

THE TERNARY DISTINCTION OF SOUND CINEMA

Gaspara Cailléz Angeles

Master of Philosophy

2019

Western Sydney University

DEDICATION

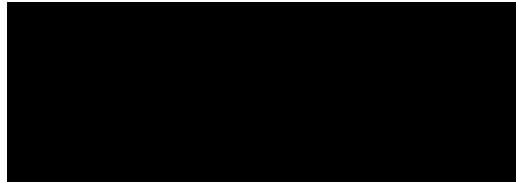
I dedicate this work to Dr Alex Ling and Dr Ian Stevenson whose belief in my work served as my source of support and inspiration. Their unparalleled level of expertise and patience aided the writing of this thesis in innumerable ways.

ACKNOWLEDGEMENT

I am overwhelmingly grateful to Dr Alex Ling for not only making this inquiry possible, but moreover for helping to make it my most educational and meaningful academic experience.

STATEMENT OF AUTHENTICATION

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.



Gaspara Cailléz Angeles

TABLE OF CONTENTS

CHAPTER ONE: Introduction	11
1.1. Our Field of Inquiry	11
1.2. The Resistance to the Binary Distinction	14
1.3. In Defense of the Binary Distinction	16
1.4. Our Position on the Binary Distinction	18
1.5. The Knowledge Gap: The Deluge	20
1.6. Aims and Significance	20
1.7. Thesis Statement	21
1.8. Method	21
1.9. The Functionality Theory Scaffold	22
1.9.1. Referentiality: Referential Music	24
1.9.2. Complementarity: Complementary Music	25
1.9.3. Informativity: Epistemic Music	27
1.10. The Inferentiality Theory Scaffold	29
1.10.1. Explicit Data	30
1.10.2. Implicit Data	33
CHAPTER TWO: The Categorization Process	36
2.1. The First Factor: Musicality	36
2.1.1. The Soundscape of Periodic Music	36
2.1.2. The Soundscape of Drone Music	39
2.2. The Second Factor: Functionality	42
2.2.1. Spatiality: Active offscreen	43
2.2.2. Spatiality: Ambidiegetic	45
2.2.3. Spatiality: Source Scoring	47
2.2.4. Temporal Relationship: External Analepsis	49
2.2.5. Temporal Relationship: Oneiric Hypnagogic	52
2.2.6. Diminished Borderline: Onomatopoeic	54
2.2.7. Diminished Borderline: Ambient	55
2.2.8. Counter Emotional Tonality: Contrapuntal	56
2.2.9. Counter Emotional Tonality: Didactic Contrapuntal	58

2.3.	The Functionality of Cinema Music	59
2.3.1.	The Function of Referentiality	59
2.3.2.	The Function of Complementarity	60
2.3.2.A.	Abstract Concept: The Tonality of Pain	63
2.3.2.B.	Abstract Concept: The Tonality of Valor	64
2.3.2.C.	Abstract Concept: The Tonality of Madness	64
2.3.3.	The Function of Informativity	65
2.4.	How to Catalogue Cinema Music	66
CHAPTER THREE: Epistemic Music		68
3.1.	What is Epistemic Music	68
3.2.	The Pre-Existence of Epistemic Music	69
3.3.	Implicit Data: The Three Forms	70
3.3.1.	Authorial Commentary: Narrative Trajectory	71
3.3.2.	Inner State: Psychophysical Trajectory	73
3.3.3.	Displaced Reality: Perceptual Trajectory	75
3.4.	The Inferential Process	76
3.5.	The Difference between Epistemic and Complementary Music	79
3.5.1.	When Complementary Music Seems Epistemic	80
3.5.2.	When Epistemic Music Transcends its Annotative Function	81
3.5.3.	Comparative Analysis: Epistemic and Complementary Music	84
3.6.	A Reflection on Epistemic Music: The Beauty of Cognition	86
CHAPTER FOUR: Cinema Music: An Exegesis		88
4.1.	The Autonomy of Cinema Music	88
4.2.	The Symbiosis of Cinema Music and Image	89
4.3.	The Parsimony of Cinema Music	92
4.4.	Confluence: How We Can Still Classify Parsimoniously	94
4.4.1.	Referential Precedence Over Complementary	95
4.4.2.	Epistemic Precedence Over Referential and Complementary	99
4.5.	Epilogue	103
APPENDIX I		106
APPENDIX II		112
BIBLIOGRAPHY		114

LIST OF TABLES

Table 1. Ambiguities and Solutions	43
Table 2. Sample Catalogue of Categorized Cinema Music	66
Table 3. Comparative Chart: Epistemic and Complimentary Music	85

LIST OF FIGURES

Fig. 1.	Cinema Music Sample No. 1: Referential	24
Fig. 2.	Cinema Music Sample No. 2: Complementary	26
Fig. 3.	Cinema Music Sample No. 3: Epistemic	28
Fig. 4.	The Adaptation of Bordwell's Inference Theory	30
Fig. 5.	Cinema Music Sample No. 4: Explicit Data (Referential)	31
Fig. 6.	Cinema Music Sample No. 5: Explicit Data (Complementary)	32
Fig. 7.	Cinema Music Sample No. 6: Explicit Data (Complementary)	33
Fig. 8.	Cinema Music Sample No. 7: Explicit Data (Complementary)	33
Fig. 9.	Cinema Music Sample No. 8: Implicit Date (Epistemic)	34
Fig. 10.	Cinema Music Sample No. 9: Atonality	37
Fig. 11.	Cinema Music Sample No. 10: Drone Music	41
Fig. 12.	Cinema Music Sample No. 11: Drone Music	41
Fig. 13.	Cinema Music Sample No. 12: Drone Music	42
Fig. 14.	Active Offscreen Sample	43
Fig. 15.	Cinema Music Sample No. 13: Referential	44
Fig. 16.	Cinema Music Sample No. 14: Complementary	45
Fig. 17.	Cinema Music Sample No. 15: Complementary	48
Fig. 18.	Cinema Music Sample No. 16: Epistemic	51
Fig. 19.	Cinema Music Sample No. 17: Complementary	53
Fig. 20.	Territory: Unclassifiable as Cinema Music	54
Fig. 21.	Ambient: Unclassifiable as Cinema Music	55
Fig. 22.	Cinema Music Sample No. 18: Epistemic	56
Fig. 23.	Cinema Music Sample No. 19: Epistemic	58
Fig. 24.	Cinema Music Sample No. 20: Referentiality	60
Fig. 25.	Cinema Music Sample No. 21: Abstract Concept (Pain)	63
Fig. 26.	Cinema Music Sample No. 22: Abstract Concept (Valor)	64
Fig. 27.	Cinema Music Sample No. 23: Abstract Concept (Madness)	65
Fig. 28.	Cinema Music Sample No. 24: Informativity	65
Fig. 29.	The Categorization Process of Cinema Music	67
Fig. 30.	Cinema Music Sample No. 25: Authorial Commentary	72
Fig. 31.	Cinema Music Sample No. 26: Referential (For contrast only)	74

Fig. 32.	Cinema Music Sample No. 27: Epistemic (Inner State)	74
Fig. 33.	Cinema Music Sample No. 28: Epistemic (Displaced Reality)	76
Fig. 34.	Perspectives: An Analogy between Camera and Epistemic Music	79
Fig. 35.	Narrative Trajectory No. 1	82
Fig. 36.	Cinema Music Sample No. 29: Narrative Trajectory No. 2	82
Fig. 37.	Narrative Trajectory No. 3	83
Fig. 38.	Narrative Trajectory No. 4	83
Fig. 39.	Narrative Trajectory No. 5	83
Fig. 40.	Narrative Trajectory No. 6	84
Fig. 41.	Narrative Trajectory No. 7	84
Fig. 42.	A Reflection on Epistemic Music: The Beauty of Cognition	86
Fig. 43.	The Ontological Structure of Epistemic Music	87
Fig. 44.	Symbiosis of Sound and Image (I)	90
Fig. 45.	Symbiosis of Sound and Image (II)	91
Fig. 46.	A Stand-alone 'Music' Sample (For contrast only)	91
Fig. 47.	Cinema Music Sample No. 30: Parsimony	92
Fig. 48.	Cinema Music Sample No. 31: Parsimony	93
Fig. 49.	Cinema Music Sample No. 32: Parsimony	93
Fig. 50.	Cinema Music Sample No. 33: Tritone	94
Fig. 51.	Categorical Solutions for Confluent Music	95
Fig. 52.	Cinema Music Sample No. 34: Referential	97
Fig. 53.	Cinema Music Sample No. 35: Referential	98
Fig. 54.	Cinema Music Sample No. 36: Epistemic	100
Fig. 55.	Cinema Music Sample No. 37: Epistemic	101
Fig. 56.	Cinema Music Sample No. 38: Complementary	101
Fig. 57.	The Inference	103
Fig. 58.	The Ternary Distinction of Sound Cinema	104

