

The Rise of the Sound Designer: Northern California Film Sound in the 1960s and 1970s

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Northern California based filmmakers in the late 1960s and 1970s pushed the traditional boundaries of filmmaking practices in ways that have been adopted and reworked into contemporary Hollywood filmmaking practices. The article examines labour issues and conditions and politics of film sound work during this era, some of which continue to be applicable today. The development of new production practices pushed filmmakers including George Lucas, Francis Ford Coppola, and Walter Murch to produce films outside the traditional Hollywood studio production paradigm. This new generation of filmmakers held sound with a higher status and popularized non-traditional ways of working with sound. They created the new job title of sound designer to signify a person who supervises and collaborates with the director, department heads, and screenwriter on the use and function of sound through all of the filmmaking phases from the writing stage through the final mix. Through this historical view of the issues, conditions, and politics of Hollywood film sound labour as experienced by practitioners at the early period of the contemporary film sound era, this article illuminates the reasons and ways in which filmmakers sought to work outside of studio controls and union regulations that inhibited their emerging production processes, and led to formation of a media capital for film sound in the San Francisco Bay Area.

Keywords: film sound; sound designer; film production; labour union; media capital

THE RISE OF NORTHERN CALIFORNIA FILM SOUND IN THE 1960S AND 1970S

Hollywood film sound production practices have a long history based in Southern California. The first sound based union, IATSE Local 695, was established in Hollywood in 1930.¹ The early history of production practices is a history of standardizations and union regulations. Filmmaking equipment was a central factor in these standardized production practices. The relatively stable studio production departments along with union regulations that focused on protecting its members' jobs further upheld the stability of work roles and practices for decades. During the studio era, practitioners were trained in their specializations through the unions, through studio apprenticeships, or working their way up the ladder and proving themselves through their work on B-films. The vertical structure of studio production insisted that practitioners specialize in one craft, such as production sound mixing, sound editing, camera operation, or picture editing. Films were produced within a Fordist tradition where a film essentially traveled through the various departments and its components were put together along its way through a hierarchical division of labour.

Hollywood film sound production practices remained stable throughout the studio era and through the transitional period after the 1948 Paramount Decree. It was not until a new generation of filmmakers entered the Hollywood workforce in the 1960s with their film school backgrounds that production practices begin to change. Francis Ford Coppola, George Lucas, Walter Murch, John Milius, Brian DePalma, and Martin Scorsese were the filmmakers of this new generation.² Until the mid 1960s and 1970s, the directors and craft workers in the Hollywood film industry were predominantly those either union trained or whose careers were based in the studio system. They were union members and predominantly only practiced in their specific craft, however, members of the new film school generation were trained in all the crafts of filmmaking at university and learned film production practices in new ways that differed from the studio- and union-trained practitioners. It was these filmmakers' relocation to Northern California that perhaps had the greatest affect on film sound production practices. Far from the studio and union interferences, filmmakers such as Coppola, Lucas and Murch were freer to produce films under their own terms. Consequently, as Gary Rydstrom states, 'Northern California was a big part of a golden age of sound.'³ The San

Francisco Bay Area became the nexus of innovative Hollywood film sound.

One way to conceive this uniqueness and importance of the Bay Area in film sound history is to examine the San Francisco Bay Area as a media capital. Media capital is a concept of cultural geography aimed specifically at understanding sites of media production. Cultural geography is ‘interested in the contingent nature of the culture, in dominant ideologies and in forms of resistance to them.’⁴ Cultural geography looks at the way different processes come together in particular places and how those places develop meaning for people.⁵ Cultural geography thus investigates how ideas, ideals, people, culture, practices, institutions, economy and places interrelate. The study of a locale as a media capital is a historically informed cultural geography that is centered on the relationships of cultural forms such as film, television or radio with social forces, migration and geo-politics.⁶

By exploring the San Francisco Bay Area through the concept of media capital, this article will show how the political economy, socio-cultural, and geo-political aspects of Bay Area filmmaking from a predominantly historical perspective turned the area into an influential centre for film sound that influences, impacts and (re)acts with the production culture of contemporary Hollywood film sound. As Curtin states:

The concept media capital encourages us to provide dynamic and historicized accounts that delineate the operations of capital and the migrations of talent and at the same time directs our attention to forces and contingencies that can engender alternative discourses, practices and spatialities.⁷

In other words, the concept of media capital informs this article to take a historical look at this particular locale and investigate the conditions and forces that shaped the region into a unique centre of film and film sound production. Furthermore, as media capital is a relational concept, San Francisco’s ‘status [as a media capital] is crucially dependent on historical, cultural and institutional relations’ with Hollywood.⁸

To aid in the identification of a media capital, Curtin cites three primary principals of the concept of media capitals. The three primary principals of media capital are (1) the accumulation and concentration of production resources, (2) a substantial migration of creative workers and (3) forces of sociocultural variation.⁹ In

terms of identifying the San Francisco Bay Area as a media capital for film sound, the accumulation and concentration of production resources were found in the film studios American Zoetrope and Lucasfilm, Industrial Light and Magic, Sprocket Systems (now named Skywalker Sound) and the recording studios of Fantasy in Berkeley and the Richard Beggs sound studio in North Beach, San Francisco. The migration of creative workers in the film industry in the 1960s and 1970s came predominantly from the film school graduates from Southern California and those who worked in the music recording industry in the Bay Area. The key aspects of the sociocultural variation between Southern California and Northern California in terms of film sound is found in the production practices. As Curtin states, ‘forces of sociocultural variation provide opportunities for carving out market niches;’ in Northern California one of the niche markets became film sound, followed by computer-generated graphics and computer animation.¹⁰

