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The role of the music editor and the 'temp track' as blueprint for the score, source music, and scource[1]music of films

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Abstract

The 'temp track', a temporary mock-up of a film's soundtrack, is assembled from pre-existing music prior to the real, commissioned score being composed. An integral element of the post-production process of American feature films, it survives only in its role for audience previews. Constructed by a music editor, in most cases, it is a blueprint of a film's soundtrack – a musical topography of score, songs, culture and codes in which a balance must obtain between the director's vision, the music's function, underlying requirements of genre, and the spectator's perception. This article demonstrates that the temp track informs compositional practices and the final score, and makes the argument that textual analysis would benefit from the recognition of the role of production practices. Drawing on published sources and interviews with practitioners, this article provides historical context and musical detail, and shows how productive analysis can be when it draws on practitioners' insights as well as textual analysis. Film score analysis must not begin and end with the finished film score but must utilise a more eclectic methodology which takes into account the production process. Film score analysis should reflect the constitutive nature of film and film music.

Enquiry into film music has greatly expanded over the past fifteen years, yet few scholars are expert in the multifaceted elements of film production and its organic relation to the music therein. Most enquiries posit the film composer as a central figure and conduit. However, analysis of the film score represents the tip of the iceberg; there are numerous layers of initial musical processes that prepare the creation of a film score. These pre-emptive stages substantially and profoundly inform a film composer about the film score before it is written. The purpose of this article, within the context of a need to make film inquiry more eclectic in methodology, is to clarify the various roles, chronology, and internal processes in the creation of the film score focusing on the American feature film. This constitutive account of the numerous and fragmented layers in the construction of film music is a necessary element for eclectic film inquiry. Multiple levels of strata both inform *and* inhibit the film composer. This rich underbelly of musical creation and information needs to be part of film music inquiry. I argue that film score analysis must not begin and end with the finished film score. Film score analysis should reflect the constitutive nature of film and film music.

Driven by film's role as a commercial medium, the efforts of the collaborators on a film are continually mediated by the pulse of public reception. From initial phases of post-production, audience previews serve as barometers for the state of a picture's creative development and for the assessment of its financial prospects (Griffin 2004, p. 13).[2] While the real, commissioned score is being written, and for the purpose of contributing to presentations of the film-in-progress, a temporary soundtrack is created – the 'temp track'. A music editor creates the temp track, which is a dynamic mock-up of the soundtrack, and to do this, he or she has to balance the director's vision, the music's function, underlying requirements of genre, and the spectator's perception. Before the real score replaces the temp track, the temp track as mock-up is deemed artistically and commercially viable by audience reaction. The temp track, in most cases, is a veritable blueprint of a film's soundtrack – a musical topography of score, songs, culture and codes.

A long-standing practice in sound film,[3] the temp track rehearses a ghostly version of the real, composed soundtrack's integration of musical forces, and survives only in its role for audience previews – discarded immediately following the preview phase. Like the composer, the music editor works in close collaboration with the film's director, the picture editor and the music supervisor, and 'compiles' the temp track with cues often drawn from the scores of pre-existing films – a testament to film music as a potent elixir of style, connotation and affect. The routine interchangeability of cues utilised in temp tracks demonstrates their practical functionality, rooted in a pool of standardised and accepted clichés and conventions.

At the inception of post-production, only skeletal elements embody the sonic realm of a film – essentially only production sound, i.e. dialogue and any sound recorded during principal photography. For a variety of reasons, most production sound is re-recorded or significantly altered; sound effects are created and recreations of natural sound, Foley,[4] are added. The score is yet to be composed, and pre-existing songs may still be in negotiation with record companies and publishers. The finished soundtrack is the responsibility of the music supervisor[5] who is a power broker for the soundtrack, in some instances even influencing the choice of a composer for a film, although composers may have ambivalent feelings toward music supervisors.[6]

The temp track usually provides the composer with a working model for the score. Directors and producers become so convinced, accustomed, and perhaps 'married' to the 'temp' ('*temp love*'), that composers are often requested to emulate it. Those with enough clout often refuse to listen to it, citing its presence as a major factor in diminishing their own creative input. George Burt (1994, p. 220) sums up many film composers' sentiments toward them: 'There are two words that will strike horror in a composer's heart: temp track'. Conversely, in the course of scoring a film, a composer may convince the director of viable alternatives and approaches to the temp. Nevertheless, the work of film composers, answering to a complex of narrative, directorial and visual demands, is routinely set in motion by the temp track (Karlin and Wright 2004, pp. 21–31).[7] This renders the music editor increasingly influential in defining and promulgating an amalgamation of conventions that we ultimately experience from the score. In fact, this makes him or her a touchstone – an influential governor whose choices can actively engage and perpetuate conventions and clichés. In building a temp track, a music editor must address and consolidate managerial, commercial, musical and cultural concerns. Much like the film composer, his or her musical inclinations are mediated within an interactive grid. Unlike a composer, a music editor picks music for his or her temp tracks block by block – assembling the

compilation from completed cues, which bear a stylistic and affective resemblance to the musical requirements for the project at hand. A music editor works with music from an overall perspective, while a film composer must build moment by moment from the ground up – from musical gesture and archetype. The music editor's vantage point comes from a wholesale assessment of the conventional. He or she answers collective demands and creatively addresses conventions.[8]

The 'silent' era – setting the stage: compilation scores

The ghostly, disappearing 'compiled' scores of today's music editors are similar to the 'compiled' scores used live to accompany films until mechanised sound was established in the motion picture business in 1929.

> During the silent film era, two methods of scoring were established, compiling from pre-existing material [The Compilation Score] and composing an original score. Before 1929 the former type of score predominated. Original scores were really the exception. After 1929 original scores became the rule although low budget films continued to use pre-existing public domain music. (Anderson 1988, p. xiv)

The temp track had its precursor in the silent era's *compilation scores*. Its serial compiling of music formed the conceptual springboard from which the modern soundtrack, an integration of popular and orchestral traditions, evolved. The music director, pianist or conductor, performing essentially the same function as a music editor in assembling temp tracks, compiled a score from well-known pieces of music, in accordance with filmic and genre demands. However, inherent to producing both temps and compilations, are the limitations of compiling via pre-existing music – compiling and utilising block units, i.e. by using existing phrase structures, as opposed to developing original thematic material and dovetailing timings in synchronisation with the film.[9]

By 1920, for the purpose of aiding in the creation of compilation scores, 'many of the major music publishers established special movie music departments and published vast libraries of incidental music, organised by mood, tempo, and duration' (Anderson 1988, p. xiii). For classical works and the vernacular, attempts to standardise conventional usage and codify musical archetypes appear to be exemplified in the catalogued collections of Giuseppe Becce and Hans Erdmann. Books such as Erno Rapee's *Motion Picture Moods for Pianists and Organists* (1924) and Erdmann and Beece's *Allgemeines Handbuch der Film-Musik* (1927) offered menu-driven collections with such descriptive headings as 'Love-Themes', 'Grotesque', 'Sea and Storm', and 'National' – songs and music depicting the characters of a host of countries.