FILMOGRAPHY

Accattone (Pier Paolo Pasolini, 1961)
Alexander Nevsky (Sergei Eisenstein and Dmitri Vasilyev, 1938)
Amadeus (Milos Forman, 1984)
Black Hawk Down (Ridley Scott, 2001)
Butch Cassidy and the Sundance Kid (George Roy Hill, 1968)
The Dark Knight (Christopher Nolan, 2008)
Dead Again (Scott Frank, 1991)
The Deer Hunter (Michael Cimino, 1977)
The Edge of Winter (Rob Connolly, 2016)
The Fiddler on the Roof (Norman Jewison, 1971)
Fury (David Ayer, 2014)
The Haunted Mansion (Rob Minkoff, 2003)
The Imitation Game (Morton Tyldum, 2014)
L'Immortel (Richard Berry, 2010)
Inglourious Basterds (Quentin Tarantino, 2009)
Jaws (Steven Spielberg, 1975)
Jungle (Greg McLean, 2017)
Kate and Leopold (James Mangold, 2001)
Kramer vs Kramer (Robert Benton, 1978)
The Machinist (Brad Anderson, 2004)
Mary Poppins (Robert Stevenson, 1964)
No Country for Old Men (Joel and Ethan Coen, 2007)
The Others (Alejandro Amenábar, 2001)
Psycho (Alfred Hitchcock, 1960)
Remember (Atom Egoyan, 2013)
Reservoir Dogs (Quentin Tarantino, 1992)
Saturday Night Fever (John Badham, 1977)
Seven (David Fincher, 1995)
Shaun of the Dead (Edgar Wright, 2004)
The Sound of Music (Robert Wise, 1965)
Tarzan the Ape Man (W.S. Van Dyke, 1932)
Victor Frankenstein (Paul McGuigan, 2015)
Weekend (Walter Ruttmann, 1930)
Wuthering Heights (Robert Fuest, 1971)

ABSTRACT

This thesis addresses the problematic categorization of film music in terms of a reductive diegetic/nondiegetic distinction ('the binary') and presents an alternative analytical framework. Following the law of parsimony, we reconstruct this original binary distinction in order to establish a new *tripartite* schema that accounts for the many otherwise ambiguous categories of sound that had occupied an unknown or indeterminate region of the binary zones. Drawing on the works of Bordwell, Kassabian, and Neumeyer in particular, the thesis seeks to put an end to the theoretical indeterminacy that haunts the binary distinction by introducing a new and inclusive *ternary schema* of sound cinema.

Keywords: *cinema music, ternary distinction, epistemic music, referential music, complementary music, referentiality, complementarity, informativity, deluge, functionality, implicit data, trajectories.*

CHAPTER ONE

Introduction

*Picture music is different in its purpose, in its texture, in its form and its technique.
This is why it has to be looked at with different eyes, listened to with different
ears, and judged in a different frame of mind.*

- Hans W. Heinsheimer (1947: 212-213)

1.1. Our Field of Inquiry

This study concerns cinema music and the manner in which it has been historically conceptualized and organized according to various criteria. By ‘cinema’, we refer to films typical of Hollywood studios. By ‘cinema music’, we mean manipulated musical sounds whose sole purpose is to assist the film’s audio-visual tracks in moving the diegesis forward. We examine not only the sounds themselves, but moreover, the ambiguity and imprecision surrounding the ways in which they have been theorized and categorized according to limited criteria.

However, our endeavor to provide some clarity to this ambiguity is modest in scope. That is to say, we are less concerned with *proving* our argument than we are with asserting its plausibility. This is because music in film is a huge field and its various methodologies can sometimes clash with one another.

As Jeff Smith argues, the area of ‘film music studies’ is inherently interdisciplinary and, therefore, risks drawing multiple (potentially incongruous) theoretical premises from various fields. In particular, conceptual and terminological confusions can arise. Smith further notes how this necessary interdisciplinarity:

entails certain risks [...] because scholars tend to use language in ways that are consistent with the rubrics established within their home discipline. Moreover, as film music scholars built on established theories, they often develop new related concepts and categories that adumbrate and expand some of the most basic premises of the field (2009: 2).

By the same token, Martin Marks argues:

research into film music requires an understanding of not one but two nonverbal systems of communication, as well as the problematical jargons with which we attempt to describe each of them in speech. In this age of specialized studies, few scholars have been able to master more than half of the subject (1982: 3-4).

These problems are not new, and have in fact existed since the birth of the discipline. Raymond Spottiswoode, for example, writing in the 1950's, complained that the "indeterminate and largely unexplored" place of music in films means that it "cannot be discussed with the precision attaching to the visual component" (1950: 192). Two decades later, the problem remained unsolved. Writing in the 1970's, Douglas Gallez recognized that:

the world of film is so varied that one would indeed be bold to circumscribe the possibilities for music [...]. We are in the period of neo-Dada, of anti-rationality [...]. Maybe it is because the possibilities are so great we cannot comprehend them (1970: 46).

While we agree with Noël Carroll's contention that "anxieties about theoretical purity are impediments to theoretical discovery" and that we accordingly need to "respect the limits of precision available in a given domain of inquiry" (2003: 360),¹ the bottom line is the surfeit of theoretical possibilities makes it impossible for us to obtain knowledge about cinema music with anything approaching absolute certainty. Hence, there is only so much theorizing we can do when it comes to cinema music.

Nevertheless, it is not only desirable but moreover necessary to at least postulate what the role of music in film might be. Thus, in accordance with Kathryn Kalinak's logical assertion that "film music is [...] defined by its function within a

¹ By 'limits of precision', Carroll refers to Aristotle's logic of reasoning in *Nicomachean Ethics*: "Our account will be adequate if its clarity is in line with the subject-matter, because the same degree of precision is not to be sought in all discussions [...]. It is a mark of an educated person to look in each area for only that degree of accuracy that the nature of the subject permits" (2014: 4-5). See also Hannah Arendt's argument concerning the impossibility of absolute truth" (1998: 279).

cinematic field of reference” (2010: 9),² our contention is that the fundamental function of music is to help advance the *film narrative*. Not only do we hold this essential musical function as film music’s *raison d’être*; moreover, it is on the basis of this functionality that our entire thesis is constructed.

Given the foregoing, our intention is to only attend to those elements which are both fundamental and necessary. Accordingly, our approach is based on the famous axiom of medieval scholar William of Ockham, who advanced the principle of parsimony that has since come to be known as “Ockham’s Razor”. Simply put, this principle states that in explaining something, one should make no more assumptions about the subject than necessary. In essence, it advises us to always seek the most economical solution.³

Ockham used the following propositions in his application of reasoning:

- i. it is futile to do with more what can be done with fewer;
- ii. when a proposition comes out true for things, if two things suffice for its truth, it is superfluous to assume a third;
- iii. plurality should not be assumed without necessity;
- iv. no plurality should be assumed unless it can be proven a) by reason, or b) by experience, or c) by infallible authority.⁴

Moreover, Richard Olson argues that simplification is a crucial activity in any analytical process because it bypasses potential pitfalls of mental analysis. He writes that “once we discover an adequate cause of some phenomenon, we must not expect redundancy; and we cannot allow an event to be overdetermined” (1995: 106). Said differently, “unnecessary elements decrease a design’s efficiency, and increase the probability of unanticipated consequences” (Lidwell et al. 2010: 172).

² See also Gorbman 1987: 22.

³ “Many variations of the principle exist each adapted to address the particulars of a field or domain of knowledge” (Lidwell et al. 2010: 172). In art, we might think of the monochromatic works of artists like Yves Klein. In music, it would be the sparse tonal forms of composers like Steve Reich. In physical science, Newton writes in *Principia* his rules of reasoning: “We are to admit no more cause of natural things than such as are both true and sufficient to explain their appearances” (1803: 160). In philosophy and logic, Aristotle claims in his *Posterior Analytics* that principle should, in fact, be as few as possible (Gauch 2003: 271). It was Ockham’s direct insight on motion that became “the basis for the seventeenth-century theory of inertia, replacing the earlier concept of impetus” (Adams 1987: 799-852).

⁴ Cf. Hoffman et al. 1977: 3-28.

We can say that ‘unnecessary elements’ only lead to the creation of further related concepts and subcategories of existing concepts, weakening the most basic premises or theories. In the field of study that concerns us here – namely, that of *film music* – we see just such a weakened fundamental theory in the commonly accepted binary opposition ‘diegetic’ and ‘nondiegetic’.

Originally, key to film music vocabulary was the distinction of *diegetic*, which refers to sounds that belong to the film’s story world, and *nondiegetic*, which refers to sounds that lie ‘outside’ that world (see: Genette 1980: 56; Gorbman 1987: 22-23; Chion 1994: 73). However, this basic diegetic/nondiegetic distinction has over the years been overdetermined, redefined, and increasingly subdivided.

As a result, a number of complex categories have emerged that we deem both arbitrary and unnecessary, such as the categories of ‘metadiegetic’, ‘extradiegetic’, and ‘psychodiegetic’ (see: Gorbman 1987: 22-23; and Citron 2010: 189). A comprehensive list of these diegetic and nondiegetic subcategories is found in Appendix I.