A further concept that aids in identifying San Francisco as a location of uniquely creative migration beyond the scope of film practitioners is Jacob’s contention that there has been a long identified ‘connection between creativity, bohemian diversity, and vibrant city life.’¹¹ Richard Florida’s quantitative analysis of the concentration of bohemians in a region suggest that regions, including San Francisco, with a high bohemian concentration, serves as a locale that has an ‘underlying set of conditions or milieu which is open and attractive to talented and creative people [...] and thus create a place-based environment that is conducive to the birth, growth and development of new and high-technology industries.’¹² With such openness to innovation and creativity the San Francisco Bay Area historically has been a destination to explore a bohemian and creative lifestyle. The area has also been a centre in the 1950s and 1960s cultural-political civil-rights, gay-rights, anti-war and free speech movements. More recently, the San Francisco Bay Area has been an important facet in the computer industry, the Dotcom explosion in the 1990s and a leading locale for computer animation. San Francisco also rated second in Florida’s ‘New Creativity Index’ in his book *The Rise of the Creative Class* and is ranked at the ‘top of the list in terms of arts and culture and creative workers.’¹³ The San Francisco Bay Area has and continues to be a destination for creative migration.

With such cultural richness, close proximity to Los Angeles and the excitement of the late 1960s, the San Francisco Bay Area provided a highly attractive area for the movie brats who sought out countercultural revolution on their own; a revolution in filmmaking. Re-recording mixer, supervising sound editor, and *Mix* magazine columnist Larry Blake encapsulated this period in stating:

Never before—or since—has there been such a concentrated group of influential filmmakers as there was in San Francisco during the late 1960s. The founding of Francis Coppola's Zoetrope Studios saw the beginning of the careers of director George Lucas and sound designer/editor Walter Murch, among many others. Starting from scratch in 1969, the Bay Area film community would—in less than two decades—become the virtual centre of the film sound world.¹⁴

The consideration for the San Francisco Bay Area as a media capital for film sound is predominantly based on the practitioners and their unique production practices that differentiated themselves, and the area, from others. The creative migration of filmmakers to the San Francisco Bay Area must be discussed through a historical lens that reveals their formative period prior to their migration north. As such, a short history of their Southern California experiences will inform and reveal factors that eventually shaped Northern California production practices. There are three major influences in Southern California; the graduate film schools at UCLA and USC, the Roger Corman film school, and the early studio experiences of this film school generation. This film school generation learned their crafts under much different circumstances than most of the Hollywood-employed craft workers at the time. The film school generation learned the various filmmaking crafts and were able to work in multiple roles on films. While it was extremely difficult to break into the industry, the film school generation gained practical experience working on Roger Corman productions. On Corman's productions, members of the film school generation were able to further hone their production skills that became a large influence on the later film production practices in Northern California.

The essential factors that made particular Northern California production practices possible included the migration of filmmakers to the Bay Area, the concentration of production resources at American Zoetrope and other Bay Area facilities, loose union restrictions, and greater freedom from studio interferences. In

1974, after the theatrical release of *American Graffiti* (George Lucas, Universal Pictures; US, 1974), Lucas discussed the San Francisco film community.

Slowly but surely, a film community is being developed here. Michael Ritchie lives up here now, John Korty lives up here, I live up here, Francis lives up here. They are all close friends of mine, and we are continuing to make movies up here. We sort of support each other. [...] Just recently Phil Kaufman moved up here, and a couple more of my friends are thinking seriously about moving here. So there is a community here, a very small one, and we all exchange ideas. It's not something you can create overnight. You have to get the environment right for it, and then let it grow very slowly.¹⁵

The communal aspects of Northern California filmmakers contributed to the filmmaking environment of the San Francisco Bay Area that was established as an alternative locale to Southern California. The filmmaking environment in Northern California was vastly different from that of Southern California as it was a relatively small close-knit community of filmmakers as opposed to the studio-centric Southern California filmmaking environment.

Film School and Early Industrial Experiences in Hollywood, Los Angeles

The graduate school and early industry experiences of Coppola, Lucas, and Murch were very influential in their move north and to their production practices. While the majority of the generation before them entered the film industry through long studio and union apprenticeships within a single field, the film school generation learned various crafts and spent much of their graduate school in academic film studies and learning production skills. In the 1960s, the film industry was in decline as a result of the Paramount Decree, a dwindling audience, and the emergence of alternative forms of entertainment including television. The filmgoing audience had changed in the late 50s and early 60s from families and middle age to the younger generation of 15- to 30-year olds. In this declining industry, studios no longer provided the training they once did through their apprenticeship programmes or through their B movie divisions.¹⁶ At this time, the training grounds became the universities.

As opposed to the former studio training that emphasized craft specialization, university offered opportunities where there was discussion, enthusiasm, and exchange ideas bouncing throughout the student body.¹⁷ John Milius states that film school was:

Enormously important to me and George Lucas and people like Matt Robbins and Hal Barwood. Steven Spielberg doesn't realize how important it was, because although he never went to film school he was drawn into that group which basically started at USC. We worked on each other's films and nothing has changed. We still make films in much the same way. We all talk about them just like they were student projects. I don't know if it was the film school as such or the meeting of this group of people who became very involved and enjoyed the experience of going to film school. There was obviously some sort of magic in that class.¹⁸

That magic includes a long list of New Hollywood talent from the USC classes of 1966-68: John Milius, George Lucas, Randal Kleiser, Basil Poledouris, Walter Murch, Howard Kazanjian, Willard Huyck, Gloria Katz, Caleb Deschanel, and Hal Barwood. At film school they collaborated on each other's projects, worked in multiple roles on the films, and experienced great freedoms in their filmmaking; all aspects that influenced Lucas and Murch in their later production practices.