The compilation score was, in essence, a hybrid – constructed from unrelated but often well-known pieces of popular and classical music, operating with the dramatic earmarks of a composed score. The process, by which compilation scores were assembled, bears a fundamental similarity to the music editor's creation of temp tracks. The practice of the 'silent' era's most prominent compiler, Hugo Riesenfeld, music director of New York's Rivoli and Roxy Theatres (Movie Palaces), is documented:

> . . . Mr. Riesenfeld has already seen the picture once, of course, so he began his search for music of as certain well-defined type. Piece after piece (only a little of each, of course) was played on the piano as this or that conductor would pick out one as a suggestion, and all that could be gotten out of Mr. Riesenfeld was 'No,' 'Not that,' 'No, that won't do,' 'Oh, no, not that' – and all

the while the cameras [projector] were waiting to click their first inch of the film, not a picture as yet having gone to the screen; the director had his head stuck deep in a folio of possibly two hundred selections of a given type, every one of which he glanced through in his search for the 'right' one. Finally, it was found: and what a relief. 'Slower; oh, not so fast,' then 'Ah, that's it,' and the ready amanuensis jotted down a few abbreviations to show that when the picture was ready to begin the music would be this piece, and that so much of it would be used. A mark was put lightly on the score. All that work for about sixty seconds' (sic) worth of music! . . . The piece, before being laid aside, was again played on the piano at proper tempo, that is at Mr. Riesenfeld's own tempo, the director pushed the button, the picture announcement began, and I almost thought that I was going to see a free picture show this time. . . . and this only tells a small part of the story; it forgets all about the cuts, the arrangements, the slides and glides and skips and hops through all musicdom in order to make these things go together in a proper sequence of keys as one piece.

. . . After little snatches of the film are thus projected and music fitted intimately with the moods of each, with proper record made of each separate bit of film and the music corresponding with it, Mr. Riesenfeld takes the music under his wing and spends laborious hours over it, marking, timing, cutting, trimming, fitting, and preparing it to time rightly with the film. When this is done and the librarians and orchestrators have arranged and written such things as are needed for the film, the film itself is taken in hand for revision. Projection machines can be made to run at variable speeds to suit the occasion, and these speeds can be arbitrarily set by a projector without interfering in any way with the picture; I doubt if any but a very skilled man would be able to detect the many changes Mr. Riesenfeld must get from his operators. Many times the titles and the joints in the film are deleted to just the right amount to make the film time exactly with the music, while at other times the speed accomplishes the result. Thus after the music is first fitted to the picture, the picture is then fitted exactly to the music. (Buhrmann 1920, pp. 171–3)

Until 1929, published music and live performers were used during the selection and compilation process. The compiled score was then performed live with the film. Figures like Riesenfeld were well known and well regarded. Today, although the process of selecting pre-existing music is similar, the music editor works with recorded compositions and machines, and his creation is replaced when the composed score for the film is finished.

The music editor: overview

Today, music editors are venerable professionals and are unionised, represented by major agencies such as 'Modern Music' in Los Angeles. Unlike composers and music supervisors, whose names appear alongside the film director, director of photography, picture editor, and producers, music editors do not receive principal, on-screen credit. Thus, despite their influential contribution to the soundtrack, they operate 'under the radar' – acknowledged in end-credits, their craft and function largely hidden from public view. They are chosen for a particular film based on a recommendation from a director, picture editor, producer or composer. 'Hollywood is a business of relationships. If you've worked with somebody and it's been successful, you tend to work with them again and again' (Prendergast, 2004). Music editor, Suzana Peric (*Lord of The Rings*, *Silence Of the Lambs*, *The Pianist*), has worked repeatedly with the same directors, such as Mike Nichols and Jonathan Demme.

Entering the field through previous experience within the picture-editing realm, music editors intuit both the visual and musical, although rarely do they have formal training as composers or performers. Like directors, they are experienced and well versed in the industry-operative film language. The tasks of music editors are twofold: (i) preparing temp tracks and (ii) assisting composers in managing the mechanics of synchronisation and preparing timings for cues. Due to scheduling conflicts,

they generally do not perform both jobs within a single film.[10] Proximity to the composer may grant the music editor access to aspects of the compositional process. Music editors decide where to begin and end each music cue and interact with the music supervisor and director. Thus, the music editor's functional sphere is broad, and their perspective is unique.

Little known to scholars, primarily due to their virtual invisibility, temp tracks are conceived and designed in direct collaboration with the director and picture editor, before the composer becomes involved. The music editor, acting as a surrogate composer, operates actively in overview mode, mediating the relationship between the director's intent and the spectator's reception – perpetually validated by studio screenings and audience previews.

The music editor begins the project[11]

Temp tracks are considered essential by producers, due to music's pivotal role in unifying narrative elements, clarifying characters' motives and in defining the emotional tone of a film. The choice of music used and the process by which it is employed can reveal intent, manipulation, and a director's sense of reception.

> The Music Editor can help define the music design for the whole film, before a composer ever comes on. In a sense, he solves some of the musical problems for the composer – if the composer agrees with it, obviously (Prendergast, 2nd July 2004).

Upon arrival on a project, a music editor screens a rough-cut of the film with the director or picture editor. The film may contain a 'scratch track', i.e. a fragmented, partially prepared temp track plus any source music, as laid in by the picture editor. Initial discussions address the overall role that music serves for the film, how it functions, and an appropriate style of scoring. Each 'cue' is specifically addressed through a detailed 'spotting' of the film, i.e. the placement, and entrances and exits of the music throughout the film. As important as the music chosen for a scene, music placement is a key factor in determining how the music functions and editorialises the story and has an effect on the flexibility that the composer will inherit.