Ben Winters acknowledged the seeming banality of criticizing this dominant schema today, admitting that “by suggesting that the terminology ‘diegetic’ and ‘nondiegetic’ is problematic is well-worn ground”, given that “film music scholars have been debating the appropriateness of these concepts and periodically discussing the ambiguous cases that problematize this simple binary distinction” (2010: 2). Unsurprisingly, as soon as the original binary framework gained traction, it was quickly resisted or criticized as weak, inadequate, and ambiguous. The following section gathers a number of critiques of the binary as well as examines the extent of this resistance.

1.2. The Resistance to the Binary Distinction

Criticisms may have started the wave of resistance, but it was progressive thinking that brought it to a crescendo. That is to say, the rise of modern concepts relating to the nature of sound gradually came to supersede the original binary in terms of both applicability and relevance, such that its presumed ‘irrelevance’ eventually created a distinct ‘knowledge gap’ in the field.⁵ Later in this chapter we will see how these

⁵ Some examples of modern concepts in sound are: Casey O’Callaghan’s (2017) ‘multimodality’ (where sound perception cannot be defined without reference to the hearer’s subjective condition and medial theories); Anahid Kassabian’s (2013) ‘ubiquitous listening’ (where ‘distributed subjectivity’ generates inattention as the hearer is tossed about amidst the shifting field of sound and effect); Ian Cross’s (1993)

modern studies in sound have even taken root *within* the world of cinema, when we examine a number of filmmakers who now also construe and employ sound unconventionally in their work.

According to Claudia Gorbman, the distinction between diegetic and nondiegetic music has intrigued film music circles since at least the 1940s, and has periodically set debates in motion over its appropriateness or distinctness (1987: 183). The principal reason for this comes down to its perceived inability to provide a clear and comprehensive structure, with many film scholars finding this binary either too crude (Winters 2010: 25), or too fragile (Branigan 1992: 87).

For Michel Chion, the original diegetic/nondiegetic binary is too insufficient or vague for use in demarking film sound or articulate all his theories on sound (Chion 1994: 68). By ‘film sound’, we refer to dialogue, sound effects, and music (Chion 2009: xi; Kalinak 2015: 2). By ‘sound effects’, we refer to any sound that is neither music nor dialogue, such as Foley, ambient sounds, and common environment noise (Pramaggiore and Wallis 2005: 206). Chion argues that the binary does not include volume, which is vital to spatial placement of the narrative (see: Nagari 2013: 38). He further argues that since “we classify sounds in relation to what we see in image”, and classification of sounds becomes subject to revision because what we visualize in the frame constantly changes” (Chion 1994: 68).

Today, the general view is that the binary is inadequate, its porous structure meaning that music often transits between the supposedly ‘stable’ (and mutually exclusive) diegetic and nondiegetic states because it is “a concept that has been somewhat loosely defined” (Smith 2009: 2). Addressing this problem of musical instability and indeterminacy, Robyn Stilwell argues that the “trajectory of music between diegetic and nondiegetic highlights a gap in our understanding, a place of destabilization and ambiguity” (2007: 186). As it stands, a large amount of this traditional music ends up in a complex field lying between the binary regions that Stilwell calls “the fantastical gap” (2007: 184). Guido Heldt defines this gap as “a

‘cognitive and behavioral neuroscience’ (which explores the relevance of cultural, biological, and acoustical bases for human musicality); John Cage’s ‘chance music’ (where sound from environment and ‘prepared’ instruments are considered interior to music paradoxically due to their departure from the modulus) (Prichett 1993: 25); Jonathan Sterne’s (2003) ‘ensoniment’ (where medicine, science, and technology merge in the modern organization of sound); and David Sonnenschein’s (2011) psychoacoustic theories, or what he calls ‘sound spheres’, which identify layers of dream states that take place in the film narrative.

handy space to put in many examples of the music in film that do not fit a simple diegetic/nondiegetic dichotomy” (2015: 58).

A good number of other publications cast further doubt on the binary schema. For example, while noting that the diegetic/nondiegetic distinction “is one of the cornerstones of film music theory”, Jeff Smith nonetheless argues that since it is “a concept that has been somewhat loosely defined”, “the relation between diegetic and nondiegetic music has given rise to several related terms and concepts” (2009: 2). We could easily list many more examples.

Didi Merlin, for example, holds that “pairs of terms frequently used in film musicology – *onscreen vs. offscreen*, *diegetic vs. non-diegetic*, *internal vs. external* [...] are not sufficient for a precise description of the temporary results of the interactive processes taking place on the perceptual, cognitive, and emotional level between audiovisual input and the recipients (cited in Heldt 2013: 52), while Kassabian concurs that the binary “cannot comfortably describe music that seems to fall ‘in between’ these categories, much less account for its different character. Perhaps more importantly, it shifts critical attention away from features of music [...] that coincide with the different narrative statuses” (2001: 42-43).

Alexander Binns, for his part, argues that “the terms diegetic and nondiegetic themselves do a disservice to the operation of music and [...] it is in instances such as these that their inadequacies become apparent (2008: 127-140). Other articles proposing further investigation and revision of the binary distinction include Buhler 2001; Levinson 1996; and David 2012.

Nonetheless, a number of scholars, perhaps recognizing the historical relevance of the diegetic/nondiegetic binary to the field, have forcefully argued in defense of the binary distinction. We will now examine some of these counterarguments.

1.3. In Defense of the Binary Distinction

According to David Neumeyer, “despite its several difficulties, the distinction represented in diegetic/nondiegetic is still fundamental to material relations of image and sound and to narrative functions of music in the sound film” (2009: 27). The reason for this is that a good part of a cohesive *fabula* – this being the ongoing story constructed from narrative elements pieced together in the mind of the audio-viewing subject (McQuillan 2000: 83) – comes from knowing the fundamental

difference between *diegetic* (because they emanate from inside the frame), and *nondiegetic* sounds that only the audience can hear (because they emanate from ‘outside’ that frame). In a similar vein, Chion notes that even though the binary suffers from various limitation, we nonetheless benefit from keeping it as a basis upon which to build new theoretical distinctions. As he puts it:

Why reject a valuable distinction simply because it isn’t absolute? It is a mistake to see things in a binary, all-or-nothing logic [...]. We must add new categories – not claiming thereby to exhaust all possibilities, but at least to enlarge the scope, to recognize, define, and develop new areas (1994: 75)⁶

Daniel Goldmark, Lawrence Kramer, and Richard D. Leppert agree with Chion’s desire to retain the binary noting that “the issue is not to scrap the distinction [...] but how to avoid being caught up by its implicit worldview, the spontaneous philosophy that its unreflective use carries with it” (2007: 4). For Gorbman’s part, the problem with the binary does not lie with the concept itself but rather with how we perceive music in the context of film narrative. She argues that “once we understand the flexibility that music enjoys with respect to the film’s diegesis, we begin to recognize how many different kinds of functions it can have” (Gorbman 1987: 22; see: Kalinak 2010: 9). Similarly, for Daniel Yacavone, the problem with the binary simply lies in our failure to recognize the context in which the film is presented:

Undoubtedly, there are often substantial gray, or shadowy, areas for both viewers and theorists alike in terms of what may or may not be diegetic or nondiegetic [...]. And a given feature of a film such as a piece of music [...] may move from one sphere to the other in the course of its temporal unfolding,

⁶ In favoring enlarging the binary’s scope and developing new areas, Chion’s own version of the binary distinction is ‘acousmatic/visualized’. He then re-groups acousmatic and visualized sounds into ‘offscreen/onscreen/nondiegetic’, which he further subcategorizes into ‘null extension’, ‘vast extension’, ‘ambient’, ‘passive/active offscreen’, ‘trash offscreen’, and ‘objective-internal’ (see: Chion 1994). Addressing Chion’s work, Gregg Redner notes that “while Chion’s approach to audio/visual analysis [...] creates a deeper and richer reading [...], the specific and comprehensive quality of it does not privilege music. While certain elements may be adapted for musical analysis, others simply do not translate. Thus, while fascinating, rich and detailed, the application of Chion’s model to film music is limited” (2011: 14).

or indeed, may exist in both simultaneously [...]. Rather than abandoning the theoretical impulse behind the diegetic and nondiegetic distinction [...] what is needed is a recognition that [...] the story-world of a film may range from relatively more fragmentary, unstable, pretextual, and implausible, on the one hand, to more “three-dimensional”, detailed, and realistic, on the other. All this will be [...] always work specific (2014: 24-25).

While Stilwell admits to the binary’s ultimate inadequacy, she does not see the frequent crossover between the diegetic and nondiegetic levels as theoretically transgressive, but rather as reaffirming their difference. She further notes that things like ‘liminality’, ‘magic’, ‘danger’, ‘dream’, the ‘free play of possibilities’, and the ‘sense of unreality’ necessarily exist in border regions, and that they emerge the second we step out of the stable regions (Stilwell 2007: 184).⁷

Having outlined a number of arguments both in opposition to and in defense of the diegetic/nondiegetic binary, the question now arises as to what side of the debate this thesis falls on; that is to say, are we *pro-or anti*-binary? The following section will show that we sit somewhere in the middle.