The 1960s were also an innovative time for technological change as lightweight 16 mm cameras were being produced as well as the more portable Nagra magnetic sound recorder that became widely used in documentary, avant-garde and the French New Wave. Murch cites the New Wave filmmakers Truffaut and Godard, as well as Bergman and Kurosawa as his early film influences in the 1960s and states, 'I didn't gravitate towards the Americans. It was the Europeans and the Japanese.'¹⁹ While Lucas and Murch attended film school at USC, 'many of the teachers, particularly those teaching craft courses like camerawork and sound recording, also embraced *La Nouvelle Vague*.'²⁰ Thus, much of the production practices taught to them at film school were based on the European rather than the Hollywood mode of production. This European mode of production became the USC film school mode of production that was practiced on many of the film school productions.

Furthermore, there are several similarities between the Italian neo-realism movement of the 1940s, the New Wave, and New Hollywood eras including the alternative production practices of low-budgets, location shooting and small crews to produce personal films. As Neupert states, ‘the New Wave taught an entire generation to experiment with the rules of storytelling, but also to rethink conventional film budgets and production norms.’²¹ Similar to the New Hollywood filmmakers, and specifically Francis Coppola and Roger Corman, New Wave filmmakers often self-financed their low-budget films. In order to make films with the low-budgets, these filmmakers shot primarily on location, used unknown or lesser-known actors and employed small, non-union crews. At the root of the French New Wave was the new, less expensive, and portable camera and sound recording equipment; stories that appealed to the youth that could be filmed on location; short shooting schedules complemented the new inexpensive production practices. These characteristics are similar to those that would be applied by Northern California filmmakers.

During the 1960s, it was very difficult for those fresh out of film school to break into the Hollywood film industry or join a craft union. There were extensive three- to five-year apprentice programmes prior to receiving a union card and full membership status. 1962 USC graduate Gary Kurtz stated that ‘it was impossible to break into the industry in any of the guilds or unions. So we were more or less forced to work in the low-budget or exploitation area.’²² According to George Lucas, ‘the ace in the hole was Roger Corman.’²³ In the 1960s in Los Angeles, the low-budget exploitation filmmaker Corman constantly hired film students to work on his many films. These students learned on-the-job skills and the Corman mode of production. The students operated cameras, recorded sound, edited sound and picture, gripped, and gaffed. After proving themselves they became second-unit directors or even feature directors for Corman’s productions. While Corman paid poorly, students and early graduates were able to work on his films even without union membership and gained valuable experience and mentorship. Just as many New Hollywood filmmakers came out of the 1960s UCLA and USC graduate programmes, numerous actors and filmmakers worked under Corman including; Francis Coppola, Martin Scorsese, Ron Howard, Peter Bogdanovich, Jonathan Demme, James Cameron, John Sayles, Jack Nicholson, Peter Fonda, Dennis Hopper, and Robert De Niro.

Scrutiny of the experiences of Roger Corman, Francis Coppola and George Lucas with Hollywood studio productions at the beginning of their careers will reveal insights into why these practitioners rejected the norms of traditional Hollywood production practices.²⁴ This rejection of traditional Hollywood production practices led to the unconventional practices that were embraced in Northern California.

Corman's first Hollywood job was as a story analyst for Fox in 1948. After returning from a trip through Europe, he began writing screenplays and eventually sold a script to Allied Artists in 1953 that was released as *Highway Dragnet* (Nathan Juran, William F. Broidy Productions; US, 1954) in January 1954. Corman had no further creative control of the picture and he worked on the set for free. The film was shot on soundstages, and according to Corman, the studio 'wrecked my whole vision.'²⁵ The images Corman conjured up while writing the film did not translate well to the soundstage. Corman states he, 'was horrified by what they did to *my* movie: my half-flooded house obviously stood on a sound stage with a rim of galvanized metal around the set—filled with about two inches of water.'²⁶ Though the film did well in the theatre and Corman was able to gain valuable production experience at the studio, he also 'saw that there had been a certain amount of time wasted during production' and that the picture 'could have been shot more efficiently.'²⁷ Corman made the move to produce his next film independent of any studio; a move that would be later followed by the next generation of filmmakers: Francis Coppola and George Lucas.

Corman stated, 'it was in the 1970s, when I grew tired of directing and created New World Pictures, that the 'Corman School' became an alternative institute of independent filmmaking.'²⁸ Coppola was one of the first of the Corman School graduates as he began working for Corman in 1962 while enrolled in the UCLA film school. With prior experience directing theatre plays as an undergraduate, Coppola learned and gained experience in working in the many filmmaking crafts. The modes of production Coppola was introduced to at these sites helped structure his preferred production practices throughout his career. Working with a small and personal crew whose members often held multiple work roles was practiced in both the film schools and the school of Corman. As Corman mentioned about his production company New World Pictures, 'titles and job descriptions mean virtually nothing. There's an aura through the halls that everybody can—and eventually will—do everything.'²⁹ Working

with Corman while attending the graduate film programme at UCLA, Coppola furthered his knowledge by working as a production assistant, second-unit director, sound recordist, camera operator, scriptwriter, and dialogue supervisor.³⁰ This ethos of filmmaking practices was fully embraced by Coppola when he was working with Corman, and can be seen as an inspiration to the production practices at Coppola's film studio American Zoetrope that he would establish in San Francisco.

It was while directing the Hollywood studio film and the twice Oscar-nominated musical *Finian's Rainbow* (Francis Ford Coppola, Warner Brothers/Seven Arts; US, 1968) that Coppola met George Lucas who had won a 6-month internship at Warner's.³¹ With \$3,500,000 budget, *Finian's Rainbow* was shot mostly at the studio, with eight days of location shooting.³² Coppola had to conform his production practices to the Hollywood modes of production more than he had ever done before. Coppola and Lucas were both the only two with beards and the youngest people on the set, most of the craft workers were around fifty years old. Eventually the studio decided to blow the film up from 35 mm to 70 mm, which cut off parts of the top and bottom of the frame.³³ As a result, they cut off the feet from Fred Astaire as he danced in the film. As Colin Young detailed in 1962, almost always an American film is edited, not by the director, but by the studio-often in committee.³⁴ Furthermore, Murch commented that the sound on *Finian's Rainbow* had been bogged down in the bureaucratic and technical inertia at the studios.³⁵ This interference during post-production from Hollywood studios further troubled Coppola.

