foley, and the other handles dialog and music. Indeed, budget

cutbacks across the industry have made it nearly impossible for the three-person crew to survive, despite some very high-budget exceptions such as *Titanic*.²⁹

There are a host of successful mixing partnerships in Hollywood, and each share a similar working style. Andy Nelson and Anna Behlmer, who have a non-exclusive relationship with Twentieth Century Fox, have been partners since 1993, and have recurrent transactions with directors such as Steven Spielberg, Terrence Malick, Ed Zwick, and DreamWorks Animation. By maintaining an open relationship with Fox, Nelson and Behlmer are free to bring other projects to their Fox stage or work elsewhere. Both mixers prefer to work with each other, but occasionally each performs solo duties on films where schedule or budget cannot accommodate both of them. Behlmer estimates, however, that 85 percent of their work is done together.³⁰

Nelson and Behlmer stress the degree to which communication drives their relationship. Behlmer suggests, “The most important thing to start with was knowing there was good communication between us. The longer you work together, the more you develop a style you share.” Their shared sense of style begins with the pre-mix. Nelson, a dialog and music mixer, and Behlmer, an effects and Foley mixer, split their duties accordingly, leaving each mixer to work separately during the pre-mix. Nelson says, “It gives me a chance to be objective with the work she’s been handling and it gives her a fresh look at the music. We’ve stuck with that style.” The pair come together on the final mix and work, in their words, in “broad strokes,” never focusing on one or two isolated moments, but instead working to “see the story and the emotional arc” by playing the music, dialog, and key effects elements in one pass.³¹ This process opens the discussion

to knowing what is missing, what can be dropped, and what is essential to the whole sound track.

Another prominent partnership in Hollywood is one between Scott Millan and David Parker who have worked with each other since 2005. The two began their mixing careers in the 1980s with Parker in Northern California and Millan in Los Angeles, and were brought together by supervising sound editor Per Hallberg, who believed the pair would work well with each other. Millan, who handles dialog and music, notes, “You have to be in sync with one another and you can quickly find out how your sensibilities jibe. And there’s an etiquette on a [mixing] stage in knowing what the other one is working on, and supporting them. Working with David was immediately comfortable for me. It fit.”³²

During the pre-mixing process, Millan and Parker work in a parallel process on different stages. With Parker handling the sound effects, Foley elements, and backgrounds, the two will come together during the final mixing sessions to integrate their material. “You never know what will spawn a direction or concept that could make the difference,” Millan says. “You have a chance to work off each other, and it’s a huge advantage. There’s an organic factor to having someone you’re working with who has his own perspective. Playing back and forth, it’s like two musicians.”³³

As these examples demonstrate, the mixing partnership is as much about philosophy as it is personality. Hollywood mixing culture is a team sport that hinges on the instincts of its players. Finding like-minded personalities to suit the conceptual and technical demands of the medium is essential. In a certain sense, the strength of a successful partnership can offset the social dynamics of a mixing session. The “daily

battles” that Anna Behlmer describes as being a consistent feature of her social environment is based, in part, on the jurisdictional struggles between mixers and filmmakers that manifest themselves on the mixing stage.

As interpreters of pre-existing material, mixers engage with other members of the sound chain with a degree of sensitivity. Re-recording mixer Patrick Cycone calls this phenomenon “knowing the room.” He suggests that mixers spend a great deal of time trying to understand the different personalities involved, and interpret their creative needs. In this way, a mixer’s value can be based on their ability to interpret the demands, worries, and eccentricities of a group of filmmakers. In addition to satisfying their own creative needs, mixers approach the final mixing sessions with the goal of satisfying their clients’ creative vision of the sound track. After all, mixers hope that filmmakers will return to them for future projects.

Accomplishing this social task is a matter of interpreting the social and creative needs of the filmmakers. Randy Thom offers a vague but stern overview of mixing protocol when he says, “In my opinion, mixing is about 80 percent people skills. It’s an intense social pressure cooker that has at least as much to do with listening perceptively to the people behind you as it does with listening to the sounds coming from the speakers.”³⁴ Choice, in this way, is often governed by the social climate of the mixing stage. According to mixer Lora Hirschberg, “We’re required to do what we’re asked to do, and interpret what people are asking of us.” Illustrating the client dominant tradition of Hollywood sound production, Hirschberg suggests that her mixing style is less dependent on a set of aesthetic characteristics than on her ability to “know the room,” and

translate what is being asked of her into something that resembles the particular sound configuration envisioned by the clients.

Patrick Cycone offers a more pointed critique of Hollywood mixing culture:

We indulge personalities. It's Hollywood. In Hollywood we have drama. Imagine that! We have personalities. Some are mundane and others are colorful. It's about babysitting, holding hands, being psychologists; it's about being more than just mixers.

Not surprisingly, then, the social tasks of mixers can influence the aesthetic character of the sound track. Not only must filmmakers feel “comfortable and confident” in their decisions but, as Cycone notes, they must also feel recognized. If a specific cue – an effect, a piece of music, or a line of dialog – is not working in the mind of a director, then the mixer must learn what elements of the cue are posing a problem and then work to solve it. Depending on their relationship with the client, and their experience together, this can be a very sensitive process.

The placement of music, in particular, can pose a jurisdictional problem between mixers and composers. With their position outside the sound chain, but still an integral element of the sound track, composers generally do not participate in the final mix. After the director “spots” the film with the composer, a music editor fits the music cues to the film, and prepares the recordings for the music mixer. In this sense, the composer’s work is largely finished after the recording sessions take place, where the composer, director, and music editing staff select the best takes of the orchestra’s performance. The finished cues, which are timed and fitted to the picture, are then sent to the music mixer.

As Robert Faulkner ably demonstrates in his study of the Hollywood composer, the relationship between director and composer is not without its own complexities.

Although the composer's closest artistic confidant is the film director, he or she is not necessarily in control of how the music will be used, or if it is used at all.³⁵ There is, however, an unwritten rule among Hollywood mixers that music cues should be treated with more sensitivity than other sound elements. In other words, if the music department prepares a cue to underscore a scene, the mixer will generally follow suit and place the cue in the mix even if it means sacrificing other elements. One sound supervisor explains the relationship in clear terms: "Some stay low when it comes to score because it tends to be a little more political. It's typically more expensive and it's definitely more emotional, not only in terms of what's on the screen, but also what it takes to get it there."

The demand is to make the music work. However, there is no one single solution to the problems and tensions between mixers and composers. The freelance structure makes it possible for every mixer to approach a jurisdictional conflict in different ways. In defining the ways in which she approaches a final mix, Lora Hirschberg emphasizes her ability to "read" the filmmakers and approximate what they want to hear, despite her own personal feelings on a certain sound or combination of elements. In this way, she shies away from labeling the mixing craft a "creative" enterprise, and prefers instead to accentuate its interpretive components.

That is not to suggest that conflicts and problems do not arise. Indeed, the jurisdictional problem between mixers and composers is usually negotiated between the two roles, even though most composers are not involved in the final mix. When asked about the creative negotiations between these two crafts, another prominent Hollywood mixer used one incident to illustrate her point. This mixer reached a scene where the

designated music cue did not fit what she perceived to be the dramatic tone of the sequence.

There was a huge cue for this spectacular scene, and I was looking around the room to the music editor and he was looking at me, and we were both thinking the same thing. I said, “Uh, this isn’t working.” So we had to go talk to [the composer]. And we started the cue later in the sequence. We figured out something. I took the big, rumbling effects part of it, and then we traded. Once we were on a longer shot, further along in the sequence, we played the music.

The composer, too, is watching the picture, and he doesn’t know what’s going to be there if his music isn’t going to be there. Everyone comes at it from their own point of view. And he was OK with it. But there has to be that kind of respect.

Ironically, the same deference is not usually accorded to Foley artists, dialog editors, sound editors, or other members of the sound chain if a particular cue is not working. Most sound professionals perform their work with the understanding that anything can happen at the final mix, and most are not consulted when a footfall, sound effect, or dialog re-voicing is augmented, drowned out, or completely cut from the final track. In an editorial for *Mix*, Larry Blake offers a blunt assessment of the current composer/mixer divide: “Someone else you might want to disinvite to the mix: the composer, who too-often is there only to have their music played loud.”³⁶

The negotiation of music, particularly original score, is an element of re-recording practice that underlines the social dynamism of Hollywood mixing culture. At its most fundamental level, mixing is an interpretive craft with two competing demands: the creative work of mixing sound, and the social interaction with filmmakers that influences the creative tasks. In addition to the social tasks described by Lora Hirschberg, which

place a premium on a mixer's ability to accommodate the client's needs, there is a conceptual component to the work of film sound mixing that is about making creative choices. On an artistic level, mixers make creative decisions about what sounds to emphasize, and how to negotiate the balance among dialog, music, and effects elements. In achieving this balance, re-recording mixers perform a series of creative tasks that aim to solve their Rubik's cube-like puzzle.

Conceptualizing the Mix

In accomplishing the task of arranging and balancing the digital multiplanar sound track, re-recording mixers value their ability to bring "fresh ears" to the mixing process.³⁷ The skill of bringing a new perspective to the sound track, and its relationship to the picture, is as important a skill as interacting with filmmakers and "knowing the room." Given that re-recording is the culminating component of the sound chain, mixers approach their work with a sense of discovery that is all but lost on members of sound editorial who have been living with effects elements, Foley cues, and dialog recordings for months. During the pre-mix, re-recording mixers familiarize themselves with the library of material that has been prepared by sound editorial, and the conceptual work begins.

In a certain sense, the occupational ideology of mixers to maintain comprehension and intelligibility is somewhat dependent on intuiting what combinations of sounds work best. Even if a sound supervisor provides the mixing team with "the right door close, the right ADR line, the perfect dialogue alternate take, the best Foley," the decision remains

on how to integrate these materials into a unified track. In an interview with *Editors Guild Magazine*, re-recording mixer Gregg Landaker distills the “art of mixing” into an analogy with painting: “Putting together a soundtrack for a feature film is like painting a canvas with sound. We have a blank canvas with a celluloid image.”³⁸ Although there are no strict rules governing the conceptualization of a film’s sound space, two interpretive schemas seem to dominate Los Angeles-based practices.

The first method is the more restrained of the two practices; some mixers have likened it to the composition of a piece of music. Ren Klyce, the sound supervisor and re-recording mixer, explains, “You’re essentially building it how it will ultimately be heard. We know there’s a big musical moment, so there’s no point to build a sequence with car sounds. In the end, you’re not going to hear the dog collar and dog’s breath.” In other words, the sound world is built from only the pre-mixed elements that will be audible in the final track.

Most mixers agree that this style is popular among Los Angeles-based mixers because it condenses the conceptualization process to a series of decisions that directly affect the outcome of the final track. As Klyce contends, there is no point building a complex sequence of sound effects, Foley, and background ambiances if the composer and director have decided that the scene will feature only music. Mixers don’t often work in a creative vacuum. With release dates and other deadlines to consider, mixers attempt to refine their work as much as possible before settling on specific choices. To accomplish this, mixers work with directors and sound supervisors to alleviate the bottlenecking of creative options. These creative discussions can provide mixers with concrete solutions and suggestions for how to handle certain shots and whole scenes.

According to re-recording mixer Richard Portman, “On the re-recording stage, you should never have decisions to make, other than about emotional or dramatic impact.”³⁹

In some cases, sound supervisors and mixers will work proactively to “strip” the track down to its essential elements during the pre-mix. Sound editor and mixer Skip Lievsay relates Portman’s esoteric value of the mix to his own experience on Martin Scorsese’s Las Vegas crime drama, *Casino* (1995): “It was actually very uncluttered, where we took away as much unnecessary information as possible. We try to work that way, so that what you’re left with is the essence of the track.”⁴⁰

Given director Scorsese’s penchant for tracking popular songs in his films, Lievsay and mixer Tom Fleischman worked to ensure that when sound effects and other ambiences were featured, they pushed through the music and contributed something substantial to the audiovisual drama. To Lievsay’s mind, the “camera, and the edit,” more than anything else, determined what was important for the sound mix:

These are not effects-heavy pictures. You can tell what sounds need to be emphasized, and he almost never uses a close-up without a discrete, distinct sound. So you know for some of those close-ups you need something big. He’s doing the same thing with picture that we’re doing with audio, where you have the big scene, then he zooms in for a close-up on a certain word. The idea is that you’re in a big environment and can still be pulled in for something very intimate. That’s really the best way to get the most mileage out of a track.⁴¹

The “essence” of their track is comprised of a group of sound elements that provide them with the “most mileage,” as opposed to overbuilding the track with every conceivable option.⁴² Lievsay and Fleischman instead create a lean and tight conceptual blueprint based on the focal points created by Scorsese’s camera and picture editorial.

By contrast, the second approach to sound mixing begins with more pre-mixed groups that are progressively whittled down to the “essential” elements. Ren Klyce offers a critical assessment of the second approach when he says, “Mixing a movie with too much sound is a luxurious method in the right hands.” In effect, Klyce is describing a process in which re-recording mixers sculpt the final track by beginning with a large number of elements from the pre-mixed sound groups that are played against picture. This practice gives the impression of a sound track that is essentially built by removing elements from the sound space. However, the fear of track overbuilding and delayed decision-making has made professionals like Klyce wary of such a model. In this sense, the luxury of having an abundance of sound options can be a source of both creative flexibility and possible stagnation. However, as Klyce and mixer Gregg Landaker contend, it is also the most painterly way of working because it affords the mixing crew the ability to choose from a wide palette of sound “colors,” and not be limited to only a few choices.