1.4. Our Position on the Binary Distinction

Writing half a century ago on the state of ‘film music theory’, Gallez held to the view that “even as we peer over the threshold, we must continue to see where we have been and where we now stand” (1970: 46). Taking into account Gallez’s imperative, we concur with Neumeyer that the binary distinction remains the fundamental basis of music’s function in narrative film. We also accept Chion’s contention that it is an important theoretical foundation upon which we might build new concepts and ideas.

However, we can only uphold the binary by recognizing both its *referential* function (which is usually diegetic), and its *complementary* function (which is usually nondiegetic). Outside of this, the diegetic/nondiegetic binary quickly becomes too murky and indistinct for our purposes or for precise categorical

⁷ We might say that Stilwell views the soundscape of film as inherently ‘magical’ and for this reason characterizes its geography as ‘fantastical’. That is to say, her meaning of ‘fantastical’ alludes more to *fascination* than to bewilderment. In our view, however, Stilwell’s ‘fantastical gap’ translates to a broader ‘knowledge gap’ which requires immediate attention. We will explore this ‘knowledge gap’ in §1.5.

application. That is to say, our contention is that we can no longer categorize music according to its onscreen and offscreen *spatiality* as if we were simply flicking an ‘on/off switch’. For the simple fact is that concepts concerning sound have become too sophisticated for cinema music to be understood in such dichotomous terms.

Moreover, the boundary between ‘sound effects’ and ‘music’ has not simply been problematized in recent years; rather, this destabilizing process has been going on for quite some time. Over time, this boundary has become increasingly indistinct and porous, leading to a *diminished borderline*, the result of which is that sound effects are today frequently categorized as ‘music’. In addition to this, the film narrative has itself become increasingly sophisticated.⁸ For instance, sounds are today often classified according to their temporal relationship to the image which includes ‘displaced sounds’, or sounds that appear earlier or later than the image (see: Bordwell & Thompson 1979: 246-249).⁹

Lastly, sound has also been ascribed a *counter emotional tonality* characteristic, whereby it can somewhat respond according to the mood of the scene in question. This means that sound is now correspondingly classified, for example, as ‘empathetic’ (because it is ‘compassionate’ to what the image presents) or ‘anempathetic’ (because it is ‘indifferent’ to what the image presents).¹⁰

So far, we have identified four ambiguous criteria by which the majority of cinema music is currently classified: *spatiality*, *diminished borderline*, *temporal relationship*, and *counter emotional tonality*. We will examine these criteria in more detail and present examples of each in Chapter Two.

Ultimately, the frequent use of ambiguous criteria to accommodate every new and exciting idea on sound (cf. fn. 5) – or every complex (and moreover, roughly

⁸ We note that the more sophisticated or complex a subject is, the more crucial it is that writings around it be clear. Unfortunately, many of these writings are vague and have been disseminated without explicatory measures or conceptual basis. As Gregory Curie argues, “it is frequently and truly said that writing in film theory has a tendency to be obscure [...]. Jargon is then used in so unsystematic a way that no clear meaning for it can be inferred from its use. This failure of style connects [...] with the lack of clarity of much writing on film function to protect bad theory from the light of criticism [...]. Film theorists have used intellectual strategies that were almost bound to lead to disaster” (1995: xviii).

⁹ Two examples of ‘displaced sounds’ are ‘oneiric hypnanogic’ (i.e. the state of drifting away from consciousness or sleeping) and ‘oneiric hypnapompic’ (i.e. the state of returning to reality or waking up) (Carroll 2016: 69).

¹⁰ See Chion 1994: 8. Chion conceived three other types of emotional tonality: ‘redundant’, ‘contrapuntal’, and ‘didactic contrapuntal’ (2009: 430-431). See Appendix I.

identified) narrative style that arises (Branigan 1992: 187) – has resulted in a plethora of categories with ill-defined boundaries and confused meanings. As sound theorist Mladen Milicevic puts it:

all these film theories that attempt to classify film sound into absolute and complicated categories talk about sound which parallels or counterpoints the images, sound that is synchronous or asynchronous in relation to the images, sound that is either realistic or unrealistic, or sound that is literal or nonliteral. In order to accomplish this impossible pursuit and get to the bottom of the meaning of film sound, all these theories needed several sub-categories, which in return required their own sub-sub-categories, and soon ad infinitum. The reason why these film sound theories have difficulties lies in their attempt to get absolutely finite results beyond contingency. Unfortunately, in the end they become more about making classifications than they do about understanding cinema (2013: 3216).

In other words, while several categories arose as an attempt to classify cinema music as precisely as possible, these clarificatory categories have themselves only ended up adding to the confusion. This profusion of indistinct categories of cinema music has established what we identify as a distinct ‘knowledge gap’ in the field.

1.5. The Knowledge Gap: The Deluge

At present, the literature surrounding film music is so rife with ambiguous or indeterminate categories that we can reasonably describe this profusion in terms of a *deluge*. By ‘deluge’, we mean a buildup of complex and variegated distinctions which has only led to more ambiguity, indistinction, and confusion. Many of these distinctions are in fact synonymous or overlapping and hence lose all meaning when counterposed to each other. Several others are simply unclassifiable due to the aforementioned ambiguous criteria according to which they have been classified. Wearing away our understanding of music’s relation to film narrative, this knowledge gap clearly indicates the need for a more adequate and well-defined framework with which to catalogue cinema music.

1.6. Aims and Significance

Our initial aim is to employ the key criterion of ‘functionality’ in order to construct an alternative analytic framework for classifying cinema music out of the existing binary model. Our next aim is expand this framework by identifying and thematizing a third schema in the form of *epistemic music*, thereby transforming the existing binary distinction into a tripartite structure: a *ternary distinction*.

Although a small number of scholars recognize the existence of such epistemic music, it remains for the most part undertheorized, if not wholly overlooked. In holding that this third schema of ‘epistemic music’ is key to closing the knowledge gap, our aim is to vigorously expose its presence in order to contain ‘the deluge’. However, we acknowledge that the process of reducing this deluge will result in the production of a small number of new terms; and that while this process is unavoidable, it nonetheless presents a more manageable and inclusive system to those which are currently available.

The significance of this work lies in the ability of the ternary framework to eliminate ambiguous criteria and thereby reduce theoretical and terminological indeterminacy to a minimum.

1.7. Thesis Statement

Given the above, we can now formulate the following ‘thesis statement’:

Armed with a supplementary ‘epistemic’ schema, the ternary framework offers a plausible solution to the problem of ‘the deluge’. This framework is subject to a parsimonious two-pronged rule according to which we might categorize cinema music processes. This rule states that a) we only classify sounds that are musical, and that b) we only classify these musical sounds based on the criterion of ‘functionality’. This process posits only three categories as necessary to establish coherence in the ordering of cinema music namely: referential music, complementary music, and epistemic music.

While this statement will no doubt appear somewhat obscure at this early state, it will become clear in due course. The following section will examine the method by which we will attempt to close the knowledge gap and thereby contain the deluge.

1.8. Method

Chion notes that cinema music should be theoretically positioned as an object of what he calls ‘semantic listening’ (1994: 28), which musicologist Sally Macarthur explains, “assumes that we listen for the meaning of the sound or that we listen for the meaning of the sound or that we listen to gain an understanding of what is being transmitted” (Macarthur 2015: 81). We argue that ‘the meaning of sound’ lies foremost in the *function* for which it has been created or designed.¹¹ Thus the meaning of ‘fugue’, for example, is wholly contained in its contrapuntal arrangement. At its core, fugue music consists of at least two parts that tonally move against each other. The absence of such an opposition would negate the very structural design or meaning of the term ‘fugue’. In the same manner, we understand ‘cinema music’ only to the extent that we appreciate the purpose or function for which it has been placed in the film.

Having a function assigns *meaningfulness* to cinema music. Since meaning is contingent on having an identifiable function (and serving that function), we can equally say that *function* -- as mentioned earlier-- is music’s *raison d’être*. To this end, it is according to this functionality that we are able to divide cinema music into three (and only three) major categories, which we designate the ‘ternary distinction’.

In designing this ternary framework, we have formulated a two-part methodology which draws principally upon the work of three film scholars. The first part of our method, which we call the *functionality theory scaffold*, draws primarily on the work of Anahid Kassabian and David Neumeyer. This scaffold supports the three functional schemata of ‘referentiality’, ‘complementarity’, and ‘informativity’ which the next section will expound. The second part of our method, which we call the *inferentiality theory scaffold*, draws predominantly on the work of David Bordwell. This second scaffold supports the existence of **epistemic music** and its inferability.