Once the music editor is supplied with Quicktime[12] movies of the film's cues and has compiled a collection of appropriate musical cues for the project, he or she assembles and edits via Digidesign's *ProTools* software. The agility with which music can be 'cut' in and auditioned, enables the music editor to readily present the director with three or four alternative musical approaches to a scene. The music editor, compiling via the broad strokes of pre-existing cues, far outpaces a composer, who must individually compose and then produce a MIDI-mockup[13] of each cue. A completed cue by the music editor may require a few, or dozens of edits in suturing multiple sections and phrases, at times drawn from a variety of pre-existing cues. Music libraries, offering the digital audio equivalent of Erno Rapee's *Motion Picture Moods for Pianists and Organists*, may also be incorporated, although they are most appropriate for ambient, 'source' cues. In connecting sections, smoothing transitions, and accentuating visual or narrative points, music editors may draw from their collection of musical devices, utilised for 'layering', or 'sweetening'[14] – single, high, sustained violin notes; low, sub-harmonic tones; cymbal rolls and crashes. Musical and synchronisation challenges are also resolved through digital manipulations, enabling such functions as time expansion and compression, pitch shifting, and cross-fading.

Industry nomenclature: score–source–scource

The music editor is temporarily responsible for three things, in the industry's words: the 'score', the 'source music', and 'scource music', i.e. source music acting as score. These terms appear to offer clear demarcations, yet they frequently cross over, both by design and context. Source, i.e. music emanating from within the narrative frame, and possibly heard by the characters in the scene, is generally comprised of pre-existing music, although in the course of a scene, its function may transform to score. This phenomenon is understood by practitioners and is often designed into the architecture of a scene. Score, infinitely pliable, can manipulate and metamorphose, clouding lines of functional demarcation – even emulating source. Music editors and directors, inventing and defining the soundscape, operate in broad, intuitive, musical strokes in referencing filmic demands. Although primarily concerned with achieving creative solutions toward a desired effect, they answer simultaneously to the studio hierarchy, and subsequently the studio marketing department's idea of the spectator. In practice, their nomenclature, simple and direct, documents their intentions and their solutions for their perceivers.[15]

Roy Prendergast: music editing in Los Angeles

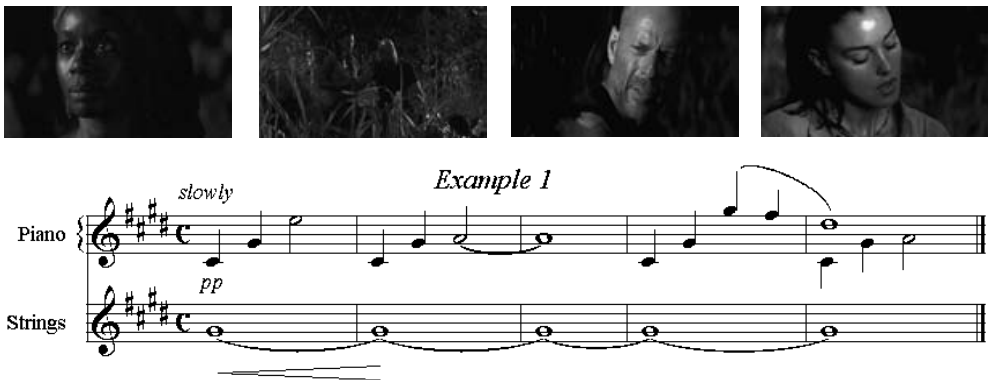
Tears of the Sun (2003)

Cue: *Lena's Story*[16]
Director: Antoine Fuqua
Picture editor: Conrad Buff
Composer: Hans Zimmer
Temp track: Roy Prendergast[17]

Tears of the Sun, a large-scale, military thriller set in war-torn Nigeria, pairs a veteran Navy seal, Lt Waters (Bruce Willis), on a rescue assignment with a doctor, Lena Hendricks (Monica Bellucci), who refuses to abandon refugees in her care. After Waters joins her in belief and action, a rebel militia group seeks to assassinate him and the refugees. In the scene entitled *Lena's Story* occurring midway through the film, we are privy to an intimate moment of reckoning for both characters – a strategic narrative point which conveys a tremendous amount of key information. The script economically teases out their feelings and the ethical pulse of the principal characters. Shot in extreme close-up, through a series of shot-reverse-shots over a series of narrative vignettes, we learn why Dr Hendricks came to Africa; that her husband died while protecting her during a rebel attack; and insights into Lt Waters through an exposé of his actions and ethics.

For the underscoring, the director wanted something quiet, but did not want to suggest any kind of romantic involvement between Bruce Willis and Monica Bellucci. Their on-screen chemistry had not proven 'credible' with test audiences, thus necessitating narrative and picture changes. Due to skilful editing and some re-shooting of scenes, there are no remnants of romance in the script or the editing. The director's clear approach to what music must *not* do in this scene reflects some of the narrative restructuring that was necessary.

> In Previews, anytime there were scenes between Willis and Bellucci that played as romance, the audience laughed out loud. They didn't buy it. Those scenes were cut . . . There were scenes at



Example 1. Lena's Story temp track cue music and screen shots from Tears of the Sun.

the end of the movie where they embraced and kissed – the audience laughed every time – so those scenes are gone.[18]

Roy Prendergast worked primarily with the picture editor, Conrad Buff, who has a rich history in editing large-scale Hollywood films with romantic subplots. While Prendergast also had contact with the director, it is common for the picture editor to act on behalf of the director. Prendergast spotted the entire film, essentially defining how the score would interact with the narrative and visual elements. In agreement with Buff and director, Antoine Fuqua, they envisioned the music as subdued throughout the film – polarised and reflective against the violence on the screen. Although Prendergast had no direct contact with the composer, Hans Zimmer, Zimmer's score reflected essentially the same approach.

According to Prendergast, Fuqua's directions for the scene, *Lena's Story*, were to elicit a general sadness and tragedy for the situation, but also to sustain an element of warmth. Prendergast realised that the music would be most effective if it played the character of the situation, not of Lt Water's and Dr Hendrick's relationship. 'This approach, conveyed to the director by Buff, drifted through to Hans Zimmer in the course of his spotting session with the director. Zimmer obviously approached it in exactly the same way in his score'.[19]

The scene was temped[20] with a cue entitled, *I Opened the Door* (2000),[21] from Alan Silvestri's score for the film *What Lies Beneath* (dir. Zemeckis 2000).[22] A supernatural thriller, it is scored quietly and sparsely, utilising the approach of Bernard Herrmann in *Vertigo* and in the more seething cues from *Psycho*, yet occasionally erupting in clear allusions to *Psycho*'s opening music. The cue that Prendergast uses for his temp begins in the original film, *What Lies Beneath*, under a conversation concerning a dead girl's ghostly appearances in a couple's Vermont home. It enters, barely perceptible, under the line, 'It's the only thing that makes sense', at 1:21:25. The tempo is very slow, and the phrasing is fragmentary and halting: phrase–pause–phrase–pause. This allows great latitude in editing the cue into manageable slices, thus avoiding unwanted musical developments that occur later in the film. This kind of cue can also accommodate the negotiation around dialogue.