Landaker describes his mixing duties in painterly terms:

I go about [building the track] by painting in the backgrounds first, balancing them absolutely perfecting for this envelope of sound. Then I start Foley work. The images you see now become alive with these kind of abstract footsteps. I then paint in key effects...stuff that moves around the screen and flies off the screen. Dialogue is then added. That’s your story, your main character.⁴³

Landaker, whose extensive résumé of credits includes *The Empire Strikes Back* (1980), *Speed* (1994), *Transformers 2: Revenge of the Fallen* (2008), and *The Town* (2010), organizes his mixing work by creating distinctive background, midground, and foreground layers. The dialog, which functions as the principal foreground element,

“stays out front” as much as possible, surrounded by the other elements derived from the pre-mixed sound groups. From there, if music has been written to accompany a scene, it is balanced against the dialog and effects.

Working with “too much sound” also means mixers must work to balance the pre-mixes so it doesn’t become a brown colored and muddled mess. In one way, this method of track building represents an outgrowth of classical mixing practice, which created intelligibility by throwing certain layers out of focus. As Rick Altman has shown, studio era mixing practices emphasized dialog comprehension by lowering the volume on the continuous effects layer. By simply increasing or decreasing volume, mixers were able to create focal points, which, to this day, remain a conceptual goal of modern re-recording. Patrick Cycone notes, “We enhance that moment, focus the audience’s attention to a certain feeling, isolate a moment, and create a sense of focus at different areas of the sound track.” At the same time, this approach is a direct consequence of digital excess, where track inputs are virtually unlimited and filmmakers can delay mixing decisions until the eleventh hour. There is an option to hear everything, and experiment with different combination of pre-mixed elements until the “right” formula is found. When tasked with finding the “voice” of the track within a wall of sound, current mixers search for sonic focal points.

The work of creating sound focal points is more than a matter of volume adjustment; in most cases, it also about finding a textural balance among sounds. The size of some contemporary pre-mixes requires that sound editors and mixers prepare extensive cue sheets or “binkies” that effectively become the mixer’s primary road map during the final mixing sessions. A brief glance at sound editor Erik Aadahl’s pre-mix

layout for *Transformers 2: Revenge of the Fallen* illustrates the sheer size of that film's sound world. (See Appendix C.) The cue sheet lists all the sound effects, Foley, "sweeteners," and background ambiences that have been prepared for an action-filled sequence.⁴⁴ In addition to an array of WEAPONS and IMPACTS, there are pre-mixed groups of ROBOT effects (vocals, tires, skids, turbines, and slices), VEHICLES, and FOLEY cloth and footsteps as well as some miscellaneous items (doors, punches, and bodyfalls).

Within each of these pre-mixed categories are several choices that emphasize a different emotion or sonorous texture. Notice that Aadahl does not distinguish between "bodyfalls," but instead groups them into one pre-mixed category. During the final mixing sessions, the film's re-recording mixers will refine Aadahl's pre-mixes even further to create a tighter "road map." Working with re-recording mixer Greg P. Russell on refining the effects pre-mixes for *Transformers 2*, Aadahl acknowledged the arduous and time-consuming task of making the mix work:

While in final mode, I'm always going into our printed predub material and making adjustments. I might cut out chunks of certain predubs that clash with music, for example. Maybe certain impacts in my effects are "flaming" with music percussion, and need sync adjustment.⁴⁵

Aadahl's admission supports Ren Klyce's assumption about mixing with too much sound: while there is a certain luxury in having a wealth of materials from which to choose, sometimes it can create a creative impasse that the mixer is forced to solve.

According to Lora Hirschberg, the mixer's role in the sound chain is determined, in part, by his or her ability to refine and narrow the aesthetic choices available to them.

“A lot of our job is taking these away. My instinct is to simplify the sound.”

Hirschberg’s instinct to simplify the sound space by removing superfluous tracks is shared by re-recording mixer Kevin O’Connell, who also treats the final mix as a time to “weed out” the contradictory or redundant cues. O’Connell tells *Mix*:

The filmmakers put so much on the screen at one time and I think they don't always realize that, yes, it looks cool, but when you try to hear it *all*, it becomes a bit of a mess. So what I've been trying to do in the latter stages of my career is figure out what on the screen do we *need* to listen to? What can we get rid of and how can we make it all better? That comes with experience.⁴⁶

Despite the social pressures to satisfy the aesthetic demands of filmmakers, O’Connell insists that there are some things “within a mixer’s control to say, ‘we’re where we need to be.’”⁴⁷

As I have suggested, the selection process is widely considered a battle between filmmakers who want the option to hear every conceivable combination of tracks, and mixers who wish to simplify the track and reduce the concoction to its leanest form. O’Connell told me, “You have to choose your moments. In other words, we have maybe 600 sounds going at one time in a chase scene in a *Transformers* film, and we have to decide what we want to hear, when. It’s about definition.” Mixing with too much sound, or saturating the track before trimming it, has encouraged mixers like O’Connell and Hirschberg to trust their ability to simplify an otherwise crowded track with selections that serve both the social dimensions of mixing culture, and aesthetic demands of the film.

Patrick Cycone makes the case for simplicity by emphasizing his own practice of economizing the over-filled track:

I refer to that as economy of sound. We have to decide as artists what is appropriate what to play sound-wise. You can't possibly play it all. It just doesn't work. If you try to play it all, guess what happens? It just becomes a big mish-mash. So you have to be selective in what you play. You've got an action sequence and the music is blasting. You have to decide what it is that you're trying to accentuate dramatically at that particular moment. So you've got a close-up of the guy in the car and we hear the music going on, maybe we hear his tense breathing, maybe we hear just a little bit of the car, but the car is not particularly very interesting. But the next cut is interesting because we cut to a wide shot and he's screeching and revving and turning the corner. So you have to pick and choose your moments.

Overall, the two mixing methods offer contrasting examples of “interpretive schemas” with the same artistic goal: clarity. Each interpretive schema tasks the mixer with solving the conceptual problem of the sound mix by treating the film’s sound space, or “sound world,” as a collection of choices that are informed by particular theoretical assumptions and stylistic preferences. In each case, the problems of conceptualizing the sound mix – marrying dialog, effects, and music – and seeing eye-to-eye with filmmakers, are not solved by rote or mechanical means, but rather by the pursuit of simplicity. *What on the screen do we need to listen to? What can we get rid of?* Ultimately, these questions of choice shape the practical methods, individual styles, and outcomes of each interpretive schema. Both approaches have the same goal in mind, but they go about the refinement process in different ways.

What is more, the underlining impetus for a simplified sound track, and the widespread acceptance of what many call an “uncluttered” mix, is rooted in the heavily stylized picture editing and shooting practices of mainstream Hollywood cinema. Sound

mixing practices have absorbed many of these changes in visual style in ways that are not entirely obvious or conventional.

Less is More: Intensified Continuity and Mixing *The Bourne Ultimatum*

One of the most significant shifts in Hollywood visual style and editing practices over the last 25 years has been the development of what David Bordwell calls “intensified continuity.” Most basically, this style does not reject the traditional continuity principles that have come to define classical Hollywood visual style, but instead it *intensifies* the established techniques and formal devices. Borne out of the highly self-conscious and stylized films of the French New Wave and New Hollywood of the 1960s, intensified continuity is “traditional continuity amped up, raised to a higher pitch of emphasis.”⁴⁸ Although it isn’t the only available option to filmmakers, the style, according to Bordwell, has become ubiquitous in modern Hollywood filmmaking.

In effect, the new style emphasizes a keen sense of “moment-to-moment anticipation” that is achieved through dizzying camerawork, fast cutting, and highly mannered photography.⁴⁹ Although the style is most commonly associated with high-concept blockbusters, Bordwell has linked the intensification of formal techniques to most genres of mainstream filmmaking, including romantic comedies, socially minded dramas, and, perhaps not surprisingly, action films. Indeed, while Hollywood storytelling has not shifted significantly, the accentuated use of close-ups, rapid-fire editing, saturated or desaturated photography has “changed our experience of following the story.”⁵⁰ Moreover, like other innovations in visual style, hyper-stylization has encouraged

filmmakers to explore new creative options without sacrificing the precepts of classical style and narration. Indeed, Kirstin Thompson notes, “The ideal American film still centers around a well-structured, carefully motivated series of events that the spectator can comprehend relatively easily.”⁵¹

Most of the techniques and devices of the intensified style have been available to filmmakers for decades and used in a similar fashion in Hollywood films of the past. What is different is the frequency in which filmmakers are using them to promote a general sense of movement, anticipation, and energy even in the most ordinary of scenes.

The hallmarks of this glossy style include faster cutting and closer framings, two devices that are emblematic of the hyper-kinetic visual palette usually reserved for music videos. More rapid editing techniques have crept into mainstream Hollywood filmmaking since the 1960s, and can be linked to a reduction in a film’s average shot length (ASL). Between 1930-1960, a film’s average shot length was somewhere around 6 to 8 seconds, but by the 1970s a new generation of American filmmakers began organizing their films around shorter shots. By the 1990s and 2000s, the trend continued to grow and resulted in an average shot length of approximately 4 seconds, with some films boasting longer averages (*The Royal Tenenbaums* [2001] at 7 seconds) and others with shorter averages (*Armageddon* [1998] at 2.3 seconds). Today, it is common for most films to feature shorter shots for action sequences and even simple conversation scenes. As Bordwell notes, “Admittedly, by building dialogue scenes out of brief shots, the new style has become slightly more elliptical, utilizing fewer establishing shots and long-held two-shots.”⁵² At the same time, as films are cut faster, filmmakers have replaced the more traditional *plan américain*, or medium shot, during conventional dialog scenes with

“singles,” close-ups that normally favor one actor. These tighter framing strategies often require faster cutting rhythms to compensate for the condensed spatial coverage of close-ups.

That said, critical assessments of intensified continuity have been limited to accounts of visual style: framing, staging, picture editing, color and emulsion, and other elements of *mise-en-scène*. The core elements of intensified continuity gained widespread attention with the release of Paul Greengrass’ final installment in the Jason Bourne action trilogy, *The Bourne Ultimatum*.⁵³ The argument for an intensified Hollywood style has overlooked the ways in which sound editing and mixing have contributed to the audiovisual shift in stylistic practice. The sound of intensified continuity has eluded academic accounts of film style and mainstream film reviews.

In a 2007 interview about *The Bourne Ultimatum*, director Paul Greengrass noted:

Your p.o.v. is limited to the eye of the character ... instead of the camera being a godlike instrument choreographed to be in the right place at the right time. Sometimes the camera will not know what's going to happen. That gives you space; you can play in that space.⁵⁴

In an attempt to explain the motivation behind the visual style of the third entry in the action series, Greengrass added his voice to a growing critical and public discussion over the camera work and editing strategies of the film. David Bordwell dubbed the debate the “unsteadicam chronicles,” referring to the shaky hand-held camera, quick cutting, and tight framings that provide the *Bourne* series with their aesthetic signature.⁵⁵ At the time of its release in the summer of 2007, several critics weighed in on the film’s visual style. Carina Chocano of the *Los Angeles Times* called it a “seen-from-all-angles Cubist style.”⁵⁶ Todd McCarthy of *Variety* praised the “nervous camera movement and machine-

gun cutting,” but warned that its effects in the hands of a lesser director could have been disastrous. David Denby of *The New Yorker* echoed Greengrass’ comments when he suggested, “The camera trembles and shakes and hurtles in ‘Ultimatum,’ as if we were trapped inside the moving Bourne, and yet, on the fly, we see what we need to see.”⁵⁷

Roger Ebert received so many letters about the film’s hyper visual style that he decided to share several of them with his newspaper and web audience: many complained about the “herky-jerky” camera work, the “pointless pans and zooms,” and tight framing that led, in some cases, to headaches and, in one reported case, vomiting.⁵⁸

In the above quotation, Greengrass emphasizes the subjective properties of his compositional strategy, highlighting his use of the camera and visual space to express the psychological confusion of the amnesiac protagonist, Jason Bourne. Within this context, however, both Greengrass and critics point to the perceived effects of visual techniques without considering the degree to which the sound mix guides the pseudo vérité visual space. Not surprisingly, the compositional dynamics of intensified continuity have deeply affected the ways in which sound editors and re-recording mixers go about conceptualizing the architecture of sound mixes. Despite the paucity of critical commentary on the *audiovisual* dynamics of intensified continuity, current Hollywood sound editors and mixers have found ways to work within the style. Of course, the *Bourne* series is not the only film to feature the intensified palette of visual techniques, but it has inspired other filmmakers to test the limits of the style. Other films to feature *Bourne*-like hyper-kinetic camerawork and editing include *Batman Begins* (2005), *Crank* (2006), *Iron Man* (2007), *Knight and Day* (2010), *Public Enemies* (2009), *Quantum of Solace* (2008), and *Slumdog Millionaire* (2009).