George Lucas, like Coppola, had unfavourable early experiences with the film industry on the production side. In 1968, Columbia Pictures funded two students from UCLA and two students from USC to make two ten-minute documentaries about the making of the film *Mackenna's Gold* (J. Lee Thompson, Columbia Pictures Corporation; US, 1969).³⁶ Charley Lippincott and George Lucas from USC earned the scholarship to shoot their documentary in Arizona and Utah where the film was being shot.³⁷ On this trip, Lucas experienced the hindrances of working on Hollywood union productions. No one could drive a car because only teamster union drivers could drive the vehicles. While Columbia Pictures brought in their own crew, union regulations stipulated that the production must employ local union members as well. For every working Hollywood union member on the location, a local union member was also paid, but did

not do any of the work. Lucas was disgusted with the waste of money on *Mackenna's Gold* stating, 'We had never been around such opulence, zillions of dollars being spent every five minutes on this huge, unwieldy thing. It was mind-boggling to us because we had been making films for \$300, and seeing this terrible waste – that was the worst of Hollywood.'³⁸ Such experiences helped steer these practitioners away from the Hollywood production practices and more toward their own based on their university and Corman experiences.

On both of Lucas' first two films, *THX 1138* (George Lucas, American Zoetrope; US, 1971) and *American Graffiti*, the studios mandated a studio re-edit prior to release. George Lucas expressed the pains of studio interferences such as the editing committees in 1974 after the release of his second feature *American Graffiti*. Lucas commented:

There was no reason for the cutting, it was just arbitrary. You do a film like *American Graffiti* or *THX*—it takes two years of your life, you get paid hardly anything at all, and you sweat blood. You write it, you slave over it, you stay up 28 nights getting cold and sick. Then you put it together, and you've lived with it. It's exactly like raising a kid. You raise a kid for two or three years, you struggle with it, then somebody comes along and says, "Well, it's a very nice kid, but I think we ought to cut off one of its fingers." So they take their little axe and chop off one of the fingers. They say, "Don't worry. Nobody will notice. She'll live, everything will be all right." But I mean, it hurts a great deal.³⁹

For the new generation of filmmakers, these studio practices proved unfavourable. Also in 1962, Colin Young's remark concerning the Hollywood unions presented the position of the unions at that time towards changing production practices. Young stated:

What emerges, as an official position is an impression of the unions as being completely unaware of changes in the film business all over the world, even in Hollywood. They act as if they have no idea at all that there might be other ways to produce films than those customarily used by the studios here, and they seem oppressively aware, still, of conditions in the earlier years.⁴⁰

Some of the new generation of filmmakers were outgrowing the old models of filmmaking practices the studios and unions were upholding. The new filmmakers were

working towards making films with unconventional production practices that were in conflict with the production practices of the studios and the unions. In order to reduce the intervention of the studios and unions, there was a migration North to the San Francisco Bay Area in the late 1960s where filmmakers were able to make studio-distributed films within their own modes of production. At the epicentre of this new filmmaking community in Northern California was Francis Coppola's new studio American Zoetrope, established in 1969, where sound became highly regarded as a storytelling element.

American Zoetrope and Northern California Production Practices

From the beginning of American Zoetrope all of us, George, Francis and myself, were interested in pushing sound to be a greater contributor to the story.⁴¹

Walter Murch

Tom Kenney, the editing director for *Mix* magazine, stated that, '*The Rain People* (Francis Ford Coppola, American Zoetrope; US, 1969) turned out to have a profound influence on the formation of a Bay Area film industry.'⁴² Kenney reached this conclusion because *The Rain People* was the film that proved to Coppola that he did not need to be based in Hollywood and was the first film to go through post-production at American Zoetrope in San Francisco. Coppola was funded by Seven Arts studio to produce and direct the screenplay *The Rain People* and film it on location across the United States. According to union regulations that Seven Arts projects were contracted to abide by, any signatory production was obligated to hire a union crew and hire union members from the union Locals in the region they were filming even if a union crew was brought to that location. To bring in an outside film crew they were required to pay the union members from the region they were shooting in as well as the union members that were brought in, just as was the case for *Mackenna's Gold* where Lucas saw the waste of money from these practices.

Fortunately, Coppola was able to negotiate with the IATSE union to waive these rules.⁴³ As *The Rain People* was completely shot on location across America, Coppola

used a small crew to follow the production including a self-contained studio, with editing capability that would fit in a trailer. Coppola employed a non-union crew made up predominantly of his friends, which included Walter Murch and George Lucas. Without the hindrance of union regulations, Coppola saved a tremendous amount of money and made the movie under his preferred production practices. Production practices were reminiscent of the film school days and were a prelude to the ways American Zoetrope would function in San Francisco. According to Walter Murch, ‘for Francis and George, that film was the prototype. If they could operate making a film out of a storefront in Ogallala, Nebraska—and do it successfully— then there was no reason why they should live in Hollywood.’⁴⁴

On a 1968 trip to deliver a talk to high school English teachers in San Francisco during the filming of *The Rain People*, Lucas met Bay Area based filmmaker John Korty.⁴⁵ As early as 1964, Korty was already producing award-winning feature films in the Bay Area, away from Hollywood interferences, at his small studio in Stinson Beach just north of San Francisco. Korty’s production practices and distance from the studios and unions matched Lucas’ and Coppola’s desires to work outside the industrial norms. Their ideals closely matched. In 1966 Korty commented:

I don’t think there’s anything in Hollywood I want to do! [...] I’m not trying to be stubborn or anything, but I know enough about what the situation is down there to know that I couldn’t work there. I mean, one of the first things is that I want to do my own camerawork, and I don’t want forty people standing around watching me. [...] And even from a purely selfish, almost commercial standpoint I have a better chance of doing what I want in San Francisco, than in either New York or Hollywood.⁴⁶

Korty’s description of Hollywood recalls those similar early Hollywood experiences of Coppola and Lucas.