1.9. The Functionality Theory Scaffold

While we agree with Gorbman’s observation that music serves different kinds of functions (1987: 22),¹² we contend that these functions are broadly divisible into three major groups or functionalities, namely, those of *referentiality*, of *complementarity*, and of *informativity*. We further hold that these three

¹¹ The *Oxford English Dictionary* defines ‘function’ as “the special kind of activity proper to anything; the mode of action by which it fulfills its purpose” (Simpson & Weiner 1989b: 262-3).

¹² See §1.3.

functionalities in fact already exist in the literature surrounding cinema music. To illustrate this claim, we have listed in Appendix II all other functions identified in the literature and sorted then into major groups. As it stands, nothing in this list suggests that a fourth major functionality discretely and distinctly exists. This supports our view that in order to arrange cinema music into a simple and coherent order, only the following three musical distinctions are necessary:

- a) *referential music*, whose function is to monumentalize referential elements in the story world to support the believability of a constructed reality (hence, we say that music ‘denotes’);
- b) *complementary music*, whose function is to co-determine or highlight the visual tracks (hence, we say that music ‘underscores’); and
- c) *epistemic music*, whose function is to crystallize obscured messages or subtexts in the story (hence, we say that music informs or ‘annotates’).

Referential music (music that denotes), *complementary music* (music that underscores), and *epistemic music* (music that informs or annotates): these are the three schemata of film music (i.e. cinema music) that comprise the ternary distinction of sound cinema.

The views of Kassabian and Neumeyer on the function of cinema music correlate to our meanings of ‘referentiality’, ‘complementarity’, and ‘informativity’ respectively. Although their terminologies vary slightly, their definitions either overlap or converge in meaning. For Kassabian, the core functions of cinema music involve *identification*, *mood*, and *commentary*. She writes:

Film music serves three broad purposes: identification, mood, and commentary [...]. Identifying music can convey or evoke all of the things mentioned in the definition of leitmotiv – a character, a place or an object, a certain place, or a certain situation, or a recurrent idea of the plot – as well as period, time, depth of field, and certain sociological factors [...]. Mood [...] is frequently expressed by onetime dramatic scoring [...]. Finally, there exists the possibility of music used as commentary [...]. Commentary music, for example, might tell us [...] that a daisy-filled meadow contains some unseen danger (2001: 59-60).¹³

¹³ Kassabian adds to this that while one could conceivably argue that, for example, ‘mood’ and

Neumeier, for his part, holds that the primary functions of cinema music involve *referentiality*, *expressivity*, and *motivically*. He writes:

In the context of a feature film’s sound track, music most often works in one or more of three ways: (1) referentially (supplying or reinforcing identifying markers of time, place, social status, ethnicity, etc.); (2) expressively (as markers of emotion); (3) motivically (that is, in the manner of the motif in literature or motive in music, supplying recurring elements that help clarify the processes of narrative comprehension) (2015: 28).

We will now examine our three functionalities (referentiality, complementarity, informativity) and their respective categories of *referential*, *complementary*, and *epistemic music*.

1.9.1. Referentiality: Referential Music

We call ‘referential music’ music that *denotes*. An example of such music comes from a scene in Robert Benton’s *Kramer vs. Kramer* (1979) where street musicians are shown playing mandolin and guitar (see Fig. 1).



Fig. 1. Cinema Music Sample No. 1: Referentiality
Music: *Mandolin Concerto in C* (Antonio Vivaldi)¹⁴
Film: *Kramer vs Kramer*: (Robert Benton, 1979)

‘commentary’ perform a similar role, “this would make aspects of their functions less clear, insofar as mood is more often associated with (unconscious) identification process, while commentary often requests reflective evaluation” (2001: 59-60).

¹⁴ Unless otherwise indicated, all music notation in this thesis has been aurally transcribed by the thesis’ author.

Since the sound comes from inside the story world, this diegetic music concerns *what the characters should hear*. Thus, the music makes ‘reference’ to the sounds we expect to hear when we see mandolins and guitars being played. In other words, the music parallels sounds of the real world with those of cinema by *denoting* elements we can clearly discern within the frame, thereby further suspending our disbelief regarding the film’s artificially constructed spatiotemporal reality.

When we cognize such parallelism in sounds, we experience a heightened sense of ‘realism’ because the sounds we hear ‘onscreen’ are faithful to those we hear them in real life: there is a *fidelity* between reality and its filmic representation. As Daniel Percheron puts it:

Sound is an element which reinforces the impression of reality, completes it; it is the only given, along with movement, that is reproduced integrally in the cinema and moreover, it helps to three-dimensionalize the rectangular screen (1980: 17-18).

In short, referential music constitutes a cinematic means of ‘faithfully’ representing a story world. Or again, referential music creates a cogent perceptual dimension through which the film’s ‘receiver’ may derive a sense of inhabiting the same spatiotemporal environment as that of the film’s characters.¹⁵

1.9.1. Complementarity: Complementary Music

We call ‘complimentary music’ music that *underscores*. Since in this case the sound usually comes from outside the narrative world, this nondiegetic music primarily concerns *how the receiver should feel*. Pathos is stirred when the receiver is invoked (if only subliminally) to closely follow the on-screen events and empathize with the action taking place. This happens when complementary music dramatizes the presentation of the story by *underscoring* the visual tracks.

For example, when we are shown a scene of a horse running, more often than not, the music will ‘run’ along with it. This parallel scoring is known as ‘mickey mousing’, which refers to a musical gesture that “directly and slavishly mimics screen action” (Donnelly 2014: 10) (see Fig. 2).

¹⁵ By ‘receiver’, we mean the audio-viewing subject or percipient (i.e. audio-viewer) of a film text.



Fig. 2. Cinema Music Sample No. 2: Complementary
Music: *Theme from Jaws* (John Williams)
Film: *Jaws* (Steven Spielberg, 1975)

The ability of music to ‘mickey-mouse’ encourages the receiver to vicariously participate in the activity. The motivic *basso ostinato* played in the first shark attack scene in Steven Spielberg’s 1975 *Jaws*, for example, exemplifies ‘parallel scoring’ in that the music seems to mimic the shark’s movement in transit.¹⁶ As the ostinato increases in volume and speed, so does the proximity of the shark to its prey: the faster and more insistent the music, the more imminent the attack.

Key to this cinematic technique is the (implicit) idea that only the receiver can hear the music. Obviously, if the intended victim were privy to the ominous ‘dun-dun-dun-dun’ music, there would be neither victims nor plot. That is to say, complementary music “appears in its own right as a discursive form [...] partly disengage[d] from the ‘realistic’ presentation (Goldmark et al. 2007: 3).

Of all the forms of cinematic music, complementary music is the most pervasive because it can present itself at any and every frame (as the director sees fit). All it has to do is ‘parallel’ itself to the action or event of the scene at hand. Indeed, in the age of sound cinema, music maintains its punctuative role unreservedly (Chion 1994: 48-49). As George Burt notes, “while the duration of most feature-length films is between 90 and 120 minutes, up to 30 or 40 minutes of dramatic music is required on average – roughly one-third of the film. This is quite a bit” (1994: 4).

¹⁶ *Basso ostinato* refers to the short recurring melodic pattern in the bass part of a composition that becomes the principal element in the music (Collaer et al. 1968: 143). Note that we use the word ‘ostinato’ to generally refer to any recurring pattern.

Howard Goodall sums up the importance of complementary music to sound cinema (and film viewing in general) in terms of the impact it continues to have on the genre of ‘classical music’:

Following *Alexander Nevsky* [...], it was clear that large-scale orchestral music was going to be a powerful component in making films more exciting, more frightening and more emotional. To this day, millions of people who might never set foot in a classical concert hall thrill to the symphonic sound of film scores that are often made entirely of classical orchestral styles and techniques. If anyone tells you classical music is dead in the twenty-first century, all it means is that they don’t go to the cinema (2013: 291).

1.9.2. Informativity: Epistemic Music

We call ‘epistemic music’ music that annotates. According to the *Oxford English Dictionary* (OED), the word ‘annotate’ is derived from the Latin word *adnotāre* which means “to add notes or to furnish with notes” (Simpson & Weiner 1989a: 485). Clearly, the meaning of ‘annotation’ is historically linked to the word ‘note’, which itself means “a brief record or abstract of facts written down for the purpose of assisting the memory, or to serve as a basis for a more complex or full statement (Simpson & Weiner 1989c: 544). Sometimes embedded in the film text are manifold hidden messages or ‘subtexts’. The receiver’s ability to appraise the film *beyond* what is explicitly shown – to think past the fabula and grasp ‘subtextual’ messages – lies in the inferability of epistemic music. Since the music uncovers subtexts in the story, epistemic music concerns *what the receiver should know*.

Our example of this music comes from the library scene in David Fincher’s *Seven* (1995) where we see Detective Somerset conducting research on biblical sins, human violence, and the history of evil. In this example, Bach’s sacred music establishes a contrast with the gruesomeness of the materials Somerset studies. By getting inside the killer’s mind, Somerset believes that his scholarly efforts will somehow lead to the killer’s capture (see Fig. 3).