The visual dynamics of intensified continuity have forced re-recording mixers to find creative solutions to problems posed by the style's key visual techniques. Specifically, the "run-and-gun" style, as it has come to be known, favors the close-up over the medium shot, and faster cutting, which has the effect of producing a seemingly discontinuous visual space. Without the wider shots to establish setting and screen direction, directors like Greengrass forsake visual clarity for a sense of disequilibrium and spatial disorientation. In fact, trade press about the *Ultimatum*'s visual style spotlighted the "spontaneous" and discordant feel of the editing and camerawork, which, according to Greengrass, was inspired by the main character's in-the-moment behavior. Greengrass told *Variety*, "You have to think on your feet. It has got a sense of energy and of place. Bourne is driven across a contemporary landscape; you have to realize it with enough detail so people get that fact."⁵⁹

The *Ultimatum*'s picture editor, Christopher Rouse, suggests that Greengrass' run-and-gun style is a visual reflection of Bourne's inner subjectivity. He notes, "The way I've approached the action is, hopefully, reflective of the specifics of the Bourne character and his state of mind and state of being. He's a man that's never quite comfortable in his environment. He's not anchored, he's moving. We're never particularly settled as he's never particularly settled."⁶⁰ Rouse then compares his approach to more traditional editing patterns, which he says do not necessarily fit with Greengrass' off-the-cuff shooting style:

If you have a scene where Bourne is crossing the street and staking out a house, for example, there's a methodical, logical, easy way to cut that — where you see him crossing the street in real time, you see what he's looking at — and it would have to do with natural rhythms, how you would see a moment like that unfold. The way I tend to approach

a moment like that is to make it a bit more jumpy, a bit more erratic, for two reasons: A, because that's his state of mind and B, because sometimes it's just more interesting to look at.⁶¹

As an editor, Rouse is interested in creating an original set of options to distinguish his own work from other action films. In this way, he interprets the Bourne aesthetic as a set of techniques that reflect how we experience fast-moving stimuli. "Often times we're just seeing snatches of things and glimpses of things," he adds. "Particularly on a *Bourne* film, I'm always looking for the first-person way to enter a piece that's a bit more odd, a bit more interesting, and keeps you closer to the character."⁶²

Consequently, the net effects of these techniques – tighter framings, unpolished camerawork, and faster cutting – posed a distinct set of creative challenges for the supervising sound editors and re-recording mixers of *The Bourne Ultimatum*. In many ways, the sound crew's solutions provide a novel heuristic that supports the visual discontinuities without sacrificing the demands of classical continuity. Sound supervisors Karen Baker Landers and Per Hallberg worked closely with re-recording mixers Scott Millan (dialog and music) and David Parker (effects, Foley, backgrounds) to conceptualize the mix in a way that foregrounded narrative clarity and comprehension without sacrificing the organic "spontaneity" of the film's overall style. In the end, their work provides an instructive illustration of how current Hollywood sound professionals have responded to the industry's prevailing visual trend.

In conceptualizing the sound world for the film, the sound crew acknowledged the challenge of working with the hyper-kinetic visual style. Hallberg says, "It puts a little extra pressure on us, because we have to create what is almost a guide map for the

audience to follow. There's a lot you don't see, and if you do, it goes by so quickly that the eye won't catch it unless something very specific helps it along sound-wise."⁶³

Ultimately, the guide map metaphor shaped the crew's attempts to simplify and coordinate the relationship between sound and picture. The pressure toward closer framings and faster cutting, especially during film's many action set pieces, narrows the field of view by which the audience absorbs the spatial geography of a scene. By sacrificing, in some cases, the wider "master shot" in favor of tighter and more compact ones, the window onto the scene is inevitably reduced.

One of the first decisions made by Per Hallberg and Karen Baker Landers during the conceptualization process was how their sound work would respond to Greengrass and Rouse's stylized shooting and cutting strategies. In organizing the sound elements for the final mixing sessions, Baker Landers made an early decision to simplify the sound world and bring a leaner package of elements to the mixing stage. She notes,

People like to play and they want a lot of tracks, but if you give them the right tracks, you don't need to bring tons and tons of material. It really is knowing your tracks and not trying to clutter it up with too much. Because when you're playing a mix back and you're like, "Why can't I hear that?" It's usually not always that you need to add more; it's that you need to take away frequencies that are cluttering things up. And then things become much more detailed and crisp. You can provide a lot of tracks but that's not always better. Many times it's just too much clutter, sonically. If it's a big *Bourne* film, I still think you should have fewer tracks.

This preference was motivated, in part, by the speed at which the *Ultimatum*'s action scenes were cut. Instead of following the image in a redundant fashion, where sound and picture are essentially synchronized to every action, movement, and perspective shift,

sound underlines the emotional logic of the action scenes. By not hitting every beat, sound does not reinforce the disjointed picture, but instead becomes a counterpoint element that serves to set in relief salient elements.

In cutting the sound effects for the film's climactic car chase in midtown Manhattan, sound editor Peter Staubli recalls that his overall goal was to "keep the viewer on track, tell them where we are and what's going on." The sequence, which clocks in at 1 minute and 55 seconds, contains 118 shots with an ASL of 0.9 seconds.⁶⁴ In addition to the continuous sounds of screeching tires, engine revs, and occasional gunfire, Staubli and the mixing team had to balance the placement of police sirens. Since Bourne is driving a stolen police cruiser with a blaring siren, it would not be uncommon for Staubli to retain the siren over most of the sequence, adjusting it here or there for Doppler shifts and other perspective changes. However, Staubli argues that the police siren was cut to "feeling," since "there was so much going on and it would have become a distraction" to feature it continuously throughout the scene. Instead, the siren is mixed out when other sound elements play a greater dramatic role. Shot 22, for example, features a close-up of the cruiser with an audible siren. When a bullet shatters the driver's side window, between shots 23 and 25, the siren ducks behind the exploding glass sound effects and engine revs. The siren then reemerges in shot 26 only after the glass effects subside. In this way, the siren and shattering glass effects constitute sonic focal points that work against the tempo of the picture. (See Appendix D.)

Karen Baker Landers describes these signature sounds as "cookies" that she and the editorial and mixing teams spread throughout the film to help guide the audience through the visual fireworks by providing sonic focal points. During the car chase, the

police siren becomes a sonic marker for Bourne's location, even though we may not always see the cruiser or know where Bourne is in relation to the sedan chasing him. That we hear the siren and associate it with his character is essential to the sound team's guide map principle. In most cases, Greengrass and Rouse include some key establishing views of cities accompanied by title cards like "Moscow, Russia" or "Central Intelligence Agency, Langley, Virginia." These locale markers provide a basic geography during introductory and expository scenes, but once the action ramps up, Greengrass moves his camera closer to the characters and the editing pace quickens.⁶⁵

In addition to using sound effects as a compass, Baker Landers devised an interpretive schema that spotlighted the inner subjectivity of the Bourne character. In contradistinction to Rouse's messy, if organic, visualization of Bourne's inner psychology, the sound mix is decidedly deliberate, functional, and purpose driven. As Landers suggests, "The most important thing about Jason Bourne's character is he's very solid and fast and deliberate. He's not real high-tech-y; he's not flashy. He's down and dirty—he gets it done and he's precise."⁶⁶ Devising this interpretive schema required the mixers to be sensitive to sound as an emotional device, capable of punctuating the dramatic undertones of the narrative, and functioning as a streamlined guide map through busy action sequences.

To accomplish this, one of the primary objectives of the overall mix was to build the sound world without concentrating on the minutiae of every shot. As Baker Landers notes, "Paying too much attention when you're trying to figure out creatively how to attack a scene can be a detriment." Instead, the crew's focus turned to a broader conceptualization of each sequence that aimed to clarify the most significant dramatic,

emotional, and story-related aspects of the scene. “What you want to do is watch it as an audience and ask, ‘Do I get it? Do I feel the excitement? Do I understand?’ Then you can start building with your broad brush strokes,” Baker Landers says. In illustrating this particular schema, Baker Landers points to the film’s signature action set piece, the hand-to-hand fight sequence between Bourne and Desh (Joey Ansah), an assassin, in a Tangier apartment. The sound world for the scene is designed and mixed in a way that answers Baker Landers’ two guiding questions: “Do I *feel* the excitement? Do I *understand*?” In effect, the scene, which is comprised of 135 shots and runs 2 minutes and 20 seconds, fulfills the experiential and intelligibility components of the sound track without being wholly redundant or too firmly tied to the minutiae of every shot.⁶⁷ As a result, the scene features three sound layers: 1) ADR and Foley; 2) Impacts; and 3) Backgrounds.

The first layer, which contains the actors’ voices, is the most foregrounded element in the mix. According to Baker Landers, “I think what’s most interesting in a fight is to feel the actors. To really feel their breath. And their moans. And their size. You really want to engage. That should be the key. So that is where I start first.” The way Greengrass stages and shoots the apartment fight is more intimate than other fight or chase scenes in the *Bourne* series. Not only is Jason Bourne confined to a small space with his attacker, necessitating the use of short, compact body shots, but also the fight is captured in an array of hand-held close-ups (113 of the 135 shots are close-ups or extreme close-ups). To suggest the same sense of intimacy, mixers Scott Millan and David Parker incorporated auditory close-ups of ADR fight breaths and vocalisms performed by Matt Damon and Joey Ansah. The grain of the voice combined with the closeness of the recordings “puts you right there with them,” Baker Landers says.

In addition to the ADR elements, the mix features a foregrounded Foley track. The Foley team, including artists Dan O’Connell and John Cucci, and editor Craig Jaeger, shot 22 days of props, footfalls, cloth, and body movements on the *Ultimatum*. As the sound supervisor, Karen Baker Landers suggested early in the conceptualization stage that Jason Bourne’s body movements, including his footsteps, needed to convey a sense of purposefulness that might be obscured, visually, by the editing and camerawork. His movements are “precise and solid. They don’t sound wimpy or tentative,” she says. Furthermore, Craig Jaeger notes, “It’s not just the surface he’s on or the shoes he’s wearing; it’s his attitude, his confidence.”⁶⁸

Bourne is constantly on the run in the *Ultimatum*, and during the apartment fight his feet are always moving. “There’s a lot of storytelling through feet,” Baker Landers says. “We spent a lot of time on specifics capturing the right texture and the right feeling.” The Foley crew also accented the hand-to-hand qualities of the fight with body slams and exaggerated cloth grabs that were timed to the intricate fight choreography. Mostly, however, the body hits and cloth “life” go unseen, but are, in Baker Landers’ words, overwhelmingly “felt.”

To be sure, the Foley effects are heightened in a way that foregrounds their presence in the final mix. Even though Baker Landers insists that the apartment fight was conceptualized as an “organic” and not especially “stylized” sequence, the sound world offers an aural equivalent of intensified continuity by featuring closely recorded voice and effects recordings. Just as close camerawork and frantic cutting serves to enhance energy and emotion, the sound mix in this sequence works to stabilize the image with a palette of amplified sounds.

A breakdown of the sound elements used in the apartment fight illustrates how Baker Landers and the mixing team sacrificed a rich or especially complex track in favor of one that is spare, taut, and accented. Given that the scene boasts an average shot length of 1 second, with over half of the 135 shots falling under half-a-second, the mix creates focal points with accented impacts, footfalls, grunts, and other movements that correspond to the (visible) action within a shot. Shots 53 through 56, for example, point up the way in which the mix is reduced to one or two signature sounds. As Desh and Bourne trade punches, the sound track features: Desh taking an “air swing” (shot 53), deflection hits and a Bourne grunt (shot 54), a single Bourne punch (shot 55), tussling (Foley cloth) and a Desh grunt (shot 56); in total, three shots with six sounds. (See Appendix D.)

The impacts constitute what Baker Landers calls the “bigger moments” of an action sequence: “These are characterized by your grabs, your punches, your neck cracks or your slices.” While Foley performed some of these prop actions, others were left to sound editors to craft from existing library tracks on the Soundelux server. The speed of the editing often meant that sound editors like Peter Staubli either shortened impact sounds to fit within the rapid-fire shots, or played the impacts across them. In a certain sense, the use of continuous sound across certain cuts works to streamline and “smooth” the disjointed visual techniques.

According to re-recording mixer D.M. Hemphill, “They can’t cut the sound cut for cut. It has to go over the cuts and tie it together otherwise it’s just annoying.” Although Hemphill did not work on the *Bourne* series, he has encountered the intensified system on other projects. He says, “You need a good eight frames to denote something

important. You really have to give the audience a little bit of a break so they can absorb some important piece of information when there's a lot going on."

Correspondingly, mixer David Parker chose to amplify and bridge a number of effects impacts even when the camera shifted position, or if a subsequent camera angle did not feature the continuation of an action. One of the more obvious examples of this technique occurs through shots 101-112 of the apartment fight. Desh throws Bourne through an open door and into a cramped bathroom. Bourne, on his back, throws a shampoo bottle at Desh and begins using a towel as a whip to disorient his attacker. At the same time, Desh, framed in extreme close-up, grabs a straight razor from the sink and swings it at Bourne, who fends it off with the towel wrapped around his wrist. In a series of fast moves, Bourne protects himself from the knife stabs by kicking Desh in the chest, and wraps the towel around Desh's wrist. The two men struggle but Bourne manages to slam Desh's wrist against the bathroom door until the knife becomes dislodged from his hand.

The incredibly fluid series of moves takes shape over 12 shots that run half-a-second or less in length. What is more, the moment when Bourne disarms his attacker is not conveyed clearly in that we do not see the knife fall out of Desh's hand. But we hear it. The decision to feature the knife as a primary element in the mix represented another instance where sound was being used as a sonic compass. When Desh lifts the razor from the sink, Baker Landers wanted to emphasize its danger to Bourne, so for the 12 shots in which it was featured she accented its place in the mix. When Desh raises the blade, we hear it scrape across the sink the way a very large sword is unsheathed; when Desh slashes at Bourne with it, we hear the sound of a blade cutting through the air. Baker

Landers says, “I need to hear the *shing*-out of the knife slash from side A to side B.