Although in C♯ minor, it opens with a very soft piano and harp figure, only outlining the key pensively, under a sustained G♯ in the strings (Example 1). Upon hearing the cue without first knowing the film, this author noted that there are no overt gestures, but generally, pensive and reflectively tragic qualities. Later in the cue,

however, there are G♯–A trills in the high strings, which evoke an entirely new dimension. Prendergast did not incorporate those sections in his temp. Prendergast chose this cue simply by hearing it on the CD from the film's soundtrack. He had no prior knowledge of its context. However, it is common for him to describe his needs to his music librarian, Chris Mangione, who may quickly offer five similar cues – their native contexts, generally not a factor in Prendergast's choice. The chosen Silvestri cue, *I opened the Door*, contains elements that coalesce into an archetype of reflective sadness or tragedy.

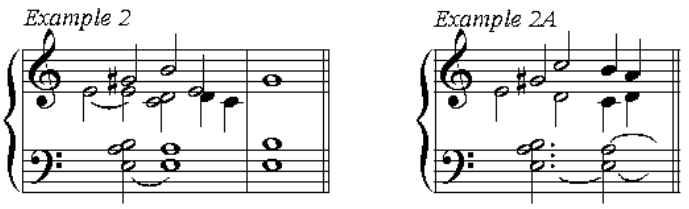
Once convinced that the Silvestri cue would work effectively, the starting point was crucial in setting the scene properly. The role of the music was to play the 'situation', not the relationship between Lt Waters and Dr Lena Hendricks.

> [The music starts] over the previous scene's couple, so that the music, in a sense, could attach itself to them – so that when you came upon the Willis and Bellucci characters, it was already there and has less of an impact. Music tends to attach itself where it starts, and if you start it on Willis and Bellucci, subconsciously the listener thinks, 'This is important – this is about them'.[23]

The gentle opening musical gestures (C♯–G♯–E – C♯–G♯–A) establish C♯ minor, allowing the note A to create the feeling that it is stretching away (a melancholy longing),[24] yet due to harmonic stability, destined to return. This underscores the previous scene, in the couple's reflective sadness, beginning after the line, 'Will you get me to my daughter?' As Lt Waters and Dr Hendricks are revealed via a slow dissolve and pull-in, a sustained G♯ in the strings warms the tone of the scene. The note G♯, beginning with a slight crescendo, provides a searing, emotional intensity to the underlying horrors that Willis and Bellucci have witnessed. The cue also intensifies via a widening pitch range and thickening orchestration.

Prendergast notes, 'Many times the music editor has solved the dramatic problem, musically'. In Zimmer's score, his music enters at exactly the same point as the temp, and is nearly identical in its focal points of dramatic import. However, his is custom-composed for the scene: it is carefully composed around dialogue and its sound is sculpted to the proportion of the scene. Prendergast notes that Zimmer's music ' ''clears the line'' – [he] writes around dialogue more easily than the temp. [It is] more effective than the temp – less 'rich' than temp cue'. Zimmer both follows the dramatic contour of the temp, but offers a significantly modified approach to the actual composition. Like the temp, he uses a sustained, underlying tone (pedal point) for much of the cue. Further into the cue, he broadens the sonority, introducing basses, accompanying the line, 'How did your husband die?' Overall, Zimmer creates a surreal sound, eliciting the reflective disillusionment of the moment, as opposed to a quiet longing in the temp. Zimmer's creates a hybrid orchestration – a mix of an ethereal synthesizer sound and orchestral strings. It is slight in size, yet colouring the atmosphere while slowly moving around the conversation. His harmonic language, operating within an unobtrusive sound palette, mixes suspended harmonies (4–3) against major and minor clashes and ambiguities – a collage of raw inflections and sustained pathos (Example 2). Melodic movement often seems unmeasured, although illuminating points of tension and repose. E major contains the note A, which constitutes a major harmony and a suspended scale degree 4, and a seventh is added as well. A derivative of A minor appears, which is generally not part of E major. A resolution in E minor frames the presence of Willis and Bellucci, with an elision toward the next phrase.

Dr. Hendricks continues her story and the intensity of her tragic experience begins to unfold: 'We went to Sierra Leone . . .'. Zimmer again begins in E major with



Example 2. Lena's Story final score cue music from Tears of the Sun.

an added suspension, but the melody moves to the note C, the same minor sixth interval that was accentuated in the temp, now with more dissonance (representing pain) because it is pitted against the expectation in E major. Zimmer's phrasings reflect the fragmented melodic/harmonic constructs of the temp, but synchronisation is now employed, allowing the phrases to be thoughtfully composed around the dialogue. Like Prendergast's temp, Zimmer's phrases are short and relatively complete, although the melodic movement is largely subsumed within the collaged harmonies and synthesised ambience (Example 2a).

Prendergast demonstrated the capacity of music to manipulate our perceptions, in this case by avoiding amorous implications between Bruce Willis and Monica Bellucci. The effect of music's motion and emotion on the perception of visual and narrative elements is an area of growing interest for researchers in cognitive psychology (Cohen 1994, 2001). They are examining tenets of film music theory and probing the effects of musical affect on perception – both holding implications for textual analyses. In one compelling study, the researcher acted as a music editor, providing two alternative temp tracks for a scene from Alfred Hitchcock's *Vertigo* (Boltz 2001). Responding individually to three viewings of the scene as accompanied by 'positive', 'negative', and no music, the participants offered their resultant interpretations of narrative events; the main character's personality/motivations; affective impact; and memory recall. Boltz concluded, 'the main finding of this experiment is that music influenced the comprehension and memory of filmed material' (Boltz 2001, p. 444). These findings 'verify' the editorial powers of music, but the choice and treatment of music within this study could have benefited from an awareness of post-production practices and aesthetics. One selection, Samuel Barber's *Adagio for Strings*, was pre-tested and deemed as 'positive' music (Boltz 2001, p. 454) – yet this is the same piece of music which provides the wholesale pathos for every scene of post-battle carnage in Oliver Stone's *Platoon*. While this anomaly does not compromise Boltz' conclusions, it does suggest a need for researchers to embrace practitioners in their domain.