The San Francisco Bay Area was already a locale where filmmakers, such as Korty, were able to produce films on their own terms and still have a connection to Hollywood for distribution. After hearing about Korty in Northern California, Coppola and *The Rain People*’s unit manager Ron Colby visited Korty’s facility and saw the precursor to American Zoetrope. Coppola reminisced about this event, ‘We started

fantasizing about the notion of going to San Francisco to be free to produce films as we had done on *Rain People*. It was a beautiful place to live, and had an artistic bohemian tradition.²⁴⁷ Kory proved to Coppola and Lucas that the San Francisco Bay Area was an ideal place to relocate.

At the end of 1969, American Zoetrope was established in San Francisco, California. Zoetrope fulfilled Coppola's and Lucas' dream of having 'a little studio where we could mix and edit our films.'²⁴⁸ Unlike the film studios in Hollywood that had self-contained shooting lots and sound stages, Zoetrope instead focused on pre-production and post-production facilities. According to Lucas:

We realized very quickly that you don't need to build a studio [with soundstages]. What we needed to do was focus on post-production because that's what takes a long time. And since I started out as an editor, I was extremely interested in post-production. We assumed we would shoot our films in the street or we'd go on location. If we needed stages, we'd go rent a warehouse or a studio. But instead of investing in those facilities, that money would go to the highest-quality finish on the films. That's where you really make or break a movie—I feel that sound is half the experience. Filmmakers should focus on making sure the soundtracks are really the best they can possibly be because in terms of an investment, sound is where you get the most bang for your buck. Starting in film school, Walter and I were very focused on sound and very interested in its power. So that's really where the center point of Zoetrope came from. The first real investment at Zoetrope was in mixing equipment.⁴⁹

With its emphasis on the post-production process, Zoetrope became the first studio to move away from the traditional equipment that had been use in post-production since the beginning of the studio era. Coppola acquired state of the art equipment from Europe including the Steenbeck flatbed-editing machine and KEM mixing equipment.⁵⁰ The Steenbeck flatbed reduced the need for the many assistants the upright Moviola called for that was in use in the studios in Southern California. According to Murch, the equipment was 'state of the art, and yet it cost a fourth of what comparable equipment would have cost five years earlier.'⁵¹ While Zoetrope had differing philosophies than the Hollywood studios, the advancement in technologies

made it possible for Zoetrope to have different equipment that further allowed for their non-traditional production practices.

American Zoetrope had the state of the art equipment and young and talented filmmakers from the San Francisco Bay Area and film school graduates from Southern California. The initial roster included Francis Coppola, Barry Beckerman, Robert Dalva, Walter Murch, George Lucas, Al Locatelli, Lawrence Struhahn, John Korty, Carroll Ballard, Steve Wax, John Milius, Dennis Jakod, Tim Huntley, and Caleb Deschanel among others. Away from Hollywood and its influences, made up primarily of film school graduates, it is easy to see how, according to Caleb Deschanel, when Zoetrope opened it was ‘very utopian, an extension of our experiences at film school.’⁵² This utopian studio and era produced numerous award-winning films and filmmakers with its revolutionary practices and ideals, which included the high stature they held for sound.

This ‘professional extension of the film school idea’ predominantly concerned their production practices. The studios and unions restricted the freedom of production practices they had enjoyed while students and working with Roger Corman.⁵³ At Zoetrope, they were able to work with their film school production practices and those from *The Rain People*. These included working with smaller crews in both production and post-production, more collaboration of practitioners and crafts, longer pre-production and post-production schedules, and practitioners working in multiple roles. This freedom fundamentally changed the way these practitioners were able to work on films whose influences are still found today.

Two distinct film sound production practices arose out of American Zoetrope in the San Francisco Bay Area whose legacy continues today. Within this ‘utopian’ studio was the revolutionary idea to raise the status of the craft of sound and give it as much attention as the other filmmaking crafts. The utopian ideals for sound were to allow the sound craft to collaborate with the other crafts in similar ways to how the cinematography or production design crafts collaborated with the other filmmaking crafts. The ideals included for a production to begin working with sound in the pre-production stage and to have a single creative person in charge of sound throughout all of the filmmaking stages. The most famous production practice to emerge was the role of the sound designer. The second non-traditional production practice is what Bay Area

practitioners call the ‘Northern California approach’ to film sound where the sound designer also holds the role of a re-recording mixer, who is in charge of the final stage of post-production.⁵⁴ The inception of these work roles and their associated production practices are interlinked; however, over time they have gained popularity divergent from each other. Their roots go back to the USC production practices of the 1960s and were solidified as viable practices during the early years of Coppola’s and Lucas’ productions. While originally the work role of the sound designer was ‘the person who is in creative charge of the sound in a film,’⁵⁵ there have been industry-wide appropriations of the title sound designer to denote anyone who ‘designs interesting, unique sounds.’⁵⁶ The second distinctly Bay Area production practice is what Randy Thom calls the ‘Northern California approach,’ which dissolves the division between sound editing and mixing.⁵⁷ It was only outside Hollywood, which is highly regulated by unions, studio operations and traditions that these distinctly Northern California production practices were able to form.