Even though we don’t see it, we need to hear that *whissh*.”

These “need to hear” moments featuring accented impacts constitute the “see-it-hear-it” elements of sound mixing for the intensified system. When Bourne forces the straight razor out of Desh’s hand, his body obscures our view of most of the action. To compensate for the incomplete visual action, Baker Landers chose to accent the razor’s impact against the door as it becomes dislodged. While the camera stays focused on the fight, the razor falls to the floor out of frame. We don’t see it, so the sound compass directs the audience again. “You have to trust your instincts with things like that,” says Baker Landers. “Oh, I didn’t hear that knife, the knife flew out of his hand. Well, where did it go? As an audience member I’m like, ‘Where’d that knife go?’”

Baker Landers likens this technique to the classic “Shave and a Haircut” musical couplet: if we only hear the first five notes of the seven-note melody, it feels irritatingly incomplete. “Sonically, there are rhythms that you’ll know if you play it,” she says. “I need to have that knife fly on the floor or into the wooden door even if it’s going offscreen. You have to feel your way through the scene to know what sonically feels right.” In addition to building the track with sound cues that underline the dramatic impetus of the sequence, there is also a see-it-hear-it component that seeks to complete the action and smooth out the rough transitions between shots.

Nowhere is the work to create a unified track more evident than in the *Ultimatum*’s use of backgrounds. Most obviously, richly detailed background ambiences provide the illusion of seamless across a series of disparate shots. Mixers Millan and Parker embraced Baker Landers’ idea of the sound compass in their construction of the

background elements. It was important for them that scenes reflect their location with specific background cues that could guide and orient the audience. Of course, not everyone knows what a New York City police siren sounds like, or what London traffic sound like, but the juxtaposition between the two created a distinct location stamp on settings that were conveyed primarily through hand-held, close-up action.

Much like Peter Staubli's treatment of the disappearing-and-reappearing police siren during the film's car chase, the mixing crew sacrificed a buoyant background track to simplify the sound space during the apartment fight. In addition, the propulsive but sometimes intrusive score was also dropped from the mix during the fight, but both the score and Tangier ambience returns at the end of the scene. There is an interesting symmetry in how the scene begins and ends that makes this technique work. As Bourne leaps from one building to another, crashing through a large window to confront Desh, the score and ambience are tucked under the explosive sound of shattering glass. From that point forward, Millan and Parker use only the ADR, Foley, and impacts to fill the sound space. When Bourne finally overtakes Desh by strangling him in the bathroom, the mixers slowly reintroduce the ambient textures of the Tangier background track.

It's here in the last 6 shots of the sequence that Greengrass and Rouse slow the editing pace, allowing the audience to catch their collective breath. Millan and Parker introduce birdsong and other "neighborhood noise," then bring in some water drips from a leaky faucet, followed by a mournful electronic drone by composer John Powell. If the sound world is reduced to a few accented "food groups" during the fight, then it swells with different textures and elements by scene's end. The scene never competes with the

intensified palette, but rather supports the visual style with sound choices that seek to provide clarity, continuity, and blunt force sound.

Conclusion: Picking up the Pieces

Despite changes in industry organization and technology, the process of re-recording remains firmly tied to the concept of choice. Any work of art or creative endeavor can be productively understood as a series of choices. Re-recording mixers, like the other major roles in the sound chain, must work within a set of available aesthetic, technological, and professional possibilities and options in order to exercise their choice. As Howard Becker notes, “the choice could always have been made differently” within the range of possibilities of film sound style and practice. Nowhere is this dynamic more crucial than in the work of re-recording mixers.

In a certain sense, the art and craft of re-recording sets in relief the constituent ways in which choice functions in the creation of the sound track. Re-recording mixer Richard Portman argues that the “true function” of mixing is what he calls “time restoration,” which is the ability to “make the film seem like it all happened continuously.”⁶⁹ Portman’s notion is at once a poetic description of a technical craft, and an implicit statement on the importance of choice to the mixing craft. As I have argued throughout this chapter, re-recording choices are made in a complicated social and artistic context in which mixers balance professional identity and stylistic individuality with the conventional and routine choices that govern the tenets of classical continuity and narrative intelligibility.

Ultimately, the transition to digital workstations and the emergence of an intensified classical continuity style have reconfigured the social and artistic processes of re-recording, but, most fundamentally, these developments have narrowed mixing choices, and encouraged mixers to constantly refine, simplify, and clarify the final sound track with pre-mixed “food groups” and other conceptualization principles. Despite the calls from some studio executives and filmmakers for louder and more crowded tracks to accompany even more frenzied visual action, Los Angeles-based mixers have developed working methods and social relationships that aim to reduce miscommunication and foreground the sound elements that “push the story along.”

Beset by an increasing demand to feature a surfeit of tracks, re-recording mixers are tasked with directing the choice of what eventually is used to convey the sound world of a film. According to sound supervisor Mark Stoeckinger, Hollywood mixers are, in the final analysis, tasked with having to choose how sound functions within a shot, a scene, and the overall structure of a narrative. He says, “We have to look at the images and try to understand why. Why for story, and why for feeling. And what can sound do to support it?” The answers, as most mixers will tell you, are in the choices.

Notes

¹ Gregg Rudloff, "The Evolution of the Film Mixing Console," *The Editors Guild Magazine* 25.1 (January-February 2004):
[http://www.editorsguild.com/v2/magazine/Newsletter/JanFeb04/janfeb04_mixing_console.html]. Accessed 1 Mar. 2011.

² Larry Blake recalls a meeting in the 1970s with one re-recording mixer who said, "It all happens here," referring to the creation of the sound track on the mixing stage. See Larry Blake, "'I'm Still Here' Part Three: Re-Recording," *Mix* (November 1994): 204, 209-210.

³ Quoted in David Fluhr, "Randy Thom: A Master of the Craft": 17.

⁴ *Ibid.*: 18.

⁵ Howard S. Becker, "The Work Itself," in Howard S. Becker, Robert R. Faulkner, and Barbara Kirshenblatt-Gimblett, eds., *Art from Start to Finish*: 26.

⁶ *Ibid.*: 26.

⁷ See especially David Bordwell, "Intensified Continuity: Visual Style in Contemporary American Film," *Film Quarterly* 55.3 (2002): 16-28.

⁸ James G. Stewart, "The Evolution of Cinematic Sound: A Personal Report," in Evan William Cameron, ed., *Sound and the Cinema: The Coming of Sound to American Film* (New York: Redgrave Publishing, 1980): 47.

⁹ See Emily Thompson, *The Soundscape of Modernity: Architectural Acoustics and the Culture of Listening in America, 1900-1933* (Cambridge, MA: MIT Press, 2004): 277.

¹⁰ Rick Altman, McGraw Jones, and Sonia Tatroe, "Inventing the Cinema Sound Track: Hollywood's Multiplane Sound System," in James Buhler, Caryl Flinn, and James Neumeyer, eds., *Music and Cinema* (Hanover, NH: Wesleyan University Press, 2000): 358.

¹¹ *Ibid.*: 341.

¹² *Ibid.*: 340.

¹³ See Westrex advertisement at the Widescreen Museum website:
[<http://www.widescreenmuseum.com/widescreen/todd-ao-westrex.htm>]. Accessed 1 Mar. 2011.

¹⁴ Larry Blake, "Track Layouts: Past, Present, Future," *Mix* (March 1997): 92.

¹⁵ Ibid.: 92.

¹⁶ Rudloff:

[http://www.editorsguild.com/v2/magazine/Newsletter/JanFeb04/janfeb04_mixing_console.html]. Accessed 1 Mar. 2011.

¹⁷ See Rudloff:

[http://www.editorsguild.com/v2/magazine/Newsletter/JanFeb04/janfeb04_mixing_console.html]. Accessed 1 Mar. 2011.

¹⁸ Larry Blake, "Track Layouts, Part 2: Delivery to the Stage," *Mix* (April 1997): 13.

¹⁹ Quoted in Miguel Isaza, "Editing for the Mix," *Designing Sound* (March 26, 2010): [<http://designingsound.org/2010/03/erik-aadahl-special-editing-for-the-mix/>]. Accessed 1 Mar. 2011.

²⁰ Larry Blake, "Track Layouts: Past, Present, Future": 92.

²¹ Rudloff:

[http://www.editorsguild.com/v2/magazine/Newsletter/JanFeb04/janfeb04_mixing_console.html]. Accessed 1 Mar. 2011.

²² Ibid.

²³ Quoted in Karen Kalish, "Two Teams of Mixers on a Mix of Topics," *The Motion Picture Editors Guild Newsletter* 19.4 (July-August 1998):

[<http://www.editorsguild.com/v2/magazine/Newsletter/JulAug98/mixers.html>]. Accessed 1 Mar. 2011.

²⁴ Quoted in Isaza: [<http://designingsound.org/2010/03/erik-aadahl-special-editing-for-the-mix/>]. Accessed 1 Mar. 2011.

²⁵ Rudloff:

[http://www.editorsguild.com/v2/magazine/Newsletter/JanFeb04/janfeb04_mixing_console.html]. Accessed 1 Mar. 2011.

²⁶ Quoted in Loren Alldrin, "Dialog Editing: Better Tools, Bigger Challenges," *Mix* (June 1996): 120.

²⁷ Ibid.: 118.

²⁸ Debra Kaufman, "Sounds Like Team Spirit: When Mixers Match," *Editors Guild Magazine* 31.3 (May-June 2010):

[<https://www.editorsguild.com/Magazine.cfm?ArticleID=848>]. Accessed 1 Mar. 2011.

²⁹ See Tom Kenny, "Sound Design for James Cameron's Epic Ocean Saga, *Titanic*," *Mix* (January 1998): 66-75, 234-235.

³⁰ See Kaufman, "Sounds Like Team Spirit":
[<https://www.editorsguild.com/Magazine.cfm?ArticleID=848>]. Accessed 1 Mar. 2011.

³¹ Ibid.

³² Ibid.

³³ Ibid.

³⁴ Quoted in Fluhr: 19.

³⁵ Faulkner, "Swimming with Sharks,": 126.

³⁶ Larry Blake, "An Open Letter to Directors/Producers": 125.

³⁷ There is some connection to the term "golden ears," which is primarily attributed to sound engineers and mixers in the recording industry who possess listening skills that allow them to discern subtle variations in sound quality. See especially Joseph O'Connell, "The Fine-Tuning of a Golden Ear: High End Audio and the Evolutionary Model of Technology," *Technology and Culture* 33 (1992): 1-37.

³⁸ Quoted in Kalish:
[<http://www.editorsguild.com/v2/magazine/Newsletter/JulAug98/mixers.html>]. Accessed 1 Mar. 2011.

³⁹ Quoted in John Michael Weaver, "Master Re-Recording Mixer: Richard Portman": 27.

⁴⁰ Tom Kenny, "Assembling the Soundtrack for Martin Scorsese's *Casino*," *Mix* (January 1996): 82.

⁴¹ Ibid.: 159.

⁴² Ibid.: 159.

⁴³ Quoted in Kalish:
[<http://www.editorsguild.com/v2/magazine/Newsletter/JulAug98/mixers.html>]. Accessed 1 Mar. 2011.

⁴⁴ "Sweeteners" are usually described in film sound parlance as sounds that enhance or enrich a particular sound effect. For example, a police siren may be "sweetened" by the addition of a high-pitch animal cry.

⁴⁵ Quoted in Isaza: [<http://designingsound.org/2010/03/erik-aadahl-special-editing-for-the-mix/>]. Accessed 1 Mar. 2011.

⁴⁶ Quoted in Blair Jackson, *Transforming Blockbuster Sound*: [http://mixonline.com/post/features/audio_transforming_blockbuster_sound/]. Accessed 1 Mar. 2011.

⁴⁷ Ibid.

⁴⁸ David Bordwell, *The Way Hollywood Tells It: Story and Style in Modern Movies* (Berkeley and Los Angeles: University of California Press, 2006): 120.

⁴⁹ Ibid.: 180.

⁵⁰ Ibid.: 180.

⁵¹ Kristin Thompson, *Storytelling in the New Hollywood*: 8.

⁵² Bordwell, "Intensified Continuity": 17.

⁵³ The first film in the series, *The Bourne Identity*, was directed by Doug Liman, and features a more conservative use of intensified techniques than what Paul Greengrass brings to the first sequel, *The Bourne Supremacy*, and the *Ultimatum*. *The Bourne Identity* features an average shot length of 3 seconds, while *Supremacy* features a 2.4 ASL, and *Ultimatum* a 2.1 ASL.

⁵⁴ Quoted in Anne Thompson, "Greengrass brings auds into picture," *Variety* (August 3, 2007): [<http://www.variety.com/article/VR1117969675?refCatId=2508>]. Accessed 1 Mar. 2011.

⁵⁵ See David Bordwell's website on cinema, *Observations on Film Art*: [<http://www.davidbordwell.net/blog/?p=1175>]. Accessed 1 Mar. 2011.