Addressing a far broader scope, the transformation of music from temp to score can provide a rich context for the study of semiotics, an area common to film and film music enquiry. In the post-production process, semiological meanings metamorphose, progressively accumulating more specifically encoded gestures. Initiated through the broad archetypes chosen from pre-existing music, their associations are refined in the process of spotting and editing, and are ultimately transformed by the score's integration and setting of specific music-visual/narrative associations. In observing through post-production's time-lapse of intent, the film's contextual lexicon of audio-visual constructs emerges.

Music editors are deprived of the ability to develop thematic material, which is generally regarded as the DNA for a score's structure. Cues and phrases culled from

various scores, and detached from their original contexts, can present a disparate and disenfranchised collection of musical vignettes – motivic germs and phrases; a breadth of highly suggestive moods; connotative suggestions; and implications for identifications with familiar (but not specific) characters, places and ideologies. In essence, music editors re-appropriate music that had been composed to serve the specific needs of other filmic contexts. Nevertheless, anyone who has witnessed the construction of a temp track by a professional music editor is struck by the effective and natural quality of these re-purposed cues in a 'foreign' context. They manage to sustain a dynamic and coherent 'score' for a film's entirety, without benefit of a thematic thread. This suggests that, although specific gestures within these cues provided adhesion to specific elements in the original film, they must also have operated in tandem with more general musical archetypes or conventions.

Specific to the film and cue, *I Opened the Door*, was the trill section mentioned earlier, which Prendergast was not able to use in his temp track. Prendergast described their presence, 'The trills are too busy and dramatic'. At 1:22:23 of *What Lies Beneath*, the character played by Harrison Ford mentions the word 'paranormal', and Silvestri enunciates and references this with soft trills in the upper strings. In this cue, the score addresses a specific narrative element of a film, i.e. the supernatural, thus rooting it to the film – quite literally via precise synchronisation. Trills also appear when the viewer sees the ghost underwater, near the end of the film. Trills in themselves are, of course, not necessarily evocative of anything specific. However, given the appropriate musical setting, they have a long history in representing ghosts, the supernatural, and perhaps fear, as in Liszt's *Mephisto Waltz*,[25] and in Herrmann's 'recognition scene' in *Vertigo*.

There are also instances in which the musical archetype within a pre-existing cue is so overused or recognisable, that it has, in effect, become a cultural icon. This limits its re-use to irony, comedy or commentary, i.e. Bernard Herrmann's slashing, glissandi shower-violins from *Psycho*. The choice of a popular song may suffer or gain similarly: I agree that in the act of conscious recognition, the spectator initially perceives the music in a 'fixed' state, unable to experience it as part of a process, unfolding in time.

Film scores encompass a vast array of musical semiotic codes, conventions, and identifications (Gorbman 1989; Tagg and Clarida 2003; Kassabian 2001). While film music may evoke only generalised referential meanings when detached from its original settings, a new set of specific meanings appear to arise upon contact within a related filmic context. So strong and adaptable are the codes that composers are often confounded by the boundaries that temp tracks impose. A composer's assessment of a temp track is also contingent on the proficiency of the music editor and to how attached the director and studio are to the temp. The example above is one which demonstrates integral, collaborative efforts – the temp track intelligently designed by an excellent music editor and picture editor, and aptly enhanced by the composer. However, so frequent, consistent and confounding are the conventions that, upon watching a newly released film, music editors often comment, 'I know what *that* was temped with!'

Suzana Peric and Nancy Allen: music editing in New York City

While New York City is the epicentre of American feature film financing, the city of Los Angeles is synonymous with the film industry – from deal making through

production, marketing and release. While major films are produced in New York, aspects of its post-production operations differ significantly from L.A. New York is more akin to a 'cottage industry', perhaps reflecting a smaller, more tightly woven network. For instance, the mixing stage in L.A. generally utilises three sound mixers – one each for dialogue, sound effects, and music. In New York there is usually only one mixer. There are only a handful of top music editors in New York, compared to approximately 150 in L.A.,[26] thirty of them considered part of the upper echelon. Exemplary of New York music editors, Suzana Peric[27] creates the temp and continues on with the composer, working on the synchronisation and timings. In contrast, while L.A.-based Roy Prendergast has worked on over twenty films in collaboration with composer Patrick Doyle, he provided the temps for only a fraction of those same films.

Since 1982, Peric has worked repeatedly with the same directors and composers. Citing camaraderie and efficiency in working repeatedly with the same professionals, she noted that the team really helps to shape the temp, although she offers the initial musical ideas: 'In working with the same people, there are shared sensibilities that result in working in a kind of shorthand' (Peric, 21 July 2004). Peric has also collaborated with the same composers over many years, including Ennio Morricone, Howard Shore, and Rachel Portman. Often knowing who the composer will be prior to creating the temp, she can address the perspectives of both director and composer. If there exists a strong mutual thread of vision between the two, Peric will try to provide a clear set of signposts for the composer, without handcuffing him or her. Always guided by her idea of audience perception, Peric also sees her role as a mediator, or facilitator, between director and composer and even an advocate for the composer:

> Suzana gives the composer a lot of pre-information and the overall broad strokes . . . we provide very detailed information about specific 'hit points' and 'low tones' that the director wants. We also try to create a temp according to the composer's style and vision of the score (Allen, N., 13 July 2004).

In Peric's temp for *The Human Stain*, she used Alexandre Desplat's score from *Read My Lips*, which featured an abundance of moody cues with sustained strings, and a 'not heavy' texture. This was intended, in part, to match composer Rachel Portman's approach to the score. For *The Pianist*, where she knew that Wojciech Kilar would be the composer, she temped it with music from his score for *Dracula*. In *The Age of Innocence*, Peric created the temp from music which was pre-composed by Elmer Bernstein – over a third of the score, including four main themes (Peric, 21 July 2004). Nancy Allen[28] noted that most music editors over-utilise particular scores and composers in their temp tracks – something which she and Peric consciously avoid. Among the scores cited that have been used extensively in temp tracks, were Thomas Newman's scores for *Shawshank Redemption* and *American Beauty*, and James Newton Howard's score for *The Fugitive*, specifically for his chase cues. While Allen considers these to be excellent scores, their overuse in temps dampens and restricts a composer's use of original ideas. Peric did note, however, a remarkable flexibility in Thomas Newman's scores, presenting rich, but more generalised emotions – readily transferable and effective for a variety of similar situations. In combating a reliance on conventional approaches, Peric will use classical music in a temp, a practice that Prendergast rarely utilises.[29] Peric will also contribute to a composer's freedom by temping part of a film with a composer's concert music. When asked which particular cues she might use for a specific mood, Peric replied that she does not think in those

terms – she approaches each cue and film individually – even her extensive personal CD library is not arranged by mood, or by film where it was previously used in a temp.