Overall, the music annotates the film’s subtext thus: *There exists a war between good and evil, between light and darkness, and that no concept can be understood without going to its opposite state* (Moore 2004: 31).¹⁷

¹⁷ This epistemic annotation refers to the necessary congruence of contrary principles conceived by Pythagoras in his ‘Table of Opposites’, and later preserved by Aristotle in the ‘Metaphysics’ section of



Violino I.

Violino II.

Viola.

Continuo.

Fig. 3. Cinema Music Sample No. 3: Epistemic

Music: *Air in G String* (Johann Sebastian Bach)

Transcription: Public Domain

Film: *Seven* (David Fincher, 1995)

The conversion of annotation into knowledge or useful information is contingent on the receiver's inference of 'annotated material' (which, for technical reasons, we will later understand in terms of 'implicit data'). Musical annotations usually manifest themselves in the form of sudden or unexpected structural changes in the music or appearance of music.

This shift implies that a 'twist' in the story has either just happened, is happening, or will happen. We call these shifts 'trajectories' and we will explore their role in the following chapter. Before we can do this, however, we first need to consider the second part of our method for establishing a ternary framework for understanding sound cinema, which we call the 'inferentiality theory scaffold'.

On the Heavens (see: Zhmud 2012: 451). This music is also an example of didactic contrapuntal (Chion 2009: 431) where the music creates a distance from savagery to evoke the concept of Somerset's heroism. Of course, governed as we are by the rule of parsimony, we simply classify this music as *epistemic*.

1.10. The Inferentiality Theory Scaffold

In the tradition of Eduard Hanslick – the nineteenth century critic who fiercely campaigned against the then fashionable ‘feeling theory’ of music¹⁸ – Bordwell regards film viewing as a mental activity of making meaning. He writes:

The perceiver is not a passive receiver of data but an active mobilizer of structures and processes [...] which enable her to search for information relevant to the task and data at hand. In watching a film, the perceiver identifies certain cues which prompt her to execute many inferential activities (1991: 3).

Our task is now to outline the process by which we convert Bordwell’s narratological inferentiality into musical inferentiality. This conversion is what allows us to construct our second scaffold. According to Bordwell, spectators understand the meaning of a film text through the cognitive tools of *comprehension* and *interpretation*. Our choice of which tool to use, however, depends on the cognitive permeability of the film text. Bordwell’s meaning of ‘cognitive permeability’ refers to the relative porosity or penetrability of the film text in question.

Accordingly, he investigates whether the text is ‘impenetrable’ (which he describes as *implicit* in meaning) or ‘penetrable’ (which he describes as *explicit* in meaning). Requiring only basic comprehension, explicit meanings speak directly of elements which bear literal meanings (e.g. the concept ‘sanity and madness cannot be easily distinguished’ explicitly permeates in the entire film of Alfred Hitchcock’s 1960 masterpiece *Psycho*). Implicit meanings, on the other hand, require interpretation or inferential activities in that they speak indirectly of tacit or implied meanings (e.g. the concept ‘sanity can turn into madness’ is implied in *Psycho*). Implicit meaning also covers ‘repressed/symptomatic meaning’ which Bordwell infers to the repressed fear of female sexuality that is implied in *Psycho* as well (Bordwell 1991: 8-9). That is to say, texts containing ‘referential meaning’ and ‘explicit meaning’ are permeable (hence, we use the ‘comprehension’ tool), whereas, texts containing ‘implicit meaning’ and ‘repressed/symptomatic meaning’ are impermeable (hence, we use the ‘interpretation’

¹⁸ ‘Feeling theory’ expressed the view that the feelings we perceive in music are phenomenologically in the music and not in the listener (Speck 1988: 40). Hanslick’s counterargument that musical beauty is only found in tonal relationships through intellection remains his most enduring intellectual legacy (Payzant 1986: xxxiii). His impact on subsequent generation of musicians and philosophers is still felt a century later.

tool) (Bordwell, *ibid.*). For the sake of simplicity, we have incorporated Bordwell’s four ‘meanings’ into our ternary schema.

In doing this, we first correlate ‘referential meaning’ to ‘referential music’ (the music denotes or monumentalizes explicit elements: hence, no inference ensues). Next, we can correlate ‘explicit meaning’ to ‘complementary music’ (the music underscores or co-determines explicit elements: hence, no inference ensues). Finally, we are able to correlate both ‘implicit meaning’ and ‘repressed/symptomatic meaning’ to ‘epistemic music’ (the music annotates, reifies, or crystallizes implicit or subtextual elements: hence, inference may ensue) (see Fig. 4).

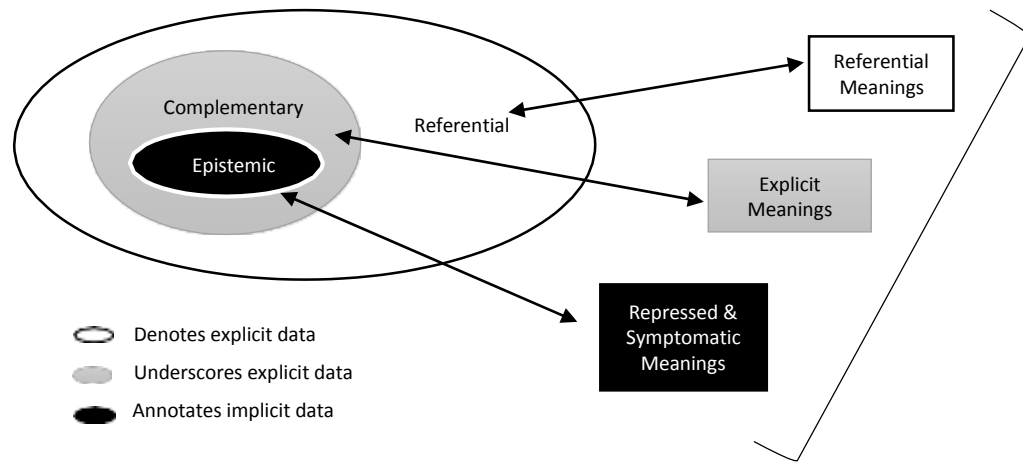


Fig. 4. The Adaptation of Bordwell’s Inference Theory

That being said, the OED defines ‘inference’ as both “the drawing of a conclusion from data or premises, either by inductive or deductive methods” and as the process of “reasoning from something known or assumed to something else which follows from it” (Simpson & Weiner 1989b: 924). Accordingly, if we do not deduce *additional* information from cinema music, then the music is not inferential but is rather operating in either *referential mode* (where the music merely helps the receiver build a convincing spatiotemporal reality) or in *complementary mode* (where the music merely helps the filmmaker dramatize the visual tracks).

Otherwise put, *inference usually does not happen under explicit conditions*. Needless to say, the converse is equally true, in that the inference usually takes place under *implicit* conditions. We will explore this inferential process in Chapter Three. For now, we will examine the difference between ‘explicit data’ and ‘implicit data’ with examples.

1.10.1. Explicit Data

Explicit data is non-inferable because its meaning lies directly in what the screen presents. This data facilitates the process by which the receiver constructs a convincing world as it immediately “draws on knowledge from conceptions of causality, space, and time and on concrete items of information” (Bordwell 1991: 8). A typical example of explicit data (in referential mode) comes from the famous disco scene in John Badham’s *Saturday Night Fever* (1977) (see Fig. 5).



Fig. 5. Cinema Music Sample No. 4: Explicit Data (Referential)

Music: *You Should Be Dancing* (The Bee Gees)

Film: *Saturday Night Fever* (John Badham, 1977)

In this example, there is no additional message to infer from the scene due to its already explicit state; all the necessary information is provided to us directly. Hence, no contemplation or mental exercise is demanded of the receiver for them to understand that the main character not only likes dancing but, according to the story, is considered good at it.

Another example of explicit data (this time operating in complementary mode) comes from the scene in Morten Tyldum’s *The Imitation Game* (2014) where we observe cryptanalyst Alan Turing during his mind-bending analysis of the Nazi’s Enigma code. In this example, the music – in particular, the overarching unsteady and roving arpeggios – mirrors not only the whirring and roving motion of the electro-mechanical rotor machine, but also that of Turing’s mind. There is no additional information for the music to uncover. The music is simply ‘mickey-mousing’ the physical dynamics of a ‘thinking’ machine and correlating these dynamics to those of a thinking human brain (see Fig. 6).



Fig. 6. Cinema Music Sample No. 5: Explicit Data (Complementary)

Music: *The Imitation Game* (Alexandre Desplat)

Film: *The Imitation Game* (Morten Tyldum, 2014)

Let us consider two more examples of complementary explicit data in *The Imitation Game*, focusing on the moment where Turing’s work finally pays off by solving the Enigma code.

Here, the characters hold their collective breath as they anticipate the prospect of winning. In this instance, the arpeggios are less but rather resemble an ostinato in order to add suspense. The arpeggios accompany the scene’s mounting intensity as Turing faces the fateful moment wherein he might finally prove his claim that only a machine can indeed beat another machine (see Fig. 7).