⁵⁶ Carina Chocano, "Engaging 'Bourne Ultimatum' Sets a Frantic Pace," *Los Angeles Times* (August 3, 2007): [<http://www.latimes.com/entertainment/la-et-bourne3aug03,0,194441.story>]. Accessed 1 Mar. 2011.

⁵⁷ David Denby, "War Wounds," *The New Yorker* (August 6, 2007): [http://www.newyorker.com/arts/critics/cinema/2007/08/06/070806crci_cinema_denby]. Accessed 1 Mar. 2011.

⁵⁸ See Roger Ebert, "Shake, Rattle, and Bourne," rogerebert.com: [<http://rogerebert.suntimes.com/apps/pbcs.dll/article?AID=/20070816/COMMENTARY/70816001>]. Accessed 1 Mar. 2011.

⁵⁹ Quoted in Thompson:

[<http://www.variety.com/article/VR1117969675?refCatId=2508>]. Accessed 1 Mar. 2011.

⁶⁰ Quoted in Bryant Frazer, "Film Editor Christopher Rouse on *The Bourne Ultimatum*," *Studio Daily* (September 11, 2007):

[<http://www.studiodaily.com/filmandvideo/currentissue/8546.html>]. Accessed 1 Mar. 2011.

⁶¹ Ibid.

⁶² Ibid.

⁶³ Quoted in Michael Kunkes, "'Bourne' and the Art of Sound," *Editor's Guild Magazine*, Online Exclusive (March 2008):

[http://www.editorsguild.com/v2/magazine/archives/exclusive/exclusive_031208.htm]. Accessed 1 Mar. 2011.

⁶⁴ The sequence begins at 1:28:58 and ends at 1:30:53. Timings were derived from the Region 1 DVD of *The Bourne Ultimatum* (Universal Studios, 2007).

⁶⁵ Importantly, these expository titles and wide establishing shots serve the purpose of orienting the audience to the general locale, but they do not establish Jason Bourne's position within these spaces.

⁶⁶ Quoted in Blair Jackson, "From Spare to Spectacular: A look at the range of sound techniques used by this year's Oscar nominees," *Millimeter* (March/April 2008): 24.

⁶⁷ The sequence begins at 1:07:00 and ends at 1:09:20. Timings were derived from the Region 1 DVD of *The Bourne Ultimatum* (Universal Studios, 2007).

⁶⁸ Quoted in Blair Jackson, "Fights, Footsteps and Thrills," *Mix* (August 2007):

[http://mixonline.com/post/features/audio_fights_footsteps_thrills/]. Accessed 1 Mar. 2011.

⁶⁹ Quoted in Weaver, "Master Re-Recording Mixer: Richard Portman": 27.

CHAPTER ELEVEN

Conclusion: Seeing the Ventriloquist for the Doll

Writing about Hollywood, F. Scott Fitzgerald once noted, “People in the East pretend to be interested in how pictures are made, but if you actually tell them anything, you find they are only interested in Colbert’s clothes or Gable’s private life. They never see the ventriloquist for the doll.” He went on, “Even the intellectuals, who ought to know better, like to hear about the pretensions, extravagances, and vulgarities – tell them pictures have a private grammar, like politics or automobile production or society, and watch the blank look come into their faces.”¹ The ventriloquist metaphor suggests that while most people might focus on the surface details of Hollywood films and the private lives of celebrities, there is a complex production system that operates just beneath the surface.

One of the goals of this dissertation has been to see past the doll to understand the social and stylistic dynamics of one element of the modern Hollywood production complex. The Hollywood production and post-production sound community is organized around a basic occupational hierarchy called the sound chain, which includes the major roles in the production of a film’s sound track: location mixers, supervising sound editors, sound designers, sound effects editors, Foley artists, ADR and dialog editors, and re-recording mixers. The “private grammar” of sound production is based on a network of relationships, working styles, task structures, occupational mandates, and aesthetic

ideologies that all function to provide mood, feeling, and an overall narrative structure to the sound world of a film. By foregrounding the work of sound professionals in each of these roles, this project has attempted to set in relief the constitutive elements of contemporary sound practices, and offer a social construction of modern sound style. My contribution to the ever-expanding field of film sound studies is, if nothing else, a comprehensive consideration of the sound industry in the so-called digital era.

One reason for choosing to write about the sound industry and the practitioners that populate it was to gain a greater understanding of the relationships, strategies, technologies, and habitual practices that define their work. I wanted to explore the underlying elements of modern sound style by investigating the occupational ideologies and mandates that structure their work.

In large measure, this dissertation has argued that the many sound editors, designers, mixers, artists, engineers, and technicians in the Los Angeles sound community work within a broad set of shared identities, styles, and conventions but also maintain distinct creative voices and practices that underline the freelance structure of the modern Hollywood production complex.

To accomplish this, it was necessary to adopt a research program that accounted for the decision-making strategies and creative choices of sound professionals in order to spotlight the constitutive character of modern sound style. This demanded a middle-level research program that incorporated elements from the sociological study of “social worlds” alongside a film poetic framework that supported interviews and field observations with archival research and close film analysis to determine how filmmakers

solve a range of technical, institutional, and artistic problems using conventional and innovative practices of sound track construction.

As sound practitioners engage with new technologies, identities, and different industrial concerns, the influence is evident in the final track. The sound of modern Hollywood is rich, complex, and dynamic in ways that distinguish it from previous generations of American sound filmmaking. These aesthetic textures reverberate across a number of different genres, budget scales, production companies, and sound facilities in the greater Los Angeles area. And although this project does not claim to tell the whole story of the sound community, it offers a snapshot of the industry's complexion at a certain time, in a certain place, and among a diverse set of practitioners.

While this research program has been applied exclusively to the sound community, it also provides an instructive framework on studying other negotiated crafts within the industry. By investigating how filmmakers in other crafts go about their work as creative decision-makers, it is possible to reconstruct how major stylistic trends, professional identities, and organizational matters take shape. Given the freelance nature of other Hollywood roles, including picture editorial, visual effects, cinematography, composing, production design, costuming, props, stunts, and acting, filmmakers continually wrestle with creative, administrative, technical, and other occupational issues that comprise the task structures and stylistic textures of their crafts. Each one of these roles contains its own history of labor relations, social organization, conventions, recurrent transactions, and networks of cooperation. In this way, the study of sound production is also the study of modern Hollywood since most roles in the larger chain of film production contain similar stories of professional development and stylistic practice.

In asking why a cinematographer chose a certain lens, a composer a certain chord, or a picture editor a certain angle, we must be able to peel back the industrial dynamics and stylistic choices to reveal the factors that informed those decisions.

There is much to be learned from the working methods of film practitioners at every level of the production chain, including “above the line” and “below the line” professionals. Their social and creative realities are the starting points for how films are made and experienced. This project represents only one aspect of a much larger system, but the routines, choices, and feelings discussed here ripple throughout the industry.

This dissertation has argued that a triumvirate of interrelated social, technical, and aesthetic factors has shaped modern sound style and practice. To understand why sound tracks reverberate with a heightened sense of clarity, finesse, and polish, it is important to consider how matters of social organization, technological adoption, and aesthetic convention have influenced the “sound” of digital film sound.

To be precise, I offer three broad conclusions about the form, function, and structure of modern film sound practice. First, sound practitioners participate in a “flexibly specialized” work environment that is chiefly characterized by clusters of interdependent but operationally distinct sound shops and facilities in the Los Angeles area. Following the dissolution of most major studio sound departments in the 1950s and 1960s, most sound professionals became freelancers and contract workers. Even after major studios began reintegration efforts in the 1990s, sound professionals had already begun a transition from “technicians” to “artists.” To compete with other freelancers, sound editors began to call themselves “designers,” and relied on original sound effects recordings to distinguish their creative sound work from others’ work; Foley walkers

became Foley “artists” who provided “custom sound effects” for films; re-recording mixers developed particular mixing styles that emphasized their role as “interpreters” and “painters” of sound. In some cases, this has led to a larger artistic and expressive role for sound practitioners to work with and sometimes revise conventions. Overall, the sound industry in the 1990s and 2000s became as much about social relationships, recurrent transactions, and client-dominant work as it was about working with sound.

Second, the transition to electronic editing and mixing workflow throughout the 1990s and 2000s had a double-edged effect on sound workflow, craft unions, and aesthetics. Computer-based, non-linear editing platforms have streamlined the editorial and mixing process, whereby sound editors and mixers can cut and mix entire sequences on a desktop or notebook computer without being tethered to a large facility or studio sound department. In addition, the ubiquity of the Pro Tools platform, with its third-party plug-ins and basic interface, has streamlined the post-production process in ways that have made it easier for practitioners to present material to different members of the sound chain, make changes, and complete a sequence without switching workstations.

This has also led to a redefinition of labor roles between sound editorial and re-recording. When re-recording mixers were integrated into the Editors Guild, Local 700, in the late 1990s, it signaled a shift in how sound editors approached the work of sound mixing. As sound editorial grew in the “sound designer” era of the 1980s and 1990s, more editors began pre-mixing effects elements and complex sequences of sound effects, which was traditionally viewed as the work of re-recording mixers. The blurred line between the edit and the mix was partially the result of the proliferation of digital audio workstations, which included easy-to-use mixing options. At the same time, the

integration of both post-production sound departments – editorial and re-recording – to one sound local made it more difficult for editors and mixers to maintain distinct identities.

Given that the post-divestment era is comprised of an interdependent network of freelancers in a market dominated by major studio facilities, large independents, and mid-level boutique firms, electronic platforms such as Pro Tools have created a way for small firms like Ear Candy Post to compete with large independents like Skywalker Sound and major studios like Warner Bros. In each case, the tools remain the same, leaving practitioners to highlight how their own craft specializations can enhance a particular film project.

At the same time, the transition to digital workflow, precipitated by the perceived speed of the process, has encouraged production executives and studio personnel to trim production and post-production budgets, reasoning that it takes a shorter amount of time to complete the sound work. As a result, crew sizes have been reduced to compensate for smaller budgets, even though digital tools do not necessarily accelerate the time it takes an editor or mixer to make the creative choices necessary to distinguish themselves in the marketplace. In addition, the bounty of choices that digital sound libraries and instant access provide have, in some cases, led to creative bottlenecks, where editors and mixers are faced with too many options, and must pare down the final track to ensure that it remains comprehensible and clear.

Third, and finally, I have argued that the creative decisions that sound practitioners make on a daily basis are intimately tied to concepts of artistic choice that, on one hand, demonstrate a keen awareness to the constitutive demands of narrative

filmmaking, and support the expressive textures of their unique professional identities, on the other. The ways that practitioners go about making sense of their work are crucial in understanding the form and function of sound styles – from the miking strategies of a production mixer interested in a reverberant sound space to the performance value of Foley to the artful syllable splicing of dialog editing. It also means paying close attention to the role of intuition and “feel” that guides many of these editing, mixing, and performance choices.

In addressing the major changes to the operation of the sound industry and the technologies of the trade, there is a remarkable sense of continuity and stylistic overlap between the current era of sound practice and previous ones. Despite changes to technology and task structures, occupational ideologies within the sound industry remain flexible but fitted to the bounded conventions of the classical paradigm. The insistence on a comprehensible, intelligible, and clear sound track has remained amazingly consistent over the years. At all levels of the sound chain, sound practitioners work with sound and picture to create a cohesive audiovisual logic that supports the fundamental tenets of classical storytelling. The discourse on sound track construction has, almost to a fault, remained tied to notions of intelligibility and the cause-and-effect chain of classical narration. Yet practitioners have also revised certain conventions, which has resulted in a sound track that is far more complex, layered, dynamic, and intensified than in previous eras.

In some sense, this research afforded an opportunity to engage with and revise broader assumptions about film sound theory and style, including the “intelligibility” thesis and the continuity model of classical Hollywood filmmaking. Although the sound

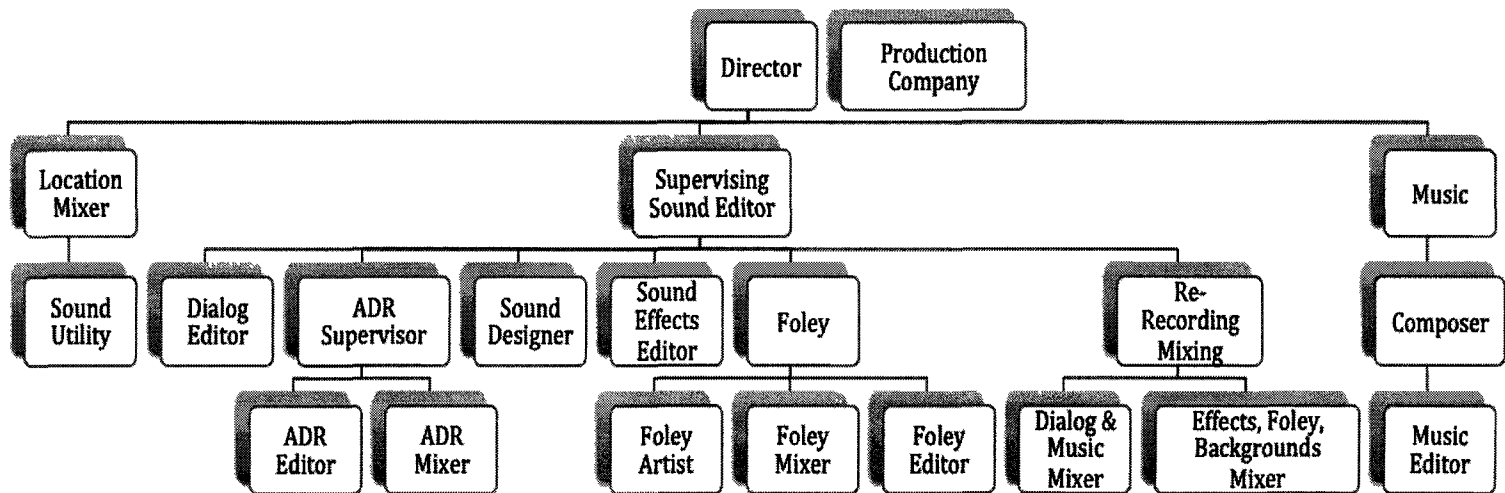
chain contains distinct professional identities, task structures, and occupational mandates, there is a remarkable sense of continuity and shared practices among the members of the sound community. Despite the compartmentalized nature of the sound chain, and the diverse ways in which practitioners formulate different solutions to common problems, sound track construction remains bound to a basic structural framework that values intelligibility and simplicity. As I have shown, digital mixing strategies may have increased the number of pre-mixes a re-recording mixer creates, but the final track is more often than not stripped of what is deemed to be unnecessary or superfluous material.