Philadelphia (1993)

Cue: 'Promoted'
[30]Director: Jonathan Demme
Composer: Howard Shore
Songwriter: Bruce Springsteen
Temp track & final score:[31] Suzana Peric

While the vast majority of the two hundred and fifty top-grossing films contain an orchestral score,[32] popular songs have increasingly appeared alongside them over the past fifteen years. However, songs are seldom integrated into the film, via the score. The following analysis of the 'Promoted' cue from *Philadelphia* was informed and driven by discussions with Suzana Peric and Roy Prendergast. They provided insights and facilitated a kind of archaeological path in discovering the relationship between song and score, and revealing elements of Howard Shore's compositional process. Suzana Peric supplied information concerning the actual cue, 'Promoted', as well as the range of music utilised in her temp track, i.e. cues drawn from Shore's scores for *The Silence of The Lambs* and films by David Cronenberg.[33] She also confirmed that Bruce Springsteen's song, *The Streets of Philadelphia*, had been edited into the opening of the film, prior to Howard Shore's composing of the score.[34] Knowing that Shore had access to the song before embarking on composing the score, they provide a window into his creative approach in incorporating salient material from the song. This also bolstered my initial sense, that the song and score bore an integral relationship.

Also preceding my analysis was Roy Prendergast's[35] assessment of the score's narrative function which he saw as defining the completion of the film's exposition, and heralding that the story has begun (Prendergast, 27 June 2004). Prendergast considered everything up until the scene in Andy's loft as a brief and tightly written exposition. He noted that his instincts would also have led him to temp the scene at Andy's loft with music powerful enough to delineate the narrative coherently. In sum, he found all premises had been revealed in the exposition: the key characters were introduced; that Andy was working on an important case; and Andy's need to keep his HIV hidden. Now the audience must be drawn into the film so that the intensity of the plot can commence. This is heralded by the score, which Prendergast felt was intensified through Shore's subtle referencing of Springsteen's song.

Analysis

The first major commercial film to document the societal plight of the AIDS epidemic, presenting a graphic depiction of what it was to be Gay in the early 1990's, is set in an old-world corporate law firm in Philadelphia. The opening aerial shot of the city is removed and muted, accompanied by the unfolding instrumental introduction to a song, exuding a foreboding feeling. Guitar chords oscillate rhythmically between F major and A minor – a pairing of light and shadow. But this is not the traditional pairing of major to relative minor familiar to popular songs: *A Day In the Life* begins

Figure 1. Screen shots from Philadelphia.

with G major ('I read the news today') and moves to E minor ('Oh Boy'). Billy Joel's *Piano Man's* opening chords begin with C and then A minor. Conventional usage of major to relative minor can, of course, aid in creating a dimension of narrative complexity and subtext, i.e. *Piano Man's* irony in which Billy Joel pits a happy entertainer persona against inner turmoil, and *A Day in the Life*, which presents a semi-psychedelic journey as metaphor for revolting against an existence lived in the mundane.

Bruce Springsteen's pairing of light and dark is unconventional and severe in its progression from F Major to A minor, which are also the essential chords drawn from Chopin's *Funeral March* (B♭ minor – G♭ Major). However, because the chords begin on F Major, instead of A minor, a direct reference (or perception) to the *Funeral March* is averted. Visually, the opening shot is otherworldly: there is an overhead shot of Philadelphia, similar to the opening of *Interview With The Vampire*, where Elliot Goldenthal's gothic soprano-of-the-night fills the sky over San Franscisco. Uncharacteristic of a rock ballad, *The Streets of Philadelphia* is shrouded in the deep, film-sound bass notes, F and A. The guitar chords are doubled and sustained by a synthesizer, mimetic of a church organ which is a funereal variation of the conventional Roland string patch. High, synthesised strings wail between the notes F and E, the only two notes not in common between F Major and A minor, induce a filmic pathos. *The Streets of Philadelphia* is produced as a hybrid, infused with elements of sound design, common to film sound and film music. It undergirds Springsteen's stolid lyrics of paired opposites, alternating images of the pleasantries of a bustling city life and those who are disenfranchised: volleyball games, welfare lines, children heading for school, homeless in the park.

I was unrecognisable to myself
Saw my reflection in a window
I didn't know my own face

Oh brother are you gonna leave me wasting away
On the streets of Philadelphia

A montage of events flows, which introduces the protagonist Andrew Beckett, a rising corporate lawyer, and many of the supporting characters. Andy, representing the corporate mainstream, is initially seen arguing against the Denzel Washington character, representing the downtrodden proletariat. We follow Andy as he catches a cab to the AIDS clinic and we witness ravaged victims. In a continuous stream of events, we enter his law firm, where he receives kudos for winning a case, banters with para-legals and secretaries, and reports to his mother on his HIV, invoking a hint of her emotional turmoil. He works on an important case at night and is called into the office of the firm's partners, where another chain of events unfurls. Andy's legal competence is established via his astute assessment of a case, he is promoted to senior associate and another partner notes a lesion on his forehead which Andy brushes off as a tennis accident. Howard Shore's cue, 'Promoted', begins within this montage of events.

Example 3. 'Promoted' final score cue music and screen shots from Philadelphia.

We jump to a shot of the exterior of Andy's loft, moving inside to see him hard at work on an important case. The music begins here in earnest – continuing with underlying harmonies, outlined in nervous sixteenths in the harp and flutes, tremolos in middle strings: D♭ Major and D♭ minor oscillating back and forth, moving to A minor and F minor oscillating back and forth. High strings sustain searing long notes, culminating in a high A to A♭ over the A minor to F minor change when we see Andy in his cap, his lesions partially exposed. Oscillating and juxtaposed major and minor chords are now dissonant and discombobulated, yet the notes F and E of D♭ major and D♭ minor are also the only notes not in common, reflecting back to the F and E of the Springsteen song's opening.[36] Furthermore, Shore's variation on Springsteen's A minor to F major not only utilises the notes F and E as not being in common, but provides a structural association (Example 3, third measure).