Fig. 7. Cinema Music Sample No. 6: Explicit Data (Complementary)

Music: *A Different Equation* (Alexandre Desplat)

Film: *The Imitation Game* (Morten Tyldum, 2014)

Upon solving the Enigma, the music grandiosely shifts, as a gliding orchestral version of the film’s theme song replaces the previous unstable arpeggios to represent not only the characters’ shared elation but also the sense of clarity accompanying the solving of this greatest of puzzles (see Fig. 8).



M—Y—M—S—A—I—C—T—R—I—S—O—A—Y—R. *KMS Jaguar is auf punkt directed to 53 degrees 24 minutes north and auf punkt one degree west Heil Hitler. Turns out that’s the only German you need to know to, uh, break Enigma!*



Fig. 8. Cinema Music Sample No. 7: Explicit Data (Complementary)

Music: *The Imitation Game* (Alexandre Desplat)

Film: *The Imitation Game* (Morten Tyldum, 2014)

1.10.2. Implicit Data

Implicit data (i.e. subtexts in the story) comes in three forms which we will discuss in the next chapter. For now, we only need to bear in mind the simple fact that implicit data represents inferable narrative material. This means that film texts are complex and difficult to understand because the ‘meaning’ of data often lies beyond what is presented on the screen and therefore, entails interpretation through inference. As George Burt observes, generally the ‘true’ meaning of a

specific film sequence is intertwined with the music and distinguished from its superficial meaning. He argues:

You will be particularly aware of the music in such instances, because it tells you something that will make an appreciable difference in your perception of the overall event [...]. These ordinarily consist of several layers of thought, where you have something to work with in terms of multiple meanings (1994: 7).

The example of implicit data we will use here, which is taken from George Roy Hill's *Butch Cassidy and the Sundance Kid* (1968), is however not that cryptic. Consider this film's celebrated 'bicycle scene'. To look at these images alone, the relationship between the characters Butch and Etta can easily be misinterpreted. Notice however the ease in which the receiver may infer the concept that Butch and Etta are just friends. In order to suggest the platonic nature of their relationship, Hill had the composer and lyricist to write a song to establish the concept (see: Burt 1994: 33). Thus, on top of the playful image (which suggests frolicsomeness), Bacharach and David produced a jaunty melody (which suggests lightheartedness), a ukulele instrumentation (which evokes casual mood), and mellow lyrics (which are almost comical) (see Fig. 9).



*Raindrops keep falling on my head and just like the guy whose feet
are too big for his bed nothing seems to fit so.*



Fig. 9. Cinema Music Sample No. 8: Implicit Data (Epistemic)

Music: *Raindrops Keep Falling on My Head* (Burt Bacharach and Hal David)

Film: *Butch Cassidy and the Sundance Kid* (George Roy Hill, 1968)

In this chapter, we have sketched a broad outline of our argument to establish a ternary framework – what we call ‘the ternary distinction’ (in place of the existing

diegetic/nondiegetic binary), a framework that might provide us with the means to finally close the knowledge gap we have labelled ‘the deluge’.

The following chapter outlines the process by which we will classify cinema music. At base, this process involves only two classifications: ‘musicality’ and ‘functionality’. Accordingly, this means we only classify as ‘cinema music’ sounds that are musical, and moreover, only if these musical sounds ‘denote’, or ‘underscore’, or ‘annotate’. All of which goes to show that, for all its seeming complexity, the ternary distinction is in actual fact quite simple – we might even say, *parsimonious*.

Chapter Two

The Categorization Process

Our categorization process of cinema music consists of a two-pronged rule which states that *we only classify sounds that are musical*, and that *we only classify these musical sounds based on the criterion of 'functionality'*. Hence, only two factors govern our categorization process: **musicality** and **functionality**. The first factor of our categorization rule rests on the musicality of the sound. The second factor rests on the functionality of the sound. We will now unpack these rules in order to examine them in some detail.

2.1. The First Factor: Musicality

The first factor of our categorization rule confines this process to only sounds that are musical. The soundscape of sounds that we deem 'musical' are a) sounds that bear some periodicity, and b) sounds with unbroken undulation of timbre or a stream of unmeasured sound commonly known as 'drone music'.

2.1.1. The Soundscape of Periodic Music

Structurally speaking, organized sound we call 'music' predicates periodicity. That is to say, music happens when time and sound are woven together. The manner in which sounds are 'woven' determines their conversion into 'music'. In other words – and in general understanding of what constitutes music -- sound becomes a musical form when placed into a particular temporal order or organizes frequencies of rhythm, pitch, and dynamics. It is this order that gives music a regular form or what we call 'periodicity'.

Accordingly, it is impossible to structurally separate 'form' from 'music', just as it is impossible to detach the 'figure in action' from the 'dance'. To divorce the music from its form gives rise to the concept of 'noise' or formless sound. Jason Martineau differentiates music and noise in the following way:

Any sound that can be perceived as a pitch or tone will have some periodicity in it, vibrating at a regular frequency with a specific mixture of overtone

amplitudes creating a distinctive timbre [...]. In contrast, noise has no periodicity such as a hammer striking, a finger plucking, a bow scraping, the sound on a television with no signal (2008: 6).

Thus, although both ‘sound effects’ and ‘music’ bear *amplitude* (vibration size that creates volume) and *frequency* (vibration speed that creates tone), their difference lies in the fact that ‘sound effects’ usually lack duration or a specific time lapse that creates periodicity inherent to musical figures. In other words, periodicity in music involves regular frequency of vibrations that are laced with overtones amplitudes. This creates a distinctive timbre or pitch which ultimately become recognizable as musical form. These forms come in various styles, from simple melodies to complex symphonies.

By contrast, what we call ‘noise’ lacks periodicity. Noise creates sound waves that are composed of indeterminate pitches and displaced rhythmic patterns. According to Chion, ‘noise’ itself is too ambiguous or too rigid in the distinctions it requires (2011: 242). This, of course, does not preclude the fact that cinema music can be harsh or atonal as required. For instance, although the ‘shower scene’ score from Alfred Hitchcock’s *Psycho* (1960) might, under ‘normal’ conditions, be considered more noisy than melodious, we nevertheless regard its sounds as musical (see Fig. 10).



Fig. 10. Cinema Music Sample No. 9: The Musicality of Atonality

Music: *The Murder* (Bernard Herrmann)

Transcription: Public Domain

Film: *Psycho* (Alfred Hitchcock, 1960)

The musicality of this atonal score rests on its repetitive structure which creates recognizable form or ‘periodicity’. Therefore, despite its heavy, dissonant elements, the score exhibits more than enough periodicity for us to recall and therefore, we classify the sound as ‘music’ instead of ‘sound effects’. What we exclude from the our category of cinema music are sounds whose boundaries between sound effects and music are unclear, for example, the sound of helicopters used by Walter Murch

as a ‘string section’ in Francis Ford Coppola’s 1979 film *Apocalypse Now* (Reay 2004: 32). Of course, just like the repetitive screeching violins of *Psycho*, the juddering sound of helicopters in flight is also repetitive and therefore, bears periodicity. Why then do we classify the former as ‘music’ and the latter as ‘sound effects’? For our purposes, our reason lies in what follows.

On the one hand, the screeching violins of *Psycho* constitute a creative, artistic moment in the world of cinema music. *Apocalypse Now*’s chopper sound, on the other hand, repurposes a common and instantly recognizable environmental sound, which is, in essence, no different from the cacophony produced by city traffic at midday or by the industrial machines of large construction sites. We recognize the difference between these two sounds because it is in our nature to integrate facts we encounter or organize phenomena that our senses detect. As Igor Stravinsky puts it, “tonal elements become music only by virtue of their being organized, and that such organization presupposes a conscious human act” (2003: 23).

However, due to the *diminished borderline* between ‘sound effects’ and ‘music’, a number of sound effects are today being classified as ‘music’ regardless of their lack of periodicity. Hence, we currently face a conflicting theoretical practice in our field of study where, on the one hand, ‘sound effects’, ‘music’, and ‘dialogue’ have been institutionalized in film studies as three disparate divisions of film sound (see fn. 5), and on the other hand, ‘sound effects’ and ‘music’ are presented as indistinguishable when film sound is categorized. This theoretical inconsistency – where ‘sound effects’ increasingly come to be perceived as ‘cinema music’ – is made especially manifest in Appendix I.

It is with this ‘diminished borderline’ in mind that Guido Heldt observes that “a minor question about the relationship of music and sound in film is whether we always know which is which” (Heldt 2016: 97). Indeed, it is common practice for scholars point to the seeming inevitability of this blurred distinction, in particular when it comes to the line between ‘sound effects’ and ‘music’. Jack Curtis Dubowsky, for example, argues that while in the “practical realities of film sound (dialogue, music, sound effects) division is important, we must understand the liminal aspect of sound whose classifications are boundless or open to interpretation” (2016: 34).

Kassabian, for her part, observes, that “the boundaries of sound and music are now evaporating and with them, the distinctions among noise, sound, and music” (2013: 143). K. J. Donnelly concurs, noting that “it has become more

common for films to eschew the dominant convention of music/sound effects/dialogue atomization” (2014: 133). Along the same lines, and as far back as the early 1900s, we recall how Edgard Varèse, in his 1936 manifesto *The Liberation of Sound*, observes how “anything new in music has always been called noise. But after all what is music but organized noise? [...]. Subjectively, *noise* is any sound one doesn’t like” (1966: 18).

The vanishing line between noise and music is also apparent in perceiving collective sounds as a single aural composition. Neumeyer writes, “the rich tensions, complexities, and contradictions that music helps articulate [...] can be understood as a kind of ‘musical composition’” (2015: 117) which involves a “scrutiny of the qualities and characteristics of individuals sounds” (Nattiez 1990: 95; see: Chion 1994: 29).

We can easily hear this ‘composition’ in Bernard Hermann’s ‘shower scene’ score in *Psycho*. Using strings for percussive effects, Hermann creates a screech which interplays with various sound registers that are captured in the sequence: the faucet turning; water shooting out from the shower head; the sudden drawing of the shower curtain; the stabbings; the victim’s screaming; the yanking of the shower curtain off the rod; and the water circling the drain (cf. Fig. 44).

As meritorious as this creative license with sound may be, we maintain that the vague boundary line between sound effects and music only encourages theoretical confusion. Accordingly, our abstemious position steers us away from this ‘boundless interpretation’ of sound. Instead, we contend that ‘sound effects’ and ‘music’ in fact constitute *two discrete parts* of film sound and, as such, each of these parts requires its own categorical system. After all, as we have just seen, their structural differences are, in essence, stark and categorical. Simply put, our ternary framework sharply distinguishes sound effects from music, and it is for this reason that we only classify cinema music. Let us now examine the other soundscape that we regard as musical, namely, the musical ‘drone’.

2.1.1. The Soundscape of Drone Music

Drone is considered the simplest form of music because it swiftly arises by simply sustaining a sound or repeating a note. Musicologist Joanna Demers holds that:

drones impose a kind of sensory deprivation through effacing the variation we take for granted, the ebb and flow of acoustic data that occur not only

in music but in daily life as well. Like other types of sensory deprivation, drones eventually sharpen other modes of perception by refocusing the listener's attention on the subtle fluctuations in timbre or pitch that accrue greater importance against an otherwise static background (2010: 93).

Elsewhere, Demers writes that:

drone's ubiquity in twenty-first century culture resulted from the music's ability to recede into the background [...]. Drone music is liminal, a straight sound that marks the edge between the past and future, presence and absence, essential and incidental (2015: 19).

We can say that due to its austere, porous, abstract, or liminal structure, drone music establishes a tonality upon which (non-drone) music might be shaped. This, at a global scale, attracts composers of sacred, contemporary, experimental film, cultural, and classical music to explore this music.¹⁹ In cinema, drone music has always been a regular feature in the repertoire of score composers. Given its power to instantly evoke a mood, drone music is usually complementary in nature. We will now present three examples of this soundscape.

Our first example comes from Rob Connolly's *The Edge of Winter* (2016). Set in a snowy landscape, the film centers on Elliot Baker, who jumps at a chance to spend time with his two estranged children (see Fig. 11). A short thriller, this film uses drones for almost an hour (approximately fifty-eight minutes in an eighty-five-minute film) to underscore Elliot's mounting pressure and anxiety. These drones take on different volumes, timbres, and tonality, one of which is transcribed below at a slow fifty-seven bpm with limited tonal variation.

¹⁹ Numerous musical instruments throughout the world have been designed especially to produce drones. These instruments include banjos, didgeridoos, gongs, bagpipes, the dronorium, the human voice (overtone throat singing), harmonium, several Indian instruments such as shankh, surmandal, sitar, sarod, ektar, dotara, etc. (Sorrell and Narayan 1980: 33-38). Drone music is contained, for example, in Wagner's Prelude to *Das Rheingold* (Erickson 1975: 104), Beethoven's Prelude of *Symphony No. 6*, Mendelssohn's Finale of *Symphony No. 3*, or Haydn's Finale in *Symphony No. 104*.



Fig. 11: Cinema Music Sample No. 10: Drone Music

Composers: Brooke and Will Blair

Film: *The Edge of Winter* (Rob Connolly, 2016)

Our second example is taken from the opening sequence of Quentin Tarantino’s *Inglourious Basterds* (2009). Here, the Nazi ‘Jew Hunter’ Col. Hans Lanza manipulates French farmer LaPadite into confessing that he is hiding Jews. The gnawing and dragged out sound of the music in this scene ratchets up the intensity and tension of the film text. That is to say, the musical form mirrors the drawn-out psychoemotional torture being inflicted on the farmer (see Fig. 12).



Fig. 12. Cinema Music Sample No. 11: Drone Music

Film: *Inglourious Basterds* (Quentin Tarantino, 2009)

Our last example of drone music comes from *No Country for Old Men* (Ethan and Joel Coen, 2007). In place of a standard melodic score, the Coen brothers instead use silence and only around eleven minutes of drone music throughout the film. In order to preserve the raw quiet of the film, a melange of sustained tones blend in with the sound effects (or Foley sounds) emanating from the landscape,

something we see clearly in the scene depicting the capture of psychopath Anton Chigurh, where the ominous sound underscores – and even leads us to expect – the tragic fate of the officer at the hand of the villain once they arrive at the station (see Fig. 13).



Fig. 13. Cinema Music Sample No. 12: Drone Music
 Film: *No Country for Old Men* (Joel and Ethan Coen, 2007)

2.2. The Second Factor: Functionality

The second factor in our rule of categorization confines the process to only registering sounds that *denote*, *underscore*, or *annotate*. The purpose of this additional refinement to our rule is to provide a clearer definition of cinema music, which, as we saw in Chapter One, is currently classified according to four ambiguous criteria: *spatiality*, *temporal relationship*, *diminished borderline*, and *counter emotional tonality*.

Table 1 below lists the materials we will study in order to understand precisely where these ambiguities lie, as well as what the ternary system might offer by way of clarification simply by employing the criterion of *functionality*. Under this criterion, the only question we need to address is “how does the music serve its *function* in the film narrative?” To qualify as ‘film music’, we must be able to supply at least one of the following answers: *the music denotes* (i.e. what the characters should **hear**), *the music underscores* (how the audience should **feel**), or *the music annotates* (i.e. what the audience should **know**). Clearly, the ternary framework covers three principal aspects of human consciousness in that it touches on the physical, the emotional, and the mental being of the receiver.

AMBIGUOUS CRITERION	AMBIGUOUS CATEGORY	FILM SOUND	FILM	CRITERION UNDER THE FUNCTIONALITY CRITERION	CATEGORY UNDER THE TERNARY SYSTEM
Spatiality	active offscreen	<i>Grim Grinning Ghosts</i> (Baker and Atencio)	<i>The Haunted Mansion</i> (Rob Minkoff, 2003)	referentiality	referential music
Spatiality	ambidiegetic	<i>Chim Chim Cheree</i> (R. B. Sherman and R. M. Sherman)	<i>Mary Poppins</i> (Robert Stevenson, 1964)	complementarity	complementary music
Spatiality	source scoring	piano scales practice	<i>Dead Again</i> (Scott Frank, 1991)	complementarity	complementary music
temporal relationship	external analepsis	<i>Serenade in Bb for 13 Winds</i> (W.A. Mozart)	<i>Amadeus</i> (Milos Forman, 1984)	informativity	epistemic music
temporal relationship	oneiric hypnagogic	<i>You Have to Cross the Girder</i> (Rolfe Kent)	<i>Kate and Leopold</i> (James Mangold, 2001)	complementarity	complementary music
diminished borderline	onomatopoeic	yell	<i>Tarzan the Ape Man</i> (W.S. Van Dyke, 1932)	N/A	(unclassifiable)
diminished borderline	ambient	bird songs	<i>The Sound of Music</i> (Robert Wise, 1965)	N/A	(unclassifiable)
counter-emotional tonality	contrapuntal	<i>Stuck in the Middle with You</i> (Stealers Wheel)	<i>Reservoir Dogs</i> (Quentin Tarantino, 1992)	informativity	epistemic music
counter-emotional tonality	didactic contrapuntal	<i>In Deepest Grief</i> (J. S. Bach)	<i>Accattone</i> (Pier Pasolini, 1961)	informativity	epistemic music

Table 1. Ambiguities and Solutions

2.2.1. Spatiality: Active offscreen

Our first example of an ambiguous category arising from the equally ambiguous criterion of ‘spatiality’ is Chion’s category of *active offscreen* sound (1994: 85). This category means that: a) the origin of the sound is not revealed to the character (hence, the word ‘offscreen’); and b) due to this withheld information, the character’s interest, curiosity, or attention is triggered (hence, the word ‘active’).

In providing an example of *active offscreen* sound, Chion cites the scene in Hitchcock’s *Psycho* where Marion overhears ‘mother’s voice’ coming