In the end, the social construction of sound style depends on a deep understanding of craft norms, conventions, occupational ideologies, mandates, and task structures. The impact of flexible specialization, digital workflow, and the continuation of the classical model of filmmaking are especially pronounced in the professional identities of sound practitioners. More than anything else, however, this dissertation has attempted to spotlight a method of analysis that foregrounds the artistic work of filmmakers, and to provide a framework by which we can begin to understand the networks and practices at play in the making of films. Seeing and hearing beyond the formal complexity of the doll reveals more than the ventriloquist; it also reveals the artistry of the performance.

Notes

¹ Quoted in Faulkner, *Music on Demand*: 16.

Appendix A: The Sound Chain



Appendix B:

Selected Personal Interviews and Conversations

(By telephone, e-mail, and in person)

Michael Babcock, supervising sound editor, 20 June 2009.
 Anna Behlmer, re-recording mixer, 6 June 2009.
 Beau Borders, re-recording mixer, 20 June 2009.
 Patrick Cycone, re-recording mixer, 27 May 2009.
 Peter J. Devlin, production mixer, 27 May 2009.
 Ron Franklin, former President of WaveFrame, 18 June 2010.
 Luke Dunn Gielmuda, sound editor, 22 Apr. 2009.
 Bari Goodis, sound and picture editor, 22 June 2009.
 Wayne Griffin, supervising sound editor, 15 Apr. 2009.
 Per Hallberg, supervising sound editor, 15 Apr. 2009.
 D.M. Hemphill, re-recording mixer, 14 May 2009.
 Lora Hirschberg, re-recording mixer, 9 June 2009.
 Blair Jackson, Senior Editor, *Mix Magazine*, 16 Mar. 2009.
 J. Stanley Johnston, re-recording mixer, 20 May 2009.
 Ren Klyce, supervising sound editor, 16 July 2009.
 Gregg Landaker, re-recording mixer, 2 June 2009.
 Karen Baker Landers, supervising sound editor, 30 Apr. 2009.
 MaryJo Lang, Foley mixer, 11 Apr. 2009 / 20 June 2009 / 22 Sept. 2010.
 Charles Maynes, sound editor, 7 Apr. 2009.
 Alyson Dee Moore, Foley artist, 30 Mar. 2009 / 20 June 2009 / 22 Sept. 2010.
 Andy Nelson, re-recording mixer, 13 Aug. 2009.
 Ed Novick, production mixer, 31 May 2009 / 8 July 2009 / 17 July 2010.
 Kevin O'Connell, re-recording mixer, 20 Apr. 2009 / 20 June 2009.
 John Ottman, composer and picture editor, 6 Aug. 2009.
 Perry Robertson, supervising sound editor, 8 Apr. 2009 / 18 June 2009.
 John Roesch, Foley artist, 1 June 2009 / 20 June 2009 / 9 Aug. 2010 / 22 Sept. 2010.
 Scott Sanders, sound designer, 30 Apr. 2010.
 Chris Scarabosio, supervising sound editor/re-recording mixer, 7 May 2009.
 Dominic Sena, director, 20 June 2009.
 Leslie Shatz, re-recording mixer, 20 June 2009.
 Frederick Stahly, dialog editor, 18 June 2009 / 30 June 2010
 Peter Staubli, sound editor, 18 June 2009 / 13 July 2009 / 20 Aug. 2009.
 Mark Stoeckinger, supervising sound editor, 1 June 2009.
 Becky Sullivan, ADR/dialog editor, 3 Apr. 2009 / 20 June 2009.

Appendix C:
Transformers 2: Revenge of the Fallen Pre-Mix Cue Sheet
 (Erik Aadahl, sound editor/sound designer)

TRANSFORMERS 2 : FX Pre-Dub Layout				
05 Jan. 2009				
FX				
1	AFX	Doors, etc	Punches	Beeps
2	B	Swttrs	Bodyfalls	Foley Props
3	C	Swish/Whoosh		
4	D	Misc		
5	WEAPONS A			
6	WEAPONS B	Swt	Zips/Whiz/Rico	
7	IMPACTS	Explos		
8	IMPACTS Swt	Debris		
9	BG Guns			
10	BG Explos			
11	VEHICLES A			
12	VEHICLES B			
13	VEH Swt A	Turbine	Slice, etc	
14	VEH Swt B	Skids	Tires	
15	ROBOT A	Mechanics		
16	ROBOT A Swt	Swttrs	Split	
17	ROBOT B	Motor	Power	
18	ROBOT B Swt	Swttrs	Split	
19	ROBOT C	Feet	Bodyfalls	
20	ROBOT C Swt	Swttrs	Split	
21	ROBOT D Foley	Surface textures		
22	ROBOT vocals			
23	ROBOT weapons			
F.S.	Foley Footsteps			
Cloth	Foley Cloth Mvmt			
BG				
1	Wind	Air	Roomtone	
2	Wind swtnr	Tonal atmos		
3	Birds	BG Overflow	Activity/Mvmt	
4	Bugs			

Courtesy Erik Aadahl and Miguel Isaza, *Designing Sound*.
<http://designingsound.org/2010/03/erik-aadahl-special-editing-for-the-mix/>

Appendix D: Shot/Sound Breakdowns

In determining the average shot length (ASL) of the following sequences, there was a margin of error of +/- .10 seconds. The ASL was achieved by using Yuri Tvisian's database tool available at <<http://www.cinemetrics.lv>>.

Glossary

CU – Close-up

MCU – Medium close-up

ECU – Extreme close-up

LS – Long shot

MLS – Medium long shot

Int. – Interior

Ext. – Exterior

The Bourne Ultimatum: Apartment Fight (1:07:00-1:09:20)

Shot	Length	Image	Sound
1.	.506	Ext. MLS Bourne framed by window, looking across the street	Music (mickey mouse on Bourne stopping); ambience
2.	.989	MLS Bourne POV seeing Nicki in window reflection	Music; ambience
3.	.593	ECU Bourne's face moving out of frame	Music; Foley step; ambience
4.	1.353	Int. Hallway – MCU Desh searching	Music
5.	1.130	Int. Hallway – MCU Desh revealed coming around corner	Music continuous
6.	.70	MCU Bourne takes a running leap (front view)	Foley steps; Music
7.	.569	CU Bourne continues his run-up	Foley steps; Music
8.	.442	ECU Bourne's foot on railing	Railing hit; music
9.	.351	MS Bourne leaping (low angle)	Railing hit continuous; music
10.	1.684	MS Track on Bourne mid-leap; breaks through window	Music stops mid-shot; window shatter; body hit
11.	.51	Int. Apartment – CU Bourne continuous	Glass shatter continuous; body hit; grunt
12.	.26	CU Desh looking offscreen	Glass shatter continuous

13.	.64	CU Nicki turning offscreen	Glass shatter continuous; Nicki gasps
14.	.507	CU over-shoulder of Desh moving forward, shooting pistol once	Glass shatter dissipates; silencer pistol shot; impact on wood/plaster
15.	.377	MCU frontal view of Desh shooting	Impact on wood/plaster surfaces; gun shot
16.	.378	MS Bourne getting up (shaky)	Impact decay (rears)
17.	.378	MS – Two shot of Bourne approaching Desh in doorway (continuous on Bourne getting up)	Foley grab
18.	.25	CU High angle on Bourne grabbing pistol	Foley grab continuous
19.	.25	CU Bourne and Desh struggle with pistol; shaky; pistol is dislodged from Desh's hand	Gun is smacked; hits hard surface
20.	.25	ECU Gun falls onto table (shaky)	Gun fall continuous
21.	1.018	CU Nicki moving toward fight (track)	Perspective shift on struggle (fainter); neighborhood ambience; Foley steps
22.	.378	MCU Desh lands a punch to Bourne's face	Ambience continuous; Desh punch; Foley cloth
23.	1.149	CU struggle; pan left to empty doorway (shaky)	Foley cloth continuous; grunts; Desh lands another hit; Foley gun moves
24.	1.936	CU Nicki moving toward door	Perspective shift on struggle (Foley cloth and grabs); Desh/Bourne grunts
25.	.456	CU Bourne and Desh struggle	Bourne lands a punch; grunt
26.	.634	CU Desh and Bourne struggle out of focus; MLS Nicki in doorway	Foley cloth; heavy breathing
27.	.25	ECU Gun pointed at doorway goes off	Gun shot
28.	.763	Same as shot 26; Nicki ducks; bullet ricochets off wall	Ricochet off wall; Nicki gasps
29.	.377	ECU Bourne takes a punch	Punch
30.	.378	ECU Gun goes off again	Gun shot with ricochet
31.	.633	ECU Bourne twists Desh's arm	Swat; cloth rustle; Bourne grunt; gun hits floor
32.	.506	CU gun is already on floor	Gun hitting floor continuous
33.	.378	ECU Bourne and Desh continue to struggle	Foley steps and frantic movement

34.	1.02	MS Bourne and Desh move into living room; Bourne is thrown	Foley movement continuous; Bourne impact on wall; Bourne grunt
35.	.533	ECU Bourne on floor	Grunt continuous; impact continuous
36.	.38	MCU Desh on top of Bourne; lands a punch	Desh lands a punch; Bourne gasp
37.	.505	ECU Bourne taking another punch	Punch; Gasp continuous
38.	.507	MCU Nicki runs into room; hits Desh	Foley step; Desh lands another punch; gasp
39.	1.09	CU Nicki alternate angle grabbing Desh	Punch decay; Nicki groans
40.	.71	ECU Bourne grabs Desh	Nicki groan continuous; Bourne hand grab
41.	.891	MCU Nicki wraps arm around Desh's mouth; zoom back	Desh mouth; Nicki hand grab; Nicki groan again
42.	.378	MCU Side angle on Nicki and Desh struggling; she pulls his mouth back	Mouth pull continuous
43.	.506	CU Same action repeated	Groan; mouth pull continuous
44.	.506	MCU as in shot 42. Desh elbows Nicki	Mouth pull continuous; Elbow punch; Nicki groans
45.	.378	CU Desh elbows with his other arm	Elbow punch
46.	.378	MCU Desh kicks Nicki back	Kick
47.	.12	CU Nicki taking a kick to the chest (repeated)	Kick continuous; Nicki gasp
48.	.378	CU Nicki falling (low angle)	Nicki fall
49.	.633	CU Nicki completes fall (shot through a decorative object)	Nicki fall continuous
50.	1.28	MS Bourne kicks Desh from floor	Kick; Bourne groan; Desh hits floor
51.	.378	CU Bourne gets up	Bourne breathes
52.	.634	MCU Low angle on Desh getting up and Bourne standing	Bourne breathing continuous; Desh standing up (Foley step; cloth)
53.	.506	MS Two shot – Desh takes a swing at Bourne	Breathing continuous; Desh "air swing"
54.	.633	Closer on Bourne – he deflects two hits from Desh	Deflection hits; Bourne grunts
55.	.509	Same as shot 53: Bourne takes a shot at Desh's face	Bourne punch;
56.	.506	Closer two shot – Desh throws Bourne out of frame	Tussle (Foley cloth); grunts

57.	.762	ECU Desh throws Bourne into glass chest	Tussle continuous; glass shatter; groan
58.	.633	CU Alternate angle – Desh pulls him out	Shatter continuous
59.	.249	CU Bourne through doorway (continuous pull out)	Shatter continuous; grunt
60.	.506	ECU Bourne hitting wall	Shatter decay; wall hit
61.	.634	CU Bourne kicks Desh in leg	Leg kick; cloth
62.	.636	CU Same angle – Bourne misses a punch	Leg kick decay; Bourne takes “air” swipe; Desh grunt
63.	.761	CU Desh strikes Bourne; Bourne deflects	Air swipe; deflection; Desh grunt
64.	.505	Closer on Bourne twisting Desh’s arm around	Cloth grab
65.	.506	MCU Bourne strikes Desh in the face	Cloth grab continuous; face smack
66.	.377	MS Bourne and Desh struggle; Bourne grabs arm	Cloth grabs
67.	.13	Closer on Bourne grabbing Desh’s hand	Hand grab
68.	.51	ECU Bourne grabbing Desh’s hand	Hand grab continuous; grunt
69.	.51	CU Desh jumps out of frame	Clothing “whish” as Desh begins jump
70.	.762	Wider – Desh is mid-flight, jumping out of hand lock	Clothing “whish” continuous; heavy Foley step landing; grunt
71.	.249	CU Bourne begins sweep kick	Foley landing continuous; “air” sweep
72.	.506	Wider – Bourne completes kick; Desh falls	Air sweep; Desh fall
73.	.379	CU Bourne stands, moves out of frame	Fall completes; Bourne grunts
74.	.549	MCU Bourne kicks Desh twice, who stands and grabs him	Grunt completes; Bourne kick; Foley step; kick again; grunt
75.	1.419	Wider – Desh throws Bourne onto coffee table	Foley steps, struggle; glass shatter and blunt impact
76.	1.15	MS Desh comes at Bourne with a golden candlestick; swings down at Bourne	Glass/blunt impact continuous; air swing
77.	.250	MCU Reverse shot – Desh lands blow on coffee table; Bourne swerves to avoid impact	Metal impact from candlestick
78.	.251	ECU Lower angle on Desh hitting coffee table with candlestick	Metal impact continuous; gasp; Foley step