This thumbnail musical-cultural analysis was informed by Prendergast's initial observations. The film's narrative pairs the opposites of a traditional heterosexual society, exemplified in the ultra-traditional setting of an upscale corporate law firm, and the 'sub-culture' of early 1990's homophobia and its associated AIDS epidemic. In Bruce Springsteen's *Streets of Philadelphia*, the oscillating chords in the song's introduction are melancholy, reflective, and metaphoric of the protagonist's societal alienation. In direct contrast, but thematically connected by paired major/minor (and the notes F and E), Howard Shore's cue is frantic and claustrophobic, as if in the midst of an anxiety attack. No longer are the chords introspective of light and dark, reflections on life and death, the chords are now juxtaposed and crushed into each other. The musical gestures and narrative import exude what it is to feel the unwanted

forces tightening their grip; a virtual and visceral fear. The film's brief but information-laden exposition is undergirded by Springsteen's music, while Howard Shore's imaginative and structurally connected score conjures forth the narrative's inner-personal affective world – the subjective day-to-day horror that the ensuing story reveals. Prendergast's intuition, validated by Peric's confirmation of Shore's access, focused this analysis and suggested a textual reading by which a collective consciousness represented in the song coalesces with personal turmoil via the score. In the loft scene a subtext emerges through Shore's score which subtly and simultaneously serves in two capacities. Initially, it supplies the affective backing for Andy's immediate predicament. However, by infusing elements from the song, the score obtains a narrative role embodied in its resonance of a personal voice empowered by collective anguish.

Knowledge acquired from interviews and aspects of *Philadelphia's* post-production processes, is germane to the interests of a new generation of musicologists. Musicologists, such as those cited in this paper, are embracing film music by peering into the creative processes and intentions of its composers, and proffering textual criticism of individual scores. Through comparative analyses of the Springsteen song and Shore's score, coupled with a knowledge of the composer's chronology of access to these materials, a musical etiology emerges. Answering to film music's collaborative creative modalities, musicologists are designing broadened analytical paradigms, infusing their field with semiotics, psychology, and cultural studies. In tandem with its legacy of traditional research models, musicological inquiry into Howard Shore's composition processes would inevitably result in more eclectic and interdisciplinary approaches. A reading of *Philadelphia* couched in the cultural stigma of homosexuality is one example.

Closing thoughts

The purpose of this article is to elucidate the constitutive nature of film music as more integral to enquiry. The discussion and analyses answer a methodological need, reflecting the fragmented and collaborative functions in the creation of a film score. In the past seven years the disciplinary approaches for analysing film music have increased, now including cognitive studies, gender studies, popular music studies, and culture studies. Recent texts (Buhler, Flinn, Neumeyer 2002, and Donelly 2001)[37], articles (Anderson, Riis, Sadoff 2004, pp. 1–13) and conferences have paired practitioners and scholars (Anderson and Sadoff 2001), and juxtaposed eclectic approaches (Goldmark, Kramer and Leppert 2004). Indeed, a collaborative art may require collaborative analysis (Anderson and Sadoff 2004).[38]

Although the film composer has often been documented as a central figure, his/her role is, for the time being, diminishing. Songs are routinely placed without his or her knowledge or approval, the music is sometimes shuffled, and the strategic musical design is often pre-determined by musically untrained directors, cliché-driven music supervisors, and editors. Modern production protocols are complex, collaborative, economy-driven, and splintered. The industry's conversion to the digital realm has transformed the post-production environment for image and sound. Songs and score are often created via the same composition software. Surround sound now permits a gnat's wings, beating against a windowpane, to dominate a soundscape. Sound design is routinely infused as an element of the score and is no longer

under the aegis of the composer. Because editing stations allow picture editors to cut the film effortlessly and endlessly, it is difficult to lock the picture[39] even though all of the elements have been assembled, including the recorded score.

The temp track is a multi-level blueprint as well as barometer, revealing an essential vision of intent, the employment of cultural/affective codes, and audio-visual conventions. In creating temp tracks, music editors attempt to accommodate a triumvirate of creative forces – director, music supervisor, and composer. In addressing the modern soundtrack's increased use of songs, music editors can offer much insight into the analytical process. Their insights into their ideas of the perceiver, the reciprocal half of the creative equation, offer significant implications for critical inquiry. Their tasks are accomplished via an intuitive, multidisciplinary approach, enmeshed in a collective ecosystem, perpetually informing and re-defining itself through checks and balances. Analysis of the music editor's creative product, concomitant with the finished film score, provides a constitutive view of the film score that is considerably broader than findings in current approaches and potentially of far greater pedagogical value to aspiring film composers.

The music editor, serving as a portal into a broader creative continuum, implicitly bridges film music and film. In proximity, we become cognisant of music perpetually undergoing contextualisation within the filmic universe. We witness a dynamic process which is impossible to garner from secondary sources. Looking to the related study of film sound, we find a paradigmatic corollary in its integral inclusion of practitioner-scholars like Walter Murch and Michel Chion. Informed by theory and practice, Murch, picture editor and sound editor for *The English Patient* and *The Godfather*, embodies a film and film sound organicity. Concomitantly, the analytical lens of film sound inquiry addresses a broad sphere; the sound-inclusive *soundscape* inextricably bound to narrative/filmic contexts. Similarly, film music's post-production processes require collaborative and interdisciplinary efforts of its practitioners within the corporate film music forum. Its inherent checks and balances and its fluid collegial discourse between director, editor, music editor, and producer suggest an industrial mirror for scholarly collaboration. The temp track, in its accessibility to musician and non-musician alike, serves as the touchstone from which a concerted sculpting of musical design, concept, and associations emanate. Comprised of what is familiar to us all, the temp track is 'music-in-common' – popular music and a gateway toward informing textual analysis.