There are two fundamental aspects to the origin of the work role and screen credit sound designer and sound montage. One being that these different production practices could only be used away from the highly regulating unions and studios.⁵⁸ Discussing Hollywood in the 1960s, Murch observed that, ‘on a practical level, the unions were still quite restrictive.’⁵⁹ It was only when practitioners worked outside these restrictions were new production practices formed in feature film production. For example, Murch’s first studio picture was Coppola’s *The Rain People*, however production practices on this film more closely resembled those from film school. On this film Murch took on multiple work roles as he recorded the sound effects, edited them in and eventually mixed them in San Francisco. For the sound editing, Murch went to a cabin in Benedict Canyon in the Los Angeles area alone with the film, ‘a Nagra recorder, a Moviola, and a transfer machine, recording and adding the sound effects.’⁶⁰ This is far outside the typical practices of studio feature sound editing where each work role is given to a different person. For his work on *The Rain People* Murch was credited with Sound Montage, the only post-production sound credit for the film, which represented his new way of working, his influence on the film and was a screen credit that was not union regulated.

The loose union regulations in the Bay Area in the 1960s and 1970s allowed for the alternative production practices Lucas, Coppola, and others desired. As there was a shortage of union film practitioners in the Bay Area at the time, membership categories differed from the highly rigid categories and work roles found in the Southern California union. Furthermore, the IATSE locals specialized in representing theatrical stagehands and not the film crafts so they initially did not look into the work being conducted at American Zoetrope.⁶¹ In Northern California, union membership at the time could be based on categories of production allowing members to work as general production or general post-production practitioners. This allowed practitioners to work in variety of crafts holding multiple work roles on individual production. Whereas in Southern California at the time, post-production membership categories such as production mixer, picture editor, sound effects editor, and re-recording mixer limited those members to working only within their membership category. The vague Northern California general post-production membership category, as Walter Murch had while working on *The Conversation* (Francis Ford Coppola, The Directors Company; US, 1974), *American Graffiti* and *Apocalypse Now* (Francis Coppola, Zoetrope Studios; US, 1979), allowed him to take on a multiplicity of work roles.⁶²

The second important aspect of these new work titles is that they were also conceived as screen credits that were not official union categories. The new job titles were necessary as non-union workers could not be credited with a union job title. At the time of *The Rain People* Murch was not a union member and was just a year out of graduate film school. According to Coppola:

We wanted very much to credit Walter [Murch] for his incredible contribution—not only for *The Rain People*, but for all the films he was doing. But because he wasn't in the union, the union forbade him getting credit as sound editor—so Walter said, will they let me be called “sound designer”? We said, we'll try it—you can be the sound designer.[...] I always thought it was ironic that “Sound Designer” became this Tiffany title, yet it was created for that reason. We did it to dodge the union constriction.⁶³

Because of his non-union status, Murch could not use any pre-recorded sound effects from the studio libraries for *The Rain People*. Just as in film school, Murch ‘never used [sound] libraries’ but went out and recorded everything himself.⁶⁴

For *The Rain People*, Murch recorded the sound effects, as he had done in film school, and in May of 1969 went to American Zoetrope in San Francisco to mix the film on the new KEM equipment Coppola had purchased from Germany for his studio. For *The Rain People*, a single person, Murch, took on all of the responsibilities for the film's sound, besides production sound. This again is extremely different than traditional Hollywood practices where a separate person conducts each role. Reflecting on his work on *The Rain People* Murch states:

We felt that, given the equipment that was becoming available in 1968, there was now no reason for the person who came up with the sounds and prepared the tracks not to be able to mix them. The director would then be able to talk to one person about the sound of the film the way that he was able to talk to the director of photography about the look of the film. Responsibility for success or failure would lie squarely with that one person, and because communication problems would be reduced or eliminated, the chances of success would be increased. [...] Originally, we had no name for this approach, although my credit on some of the early films was 'sound montage,' which had mostly to do with the fact that I was working non-union at the time and didn't want to raise any unnecessary flags.⁶⁵

The freedoms to adopt non-traditional production practices, with a person largely in charge of the sound of the film combined with a need to describe this work without alerting unions culminated into the credit sound montage. This work conducted on *The Rain People* established that working under these modes of production on Hollywood films was possible when the films were produced outside Hollywood.

The predominant characteristics of the new credits of sound montage and sound designer provide that one person would be in charge and responsible for the sound of the film as a department head beginning at the pre-production stage, seeing the project through post-production.⁶⁶ Traditionally, the supervising sound editor fulfills a similar role as a department head for sound, though this position was traditionally hired at the start of post-production. However, in the concept of the sound designer, this person begins working in the pre-production stage of the film, attains a higher degree of collaboration with the other crafts, and records or creates new sound effects where needed. Concerning the origin of the sound designer in Northern California Murch

states:

And 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. If you could establish this dialog and encourage directors to have a sense of sound that was as acute as their sense of picture, particularly at the script level, a lot of these multiple-track overkill problems would go away.⁶⁷

The work roles of a sound designer were performed on numerous Northern California films that have since become iconic for their soundtracks including *Apocalypse Now*, *The Conversation*, *Star Wars* (George Lucas, Lucasfilm; US, 1977), *The Black Stallion* (Carroll Ballard, Omni Zoetrope; US, 1979) and *The Right Stuff* (Philip Kaufman, Ladd Company; US, 1983). This approach to filmmaking in the 1970s was outshining the traditional studio approach to film sound.

Out of the production practices at American Zoetrope arose another fundamental change in film sound practices known as the Northern California approach. As presented earlier, with the Northern California approach, the sound designer is also the re-recording mixer. This gives a single practitioner, the sound designer, further creative control over the sound of a film. The re-recording process takes all the different sounds prepared and edited into a film and sets the volumes of sounds relative to the other sounds, modifies sounds with reverberation, speaker position and equalization.⁶⁸ The process taken by sound designers to make a sound effect is a similar process, on a smaller scale.⁶⁹ According to Murch, ‘it now became economically and technically possible for one person to do what several had done before, and that other frontier—between sound-effects creation and mixing—also began to disappear.’⁷⁰

This merging or disappearance of the divisions between what sound designers were doing to create new sounds and what mixers do, on a larger scale, was, and still is, unique to Northern California where many sound designers were also re-recording mixers. Murch mentioned that they ‘were able to operate much more freely there. The

union situation in San Francisco, in post-production, for example, allowed us to migrate freely from cutting picture to cutting sound to mixing, which wasn't the case in Los Angeles.⁷¹ The shifting from one craft to another that was initially practiced in film school and on Corman productions led to the production practice known as the Northern California approach. Having one person creatively in charge of sound throughout the entire filmmaking process, recording and creating new sounds and conducting the final mix broke craft barriers within sound. According to Murch:

From Zoetrope's beginning, the idea was to try to avoid the departmentalism that was sometimes the byproduct of sound's technical complexity, and that tended too often to set mixers, who came mostly from engineering [...] against the people who created the sounds. It was as if there were two directors of photography on a film, one who lighted the scene and another who photographed it, and neither could do much about countermanding the other.⁷²

Murch exemplifies the awkwardness of having two people in charge of any craft such as sound. Northern California practitioners simplified sound supervision by having a single person in charge of sound from pre- through post-production and conduct the final mix. This unconventional approach to film sound further allows the sound crafts to have a head collaborator with the director for the entire length of the production to provide for a more holistic approach to the soundtrack.

The impacts of these production practices and new job roles in film sound led many of the films produced in Northern California during this era to be highly regarded by the film industry for their sound and sound's role in storytelling. By the early 1980s there were leading film sound facilities throughout the Bay Area. There was George Lucas' Sprocket Systems, which became Skywalker Sound in 1987, American Zoetrope, Richard Beggs studio in the North Beach section of San Francisco and Fantasy Records in Berkeley.⁷³

The Golden Age of Northern California film sound from the mid 1970s through the mid 1980s led to numerous Academy Award nominations and wins for Northern California-produced films that utilized the Northern California approach to film sound. This Golden Age is industrially acknowledged starting by the 47th Annual Academy Awards for 1974 through the 57th Annual Academy Awards for 1984. In this ten-year

period, Northern California-produced films garnered four Academy Award nominations in sound categories and twelve wins (see Table 1).

The innovative Northern California practitioners and unconventional production practices that ushered in the Golden Age of film sound led to a raised awareness and appreciation of film sound. These initial changes in sound production practices led to new work roles under the job title sound designer. Once describing the unique creative overall supervisor for sound through the length of its production, the job title sound designer has since become appropriated to denote a ‘person who designs interesting, unique sounds,’ or simply a fabricator of sound effects.⁷⁴ Practitioners in Southern California and New York had appropriated the title sound designer in its various conceptions. Divisions between sound editing and mixing are being confronted more and more in Southern California as digital audio workstations have replaced the flatbed editing tables and allow practitioners to both edit and pre-mix sounds at a single workstation.⁷⁵ While changes in production practices have occurred since the American Zoetrope era, the unconventional production practices of San Francisco Bay Area practitioners remain to be some of the greatest conceptions of film sound production practices with influential and lasting effect. Within this Golden Age of Northern California film sound the status of film sound and of film sound practitioners rose to a prominence beyond the traditional. Filmmakers, audiences and industrial organizations such as the Academy of Motion Picture Sciences and Arts all helped give film sound a rise in status and attention.

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- ¹⁵ George Lucas in Stephen Farber, 'George Lucas: The Stinky Kid Hits the Big Time,' *Film Quarterly* 27, no. 3 (Spring, 1974): 5.
- ¹⁶ Jean-Pierre Geuens, *Film Production Theory* (Albany: State University of New York Press, 2000), 60.
- ¹⁷ Pye and Myles, 57.
- ¹⁸ John Milius in Peter Cowie, *Coppola* (London: Faber, 1990), 56.
- ¹⁹ Walter Murch in Michael Ondaatje, *The Conversations: Walter Murch and the Art of Editing Film* (New York: Knopf, 2002), 22.
- ²⁰ John Baxter, *George Lucas: A Biography* (London: Harper Collins, 1999), 52.
- ²¹ Richard John Neupert, Introduction to *A History of the French New Wave Cinema* (Wisconsin: University of Wisconsin Press, 2007), xv.
- ²² Baxter, 55.
- ²³ Ibid.
- ²⁴ There is much similarity in Corman's early Hollywood experiences with those of Coppola and Lucas. As Coppola spent much time in his formative years working with Corman, the insights from Coppola's early mentor reveal insights into the migration from traditional production practices.
- ²⁵ Roger Corman, *How I Made a Hundred Movies in Hollywood and Never Lost a Dime* (New York: Da Capo Press, 1998), 18.
- ²⁶ Ibid., emphasis in original.
- ²⁷ Ibid.
- ²⁸ Ibid, viii.
- ²⁹ Ibid., ix.
- ³⁰ Cowie, 25.

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- ³² Ibid., 38.
- ³³ Ibid., 42.
- ³⁴ Colin Young, 'The Hollywood War of Independence,' *Film Quarterly* 12, no. 3 (Spring, 1959): 4.
- ³⁵ Walter Murch, 'Stretching Sound to Help the Mind See,' Filmsound.org, 2000,
<http://filmsound.org/murch/stretching.htm>.
- ³⁶ Baxter, 77.
- ³⁷ Ibid.
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- ³⁹ George Lucas in Farber, 9.
- ⁴⁰ Young, 16.
- ⁴¹ Walter Murch in Doniphan Blair, 'Chairman of the Edit: Walter Murch,' *Cine Source Magazine*, May 10, 2010,
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- ⁴⁴ Walter Murch in Baxter, 84.
- ⁴⁵ Baxter, 90.
- ⁴⁶ John Korty in John Korty, Ernest Callenbach and Albert Johnson, 'Feature Production in San Francisco: An Interview with John Korty,' *Film Quarterly* 19, no. 3 (Spring, 1966): 24.
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- ⁵³ Walter Murch in Ondaatje, 15.