		(continuous)	
79.	.30	ECU Bourne picks up book (pan around, shaky)	Foley step continuous
80.	.251	MCU Bourne raises book, uses it to shield against second hit from Desh's candlestick	Foley steps continuous; blunt impact with metal reverb.
81.	.13	MCU Bourne kicks away Desh	Impact continuous; kick
82.	.92	CU Bourne's leg kicking Desh; pan to follow Desh falling	Kick continuous; clothing rustle; candlestick hits ground (metal reverb)
83.	.377	CU Bourne moves to stand	Clothing rustle (Desh)
84.	.633	MCU Bourne stands; Desh swings away	Clothing rustle; Desh's air swing
85.	1.00	CU Bourne uses book to stop second swing; jams book into Desh's foot; pan down	Metal impact on book; grunt; blunt impact on foot; Desh scream
86.	.25	CU Reverse shot – Bourne whips book at Desh's face	Air swing; impact on Desh's face;
87.	.38	CU Over Bourne's shoulder – Desh face hit continuous	Impact continuous; Foley book grab; grunt
88.	4.03	CU Bourne lunges at Desh's head; forces book into his throat, pushes back against glass chest	Grunt continuous; glass shatter; blunt impact; body hits
89.	1.29	CU Bourne pushing Desh into chest	Grunts; Foley hand grabs
90.	2.34	Reverse angle CU on Desh	Furniture movement; grunts continuous; small glass breaks
91.	.89	Two shot CU; Desh grabs Bourne's arm	Grunts and glass continuous; hand grab
92.	1.29	MCU Bourne hitting Desh through book	Book hit and punch blunt impacts
93.	.51	MCU low angle – Bourne hits book again	Blunt punch impact; gasp
94.	1.42	CU Two shot – Bourne hits Desh; struggle	Gasp continuous; arm punch; wood splinter; furniture shake; struggle (Foley cloth)
95.	.64	ECU Desh grabbing Bourne; pan right to follow	Foley steps and clothing grabs
96.	1.82	Reverse ECU Bourne hitting Desh in the ribs with book	Foley cloth continuous; blunt book impacts (2); grunts, gasps
97.	.77	MCU Bourne continues hits in ribs; Desh dislodges book	Gasps continuous; bigger blunt impact; book is tossed (L)
98.	.89	CU Desh begins to throw Bourne	Hand grab; body smack;

			gasp
	1.28	MCU reverse angle – Desh continues throw through doorway, into bathroom; Bourne stumbles	Grunt; body hit on door; big smash on floor
99.	.64	Desh enters bathroom (similar angle)	Continuous smash
100.	1.02	MS Overhead in bathroom; Bourne in corner, Desh enters. Bourne throws plastic object	Plastic object thrown; gasp
100.	.64	CU Bourne completes throw, grabs towel	Plastic object lands; gasp
101.	1.02	ECU Desh picks up a razorblade on sink, swings it at Bourne	Object decay; knife unsheathing; knife swipe; gasp; cloth movement
102.	.25	CU Bourne deflecting with towel around wrist	Knife hitting towel; Gasp continuous; cloth movement continuous
103.	.25	MS Two shot – Bourne fending off knife	Knife swipe
104.	.20	ECU Desh's chest – Bourne hits Desh	Chest impact; grunt
105.	.20	CU over Bourne shoulder – Desh falls back	Cloth rustle; second grunt
106.	.20	Close two shot – Bourne protects from another knife slash	Knife air slash; grunt continuous
107.	.64	Same as shot 105 – They untangle	Air slash, cloth movement
108.	1.00	Overhead CU – Bourne wraps towel around Desh's arm	Air slashes continuous; knife prick
109.	.37	ECU toweled hand	Air slashes continuous; cloth movement
110.	.38	Same as shot 105. Struggle	Air slashes continuous; cloth movement continuous; body hit on wall
111.	.64	CU Bourne pushes Desh against bathroom door	Cloth movement continuous; Body slam
112.	1.28	CU reverse angle – forces Desh's arm against door a second time – knife dislodges	Second body slam; knife falls to ground
113.	.38	ECU Bourne wraps towel around Desh's neck	Knife fall continuous; Foley cloth
114.	.30	MS completing the action	Foley cloth more pronounced
115.	.90	ECU struggle	Big smash – sink is turned over (offscreen)
116.	1.80	MS overhead – sink falls	Body hits against wall; sink pipe reverb

117.	1.79	MCU (shaky) Bourne forces Desh into corner	Grunts, gasps; body hits against wall
118.	1.28	CU front view of Bourne keeping Desh in corner – Desh slaps him	Grunts; slap
119.	1.95	ECU Bourne's face – zoom out to reveal Desh as well	Grunts continuous; another slap
120.	.64	CU Bourne keeps Desh down	Gasps continuous; body rustling
121.	2.34	Wider on Bourne – Desh slaps Bourne again	Gasps; face slap; Bourne pushes hand down
122.	1.42	MCU Bourne pushing Desh further into floor, choking him	Foley cloth; gasp
123.	1.02	ECU Desh	Gasp
124.	1.15	MS – overhead – Bourne continues to choke Desh	Ceiling cracks; big gasp from Desh
125.	1.95	CU Bourne	Foley cloth; Desh gasps
126.	1.15	Desh slides down	Body slide
127.	.89	CU Bourne – Desh slides further	Big grunt from Bourne; slide continues
128.	.64	ECU Desh, falling to floor	Floor hit, limp; cloth movement
129.	2.47	CU Bourne stands	Floor hit completes; Foley steps; Bourne breathes heavy; ambience creeps in (neighborhood, water drips)
130.	1.55	ECU Desh	Bourne breathes continuously; ambience continues
131.	3.51	CU Bourne through doorway – zoom in close on his face	Ambience continuous as is his breathing
132.	2.08	MCU reverse shot – Nicki standing in doorway	Breathing and ambience continuous; music begins
133.	5.96	Back to shot 130, close; Bourne reaches down	Continuous – birds add to ambience; Bourne cloth movement; music
134.	3.76	Same as shot 131; Nicki moves closer	Bourne is searching Desh's bag; Bourne breathing; music
135.	9.97	CU Bourne searching; stands up, says, "Code it in. We need to be dead." Moves off screen	Bourne completes search; Bourne breathing; Foley steps; Nicki moves off screen; music

The Bourne Ultimatum:
Manhattan Car Chase (1:28:58-1:30:53)

Shot	Length (seconds)	Image	Sound
1	1.02	Int. Bourne's car; MCU on Bourne	Engine rev; siren; music
2	2.17	Ext. Street view; MLS track	Perspective shift on siren; Black sedan engine rev; car horns; music
3	1.17	Ext. Street view; Pan left; CU Bourne's cruiser	Perspective shift on siren (closer); cruiser by (right to left); music
4	1.03	Ext. Street view; Two black sedans pass	Car by's (right to left); music
5	1.81	Int. Bourne's cruiser; CU profile	Siren; Engine rev; music
6	.64	Int. Bourne's POV – shaky	Continuous; tire squeal
7	.25	Int. Bourne CU (same as shot 5)	Tire squeal continuous; music
8	.77	Ext. MCU on Bourne's car swerving	Perspective shift on squeal; siren; music
9	.51	Int. Black sedan POV	Perspective shift on siren (louder); music
10	.77	Ext. LS overhead	Perspective shift on siren (lower); car impact (low end; metal/glass)
11	.77	Ext. CU Black sedan crashes into camera (front view); pan left	Impact (metal); glass shatter
12	.51	Ext. MCU Sedan continues crash (side view)	Glass shatter
13	1.82	Ext. MLS on Bourne's cruiser escaping as black sedan completes crash	Glass shatter; Siren; engine rev
14	.38	Int. ECU on Bourne between steering wheel spokes	Perspective shift on engine rev; siren; Bourne grunts
15	.50	Int. ECU Bourne hits the brake with his right foot	Pedal hit; tire squeal
16	1.15	Ext. MS profile of Bourne's cruiser	Tire squeal
17	.51	Int. 2 nd Black Sedan POV nearing Bourne from behind	Sedan's tire squeal
18	.38	Ext. CU Black sedan smashes cruiser (side view)	Tire squeal continuous; impact (metal/glass)

19.	.24	Int. CU Bourne – whiplash	Impact (metal/glass)
20.	.20	Int. ECU Bourne – whiplash	Continuous; Bourne groans
21.	.90	Ext. MCU Cruiser – speeds off	Glass shatter completes; Siren burps; tire squeal
22.	1.02	Ext. CU Cruiser (front angle)	Continuous siren; engine rev
23.	.85	MCU – Black SUV – driver takes shot at Bourne	Continuous siren; SUV engine rev; silencer gun shot
24.	.20	MCU Cruiser	Bullet impact
25.	.25	Int. CU Bourne, window shatters on driver's side	Window shatters; gun shot
26.	.51	CU SUV Driver continues to shoot	Gun shot; siren reappears
27.	.90	Int. Unknown Car POV – Cruiser crosses intersection	Gun shots; siren; engine rev continuous
28.	.89	Ext. CU SUV Driver slides back into car from hanging out window	Perspective shift on engine rev; siren continuous
29.	.38	Int. ECU Bourne hits the gas pedal	Siren continuous; foot smack on pedal
30.	.51	Ext. MLS – Track right as SUV approaches traffic	Car horn (presumably from SUV); engine rev continuous; siren
31.	.38	Ext. Overhead; SUV slams into green sedan, which hits Bourne's cruiser	Siren and horn continuous; brief impact of SUV into green sedan
32.	.51	Int. CU Bourne profile; side impact	Glass shatter; impact (low end)
33.	.25	Ext. MS Cruiser t-boned; spins out	Perspective shift on metal impact
34.	.38	Int. POV green sedan; cruiser continues to spin	Tire squeal
35.	.38	Int. ECU Bourne through wheel spokes	Squeal continuous; wheel turn
36.	.38	Ext. MS Cruiser spins	Squeal continuous; engine rev
37.	.51	Ext. MLS Overhead – Cruiser spins; hubcap spins loose	Squeal and rev continuous; hubcap rolls
38.	.20	Ext. ECU Green sedan light – oncoming	Engine rev intensifies
39.	1.15	Ext. Alternate ECU of SUV ramming green sedan – shaky cam	Engine rev continuous; glass shatters
40.	.77	Ext. Side view of SUV	Glass shatter intensifies (LCRS)
41.	.39	Int. SUV – gunman aims at cruiser through side window	Cruiser's engine and tires
42.	.38	Reverse shot: CU gunman aiming	Cruiser engine continuous
43.	1.02	Ext. ECU cruiser takes off - pan right	Cruiser engine intensifies;

44.	.38	Ext. CU gunman gets SUV going again; cruiser crosses in front of camera (out of focus)	siren Continuous from shot 43. Doppler shift on siren (left to right)
45.	.25	Int. ECU Bourne driving (profile)	Perspective shift on siren; engine rev continuous
46.	2.10	Ext. MS cruiser passes; pan left as SUV chases	Doppler shift on siren and engine rev; pan left and SUV engine revs
47.	1.40	Ext. MS angle on SUV; cruiser in distance	Continuous SUV engine rev; tire squeal; siren on reveal of cruiser
48.	1.43	Ext. Zoom in on cruiser (MS to CU)	Cruiser tire squeal; perspective shift on siren; other car horns (Doppler)
49.	1.41	Ext. MLS SUV turning left at top of street	Horns continuous; siren dissipates; SUV engine rev
50.	1.65	Int. SUV	Perspective shift on engine rev (quieter); siren barely audible, fades out.
51.	1.64	Ext. MCU profile of cruiser	Siren re-emerges strong; "swooshes" of passing cars
52.	2.29	Int. Unknown car POV; pan right to follow cruiser and SUV	Perspective shift on siren; Siren Doppler shift as it passes car on right; SUV horn Doppler as well.
53.	2.06	Ext. MS Cruiser and SUV swerving in traffic; Larger SUV drives in front of camera.	Tire squeals, swerves, and siren burps.
54.	1.08	Larger SUV blocking frame (same as shot 53)	Tire squeal; engines
55.	.71	Ext. Gunman in larger SUV takes aim	Perspective shift on engine revs from cruiser
56.	.44	Int. ECU Bourne hits the brake	Perspective shift on engine rev (louder); brake hit.
57.	.84	Int. ECU Bourne through steering wheel spokes	Tire squeal (loud); wheel turn; Bourne grunt
58.	1.35	Ext. MS Cruiser spins	Perspective shift on squeal; siren returns
59.	1.25	Int. SUV looking at cruiser as it continues to spin	Continuous squeal and siren; engine rev from SUV
60.	.48	Int. ECU Bourne through steering wheel spokes; shifts gears	Shifts gears; squeals are layered
61.	.83	Int. SUV approaching cruiser; cruiser begins going in reverse	Squeals continuous; music starts
62.	.84	Alternate MCU on cruiser as it goes backwards	Squeals continuous; music