Copyright acknowledgements

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Endnotes

1. The terms *Score*, *Source* and *Scource* (source music functioning as underscore) are film industry terms – operative definitions within the film-making process.
2. 'Test screenings may seem at first to be another symptom of a poll-driven culture. But comedy makers have been recasting, reshooting and re-editing based on research screenings since Mack Sennett churned out his silent shorts in the 20's'.
3. David Raksin (2002) noted that temp tracks were in existence when he arrived in Hollywood in the late 1930's.
4. Foley is named after an early designer of re-created sound, Jack Foley.
5. The music supervisor often assists the director or producer in choosing pre-existing songs for films. Responsible for negotiating a song's licensing agreement and clearing its rights, they have ongoing relationships with major and independent record labels, and are generally ensconced in the music industry.
6. The following anecdote suggests an increasingly antagonistic stance between composers and music supervisors. I am not at liberty to reveal the source, except to say that the person is an Academy Award-winning film composer: In an industry-funded conference, an audience member enquired as to how one might train toward becoming a music supervisor, to which the composer replied, 'If you could become a low-level member of the Gambino crime family, that would be a good start'.
7. Largely drawn from the perspective of film composers, this chapter presents an informative overview of temp tracks.
8. My knowledge of music editors and their practices is informed by a decade of discussions and observations with industry-acknowledged professionals such as Roy M. Prendergast and Susana Peric. Further, I have maintained contact with NYU Film Scoring alumni whose careers have flourished in this area: Nancy Allen and Emmy-nominated editor and composer John Wineglass (*All My Children*). Finally, I draw from personal experience, in composing primarily for documentaries for film and network television – invariably working with directors, producers, and their temp tracks.
9. However, there are modern corollaries in successfully composing in large blocks. Ennio Morricone primarily composes strong, emotional-laden cues in long phrases with static orchestrations – essentially laid in parallel 'against' simultaneously changing visual and narrative events. Nevertheless, most sound era scores bear an essential difference from compilation scores, in that they are comprised of a series of non-continuous, individual cues.
10. Perhaps an indication of differences between film-making in Los Angeles and New York, this is not generally true of music editors in New York. Interview with Music editor Nancy Allen, 30 June 2004.
11. My thanks to Roy M. Prendergast for a wealth of information on temp tracks and the role of the music editor, garnered from guest appearances in my film music seminars at New York University, and through interviews from 2000–2004. Mr Prendergast, author of *Film Music: A Neglected Art*, is also one of Hollywood's top music editors, having provided temps for such films as *Terminator 3*, *Shakespeare in Love*, and *Road Trip*.
12. Quicktime movies are a cross-platform, digital movie playback format, developed by Apple Computer.
13. MIDI-mockups are electronic versions of the score which detail how the score will ultimately sound when fully orchestrated and recorded. Ranging from 'sketchy' to fully blown, they can be very time-consuming to produce, having spawned a cottage industry of specialists. Required of most composers, MIDI-mockups provide directors with their only window into hearing and discussing the score prior to live recording sessions. Due to incessant picture editing, composers must often alter or re-write cues, even at recording sessions. Music editors often make further adjustments on the final dubbing stage.
14. A term used in recording studios for electronically improving the quality of an audio or video signal, such as adding sound effects, audio ambience, etc.
15. The analogous academic terms, 'diegetic' and 'non-diegetic', are paired opposites, and offer no functional middle-ground term like 'scource'. Brown (1994, p. 61) notes the term's usefulness, and discusses a series of situations which clearly demonstrate crossover functionality. *A priori*, the terms 'diegetic music' and 'non-diegetic music' situate film music as measured against the 'diegesis'. This suggests a hierarchy, positioning the narrative and visual, at least initially, as bifurcated from sound (Kassabian 2001, p. 43). These sets of nomenclature reflect discipline-specific perspectives, i.e. from the film industry and film studies. However, all of the terms can be useful and there may be a middle ground. Michel Chion (1994, p. 73), a scholar and practitioner, offers a wealth of terminology drawn from both worlds: acousmatic, offscreen, onscreen, nondiegetic.
16. Ch. 17, 'Lena's Story', *Tears of The Sun*, 01:09:02.
17. My appreciation to Roy Prendergast for sharing his temp track, working protocols, and insights into this scene. Interview, 2 July 2004.
18. *Ibid*.
19. *Ibid*.
20. Temp is the industry shorthand for temp track, also extended for use as a verb: 'temped'. 'Tracked' is alternatively used by music editors.

21. Silvestri, A., 'I Opened the Door', *What Lies Beneath*. Varese Sarabande CD, 302 066 172–2, 2000.
22. *What Lies Beneath*, 01:21:25.
23. Interview with Roy Prendergast, 2 July 2004.
24. Tagg and Clarida (2003, pp. 217–20, 444–50) demonstrate an association of the interval of the minor sixth with longing, which is an extension of releasing emotional tension. Their argument, positing sixths as mimetic sighs (sonic anaphones), historically traces the interval from Bach to Wagner to Olwen's Dream, to the 'Lassie' theme and Nina Rota's theme from *Love Story*.
25. Scott's (2003, pp. 128–51) exposé of Liszt's typology of the demonic, cites many of Liszt's demonic-entitled works, noting that the salient musical gestures include not only trills and ornaments, but slithering chromaticism and open fifths. In the Silvestri cue, note that C minor is arpeggiated in an open voicing (C–G–E♭), thus eliciting a repetitious drone, bifurcating the note E♭ and enunciating the open fifth.
26. This is a general assessment based on conversations with Suzana Peric and Roy Prendergast.
27. Suzana Peric has provided valuable information in interviews and as a lecturer in my film scoring seminars at New York University since 1995. She recently completed work on *The Manchurian Candidate*.
28. Nancy Allen has worked as a music editor, exclusively with Suzana Peric, from Martin Scorsese's *Kundun* in 1997, through the recent *Manchurian Candidate*, directed by Jonathan Demme.
29. Prendergast generally does not employ classical music in temp tracks, in part, because he finds that the classical repertoire often contains an over-abundance of information.
30. Ch. 7, '9 days later', *Philadelphia*, 52619, 00:15:26.
31. 'Final score' is music editor's parlance denoting working with the composer on the (final) score.
32. An informal survey, in accordance with information garnered from the Internet Movie Database (www.imdb.com), 17 October 2003. The American Film Institute's 'Top 10 Films', based on 'outstanding achievement', for 2000–2003, exhibits essentially the same finding (23 July 2004).
33. Conversely, Roy Prendergast has rarely been able to utilise a composer's previous scores, although he temped the film *Terminator 3* with cues from prior scores of Marco Beltrami.
34. It is not a common practice to commission a song from a major pop artist, for a film. However, this was the case for *Philadelphia*. In fact, two songs were commissioned by director Jonathan Demme – one from Neil Young and one from Bruce Springsteen. Neil Young's song appears during the final credits.
35. This was Mr Prendergast's initial viewing of the film.
36. In further suggesting organic compositional ties to the Springsteen song, Shore composes in the non-standard key of D♭ major/minor, perhaps avoiding the awkward enharmonic equivalents of the notes E to F in C♯ major/minor.
37. 'It may well be that film-music studies will eventually need to adopt a team approach, like film production itself, in order to overcome some of the more intractable research and critical issues in the field; in so doing, of course, it would depart from the traditional humanities model of solitary scholarship' (Neumeyer in Buhler *et al*. 2002, p. 8).
38. This is a proposal for devising a new, collaborative method for the analysis of moving images. This would be analogous to Lawrence Ferrara's 'eclectic method' in music analysis (Ferrara 1991).
39. A 'locked picture' is the industry terminology indicating that the picture will not be subject to any more changes.

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