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- ⁵⁴ Randy Thom, 'Re: Is Sound Designer a dirty word...?', 2008, April 15 (10:09 a.m.), *Sound Article List*, <http://groups.yahoo.com/group/sound-article-list/message/3985>.
- ⁵⁵ Ibid.
- ⁵⁶ Walter Murch in Michael Jarrett, 'Sound Doctrine: An Interview with Walter Murch,' 1999, <http://www2.yk.psu.edu/~jmj3/murchfq.htm>.
- ⁵⁷ Randy Thom.
- ⁵⁸ The typical Hollywood production practices regulate that sound editing and mixing is conducted by different people; often because of tradition, craft specialization, but most importantly union regulations.
- ⁵⁹ Walter Murch in Ondaatje, 15.
- ⁶⁰ Ibid., 20.
- ⁶¹ George Lucas in Baxter, 96.
- ⁶² Ibid., 96.
- ⁶³ Francis Coppola in Ondaatje, 53.
- ⁶⁴ Walter Murch in Ondaatje, 20.
- ⁶⁵ Walter Murch, 'Sound Design: The Dancing Shadow,' in *Projections 4*, ed. John Boorman, Tom Luddy, David Thompson, and Walter Donohue, (London: Faber and Faber, 1995), 245-246.
- ⁶⁶ George Lucas in Blake.
- ⁶⁷ Walter Murch in Tom Kenny, 'The Search for Order in Sound & Picture.'
- ⁶⁸ Walter Murch in Jarrett.
- ⁶⁹ Jarrett, 'Sound Doctrine.'
- ⁷⁰ Walter Murch, 'Stretching Sound to Help the Mind See.'
- ⁷¹ Walter Murch in Blair.
- ⁷² Walter Murch, 'Stretching Sound to Help the Mind See.'
- ⁷³ Ren Klyce's film sound studio Mit Out Sound in Sausalito, CA and Tyrell Sound have since become part of the San Francisco Bay Area community of practitioners and film sound facilities.
- ⁷⁴ Walter Murch in Jarrett.

⁷⁵ Doug Hemphill and Paul Massey, 'Overlapping Jobs and Monster Soundtracks: An Interview with Mixers Doug Hemphill and Paul Massey,' *Motion Picture Editors Guild Newsletter* 19, no. 1, (January/February 1998), <https://www.editorsguild.com/Magazine.cfm?ArticleID=519>.

Table 1 Northern California produced Academy Award winners and Nominated films in the Golden Era of film sound

1974 (47 th)	Sound (Mixing) Nomination	<i>The Conversation</i>	Walter Murch, Arthur Rochester
1977 (50 th)	Special Achievement Award for the Creation of the Alien, creature and robot voices	<i>Star Wars</i>	Ben Burt
1977 (50 th)	Sound (Mixing)	<i>Star Wars</i>	Don MacDougall, Ray West, Bob Minkler, Derek Ball
1979 (52 nd)	Special Achievement Award: Sound Editing	<i>The Black Stallion</i>	Alan Splet
1979 (52 nd)	Sound (Mixing)	<i>Apocalypse Now</i>	Walter Murch, Mark Berger, Richard Beggs, Nathan Boxer
1980 (53 rd)	Sound (Mixing)	<i>The Empire Strikes Back</i> (Irvin Kershner, Lucasfilm; US, 1980)	Bill Varney, Steve Maslow, Gregg Landaker, Peter Sutton

1981 (54 th)	Special Achievement Award: Sound Effects Editing	<i>Raiders of the Lost Ark</i> (Steven Spielberg, Paramount Pictures; US, 1981)	Ben Burt
1981 (54 th)	Sound (Mixing)	<i>The Raiders of the Lost Ark</i>	Bill Varney, Steve Maslow, Gregg Landaker, Roy Charman
1982 (55 th)	Sound (Mixing)	<i>E.T. The Extra Terrestrial</i> (Steven Spielberg, Universal Pictures; US, 1982)	Robert Knudson, Robert Glass, Don Digirolamo, Gene Cantamessa
1982 (55 th)	Special Effects Editing	<i>E.T. The Extra Terrestrial</i>	Ben Burt and Charles L. Campbell
1983 (56 th)	Nomination: Sound (Mixing)	<i>Return of the Jedi</i> (Richard Marquand, Lucasfilm; US, 1983)	Ben Burt, Gary Summers, Randy Thom, Tony Dawe
1983 (56 th)	Nomination: Sound Effects Editing	<i>Return of the Jedi</i>	Ben Burt
1983 (56 th)	Sound Effects Editing	<i>The Right Stuff</i>	Jay Boekelheide
1983 (56 th)	Best Sound Mixing	<i>The Right Stuff</i>	Mark Berger, Thomas Scott, Randy Thom, David MacMillan
1983 (56 th)	Nomination: Best Sound Mixing	<i>Never Cry Wolf</i> (Carroll Ballard, Walt Disney Pictures; US, 1983)	Alan R. Splet, Todd Boekelheide, Randy Thom, David Parker
1984 (57 th)	Best Sound Mixing	<i>Amadeus</i> (Milos Forman, The Saul Zaentz Company; US, 1984)	Mark Berger, Tom Scott, Todd Boekelheide, Chris Newman