63.	1.22	Int. Cruiser; MCU; Bourne is turned around looking out rear window	Perspective shift on squeal (closer); engine rev begins; music
64.	.77	Ext. CU cruiser – pan left	Perspective shift on engine rev (lower); “swooshes” from other traffic; music
65.	.51	Ext. MCU Cruiser approaches stopped larger SUV at full speed	Perspective shift on rev; music
66.	.64	Int. Cruiser; MCU; Bourne prepares for impact	Continuous rev; Impact (metal/glass shatter); music
67.	.25	Int. Cruiser – Impact – ECU Bourne	Continuous impact; music
68.	.50	Ext. MS Cruiser makes impact	Continuous impact (glass shatter); music
69.	.38	Ext. ECU Insert of cruiser on impact	Continuous impact; music
70.	.77	Same as shot 68	Continuous impact; music
71.	.90	MCU angle on cruiser	Decay of impact; music
72.	1.02	Int. Cruiser ECU on Bourne	Wheel turn, engine rev; music
73.	1.38	Ext. CU Cruiser – pan left	Rev continuous; music
74.	.98	Int. ECU on Bourne	Squeal; music
75.	3.35	Ext. MLS Cruiser and SUV	Larger squeal; dragging parts; music
76.	3.25	Ext. CU Cruiser and SUV pan left	Two distinct engine revs and tire squeals as each car passes; music
77.	1.6	Int. SUV POV gaining on cruiser	Perspective shift on engine rev; tire squeal; music
78.	2.42	Int. Cruiser (rack focus from Bourne to SUV driver)	Distant car horns; SUV engine revs increases as it nears; music
79.	.50	Int. SUV – ECU on Driver who turns into cruiser	Engine rev is continuous; tire squeal on swerve
80.	.20	ECU Both cars collide	Rev continuous; metal hit; music
81.	.13	Int. CU profile on Bourne	Metal continuous; music
82.	.13	Same as 81, slight movement by Bourne on impact	Metal continuous; music
83.	.30	Int. ECU Bourne through steering wheel spokes during impact	Metal continuous; music
84.	1.15	Int. Bourne POV - shaky	Metal hit ends; other car horns and tire squeals; music
85.	.38	Int. ECU Bourne (same as shot 83)	Squeals continuous; wheel turn; music
86.	2.08	Ext. MS Cruiser rams SUV	Squeals; metal hit; engines; other car horns (Doppler); music

87.	1.54	Ext. Reverse view (front) of both cars	Engines continuous; Cars pass in front, tires squealing.
88.	1.49	Ext. CU Cruiser on Bourne, pass left to reveal SUV hitting it again.	Engines continuous; metal hit on impact; music
89.	.96	Int. ECU Bourne on impact	Metal hit continuous; music
90.	.89	Ext. MLS Both cars continue past camera	Perspective shift on engines; tire squeals; music
91.	.51	Int. ECU SUV Driver; turns into Cruiser	Continuous squeals; grunt as he turns wheel; music
92.	.25	Int. CU Bourne on impact	Metal hit; music
93.	.50	Ext. CU Collision of both front ends	Metal hit continuous; glass shatter; tire squeal; music
94.	.50	Ext. CU Alternate angle on collision	Cruiser tire squeal as it spins out; music
95.	.38	Ext. MCU Alternate angle on cruiser spinning	Cruiser tire squeal continuous; music
96.	.77	Int. ECU Bourne	Tire squeal continuous; music
97.	.64	Ext. MCU Bourne POV with oncoming cars	Squeal decay; oncoming car horns (Doppler); music
98.	.51	Int. ECU Bourne through steering wheel spokes; turns wheel	Hand on wheel, turning; traffic; music
99.	.77	Int. ECU Foot on brake	Pedal hit; brake squeal; music
100.	.38	Int. ECU Bourne through wheel, shifting gears	Brake squeal continuous; Hand on gear-shift; music
101.	.90	Ext. MS - Cruiser is spun	New tire squeal; music
102.	.90	Ext. MCU - Alternate angle as cruiser is pushed onto concrete median	Squeal is continuous, then elevated to include rougher metal-on-metal sound; music
103.	1.15	Int. CU Bourne looking out window	Perspective shift on grinding sound; music
104.	.51	Int. ECU SUV Driver	Metal grinding continuous; engine rev; music
105.	.38	Int. SUV Driver's foot hitting gas	Metal grinding continuous; Pedal hit; music
106.	.90	Ext. MCU - Cruiser passes over camera	Acceleration continued from shot 105; metal grinding; music
107.	.64	Ext. MCU - Opposite angle, cruiser moving away from camera	Doppler shift on accelerating car; music
108.	.64	Int. ECU Bourne through wheel	Acceleration is

109.	.38	Int. CU Bourne ducks, moves out of frame	continuous; music Continuous from shot 108.
110.	.77	Int. CU Bourne wrapping seatbelt around himself	Continuous from shot 108; seat belt effect; music
111.	1.02	Ext. MLS – Cruiser t-bone, pushed by SUV on median	Acceleration continuous; Impact begins (metal/glass); music cuts out during shot
112.	1.28	Ext. MCU – Side angle on same action	New impact (metal/glass); vocal effect
113.	.64	Ext. MS – Alternate front angle of impact	Impact continuous; vocal effect continuous
114.	2.55	Angle similar to shot 111	Impact continuous
115.	2.57	Ext. MS frontal view of wreckage	Impact continuous; spring effect
116.	2.15	Ext. MS opposite view of wreckage	Impact decay continuous
117.	1.9	Ext. MS Passersby get out of cars; pan right to wreckage	Car doors slam; steam; car door opens; passerby dialog
118.	2.81	Ext. MCU SUV and Driver	Steam perspective shift; plastic bumper

Appendix E: Sample Interview Questionnaire

Many of the interviews conducted for this project followed a relatively basic set of questions. In most instances, interviewees were asked the same questions in order to better develop an accurate cross section of activity and organization within the sound industry. What follows is an example of the kind of questions that were posed to sound editors, mixers, designers, Foley artists, ADR and dialog editors, and other members of the Hollywood sound community.

1. Describe in some detail the process of how you come to work on a particular film project?
2. Typically, what are among the first tasks you must accomplish on any new project?
3. Can you describe your involvement in other stages of a film's production (including sound track construction)?
4. What is the immediate network of individuals with whom you work on a film?
5. What qualifications did you need to acquire this position?
6. Is there a specific route one takes to become an editor, mixer, etc.?
7. What role do you have in conceptualizing the "sound" of any given film project?
8. How long do you typically have to work on a film?
9. Some have said that the film business is a constant struggle between art and commerce. What do you make of that assessment?
10. In a broad sense, do you have a particular style for which you are known and get hired?
11. Can you describe the relationship between sound practitioners, studios, and other elements of the "sound industry"?
12. What are the key pieces of technology that you use on a daily basis?
13. What, if any, technological developments over the last 30 years do you consider to have had the most impact on your work with sound?
14. Your work is successful, when? Your work is not successful, when?
15. Describe the most important factors that influence your creative choices?

Filmography

American Gangster (2007, Ridley Scott)
American Graffiti (1973, George Lucas)
Any Given Sunday (1999, Oliver Stone)
Apocalypse Now (1979, Francis Ford Coppola)
Armageddon (1998, Michael Bay)
Back to the Future (1985, Robert Zemeckis)
Bad Boys (1995, Michael Bay)
Batman (1989, Tim Burton)
Batman Begins (2005, Christopher Nolan)
Batman Forever (1996, Joel Schumacher)
Batman: Mask of the Phantasm (1993, Eric Radomski)
Batman: The TV Series (1966-1968)
Black Hawk Down (2001, Ridley Scott)
Blast from the Past (1999, Hugh Wilson)
The Bourne Identity (2002, Doug Liman)
The Bourne Supremacy (2004, Paul Greengrass)
The Bourne Ultimatum (2007, Paul Greengrass)
Casino (1995, Martin Scorsese)
The Charge at Feather River (1953, Gordon Douglas)
The Conversation (1974, Francis Ford Coppola)
Clear and Present Danger (1994, Phillip Noyce)
Close Encounters of the Third Kind (1977, Steven Spielberg)
Columbo (1971-2003)
Contact (1997, Robert Zemeckis)
Crank (2006, Neveldine)
The Curious Case of Benjamin Button (2008, David Fincher)
The Dark Knight (2008, Christopher Nolan)
The Devil's Rejects (2005, Rob Zombie)
Distant Drums (1951, Raoul Walsh)
Down in the Valley (2005, David Jacobson)
The Empire Strikes Back (1980, Irvin Kirshner)
Eraserhead (1976, David Lynch)
Fame (2009, Kevin Tancharoen)
The Fast and the Furious (2001, Rob Cohen)
Field of Dreams (1989, Phil Alden Robinson)
The Flintstones (1994, Brian Levant)
The Fugitive (1993, Andrew Davis)
Fight Club (1999, David Fincher)
Finding Nemo (2003, Andrew Stanton)
Forrest Gump (1994, Robert Zemeckis)
Frailty (1999, Bill Paxton)
Frances (1982, Graeme Clifford)

The Game (1997, David Fincher)
The Ghost and the Darkness (1995, Stephen Hopkins)
G.I. Joe: The Rise of Cobra (2009, Stephen Sommers)
Gladiator (2000, Ridley Scott)
The Godfather (1972, Francis Ford Coppola)
The Godfather: Part II (1974, Francis Ford Coppola)
Green Zone (2009, Paul Greengrass)
Gremlins (1984, Joe Dante)
Halloween (2007, Rob Zombie)
Halloween 2 (2009, Rob Zombie)
Hoodwinked (2005, Cory Edwards)
House of 1000 Corpses (2003, Rob Zombie)
The Hunt for Red October (1990, John McTiernan)
The Hurt Locker (2009, Kathryn Bigelow)
Iron Man (2007, Jon Favreau)
Jackson County Jail (1976, Michael Miller)
Jennifer's Body (2009, Karyn Kusama)
Juno (2007, Jason Reitman)
Jurassic Park (1993, Steven Spielberg)
The Kite Runner (2007, Marc Forster)
Knight and Day (2010, James Mangold)
Lars and the Real Girl (2007, Craig Gillespie)
Letters from Iwo Jima (2007, Clint Eastwood)
Lights of New York (1928, Brian Foy)
Lost in Translation (2003, Sophia Coppola)
Love Don't Cost a Thing (2003, Troy Beyer)
The Matrix (1999, Andy and Larry Wachowski)
McMillan and Wife (1971-1977)
Monkey Business (1931, Norman McLoud)
The Mummy: Tomb of the Dragon Emperor (2008, Rob Cohen)
Nashville (1975, Robert Altman)
One from the Heart (1981, Francis Ford Coppola)
Open Range (2003, Kevin Costner)
The Patriot (2000, Roland Emmerich)
The Perfect Storm (2000, Wolfgang Petersen)
Phone Booth (2002, Joel Schumacher)
Pleasantville (1998, Gary Ross)
Post Grad (2009, Vicky Jenson)
The Prestige (2006, Christopher Nolan)
The Proposal (2009, Anne Fletcher)
Public Enemies (2009, Michael Mann)
Quantum of Solace (2008, Marc Forster)
Raging Bull (1980, Martin Scorsese)
Raiders of the Lost Ark (1981, Steven Spielberg)
The Rain People (1969, Francis Ford Coppola)
Rambo (2008, Sylvester Stallone)

Ray (2004, Taylor Hackford)
The River (1984, Mark Rydell)
Robocop (1987, Paul Verhoeven)
The Royal Tenenbaums (2000, Wes Anderson)
Se7en (1995, David Fincher)
Show Boat (1929, Harry A. Pollard)
Slumdog Millionaire (2009, Danny Boyle)
Speed (1994, Jan de Bont)
Star Trek (2009, J.J. Abrams)
Star Trek IV: The Voyage Home (1986, Leonard Nimoy)
Star Trek: The Motion Picture (1979, Ray Wise)
Star Wars (1977, George Lucas)
Terminator 2: Judgment Day (1991, James Cameron)
Thank You for Smoking (2005, Jason Reitman)
Thomas the Tank Engine (1984-)
THX 1138 (1971, George Lucas)
Titanic (1997, James Cameron)
Tommy (1975, Ken Russell)
Top Gun (1986, Tony Scott)
The Town (2010, Ben Affleck)
Transformers (2007, Michael Bay)
Transformers 2: Revenge of the Fallen (2009, Michael Bay)
Tron (1982, Jeffrey Lisberger)
Tucker: The Man and His Dream (1988, Francis Ford Coppola)
Twister (1995, Jan de Bont)
Under Siege (1992, Andrew Davis)
Waiting (2005, Rob McKittrick)
The Wizard of Oz (1939, Victor Fleming)
The Wolfman (2010, Joe Johnston)
Zodiac (2007, David Fincher)

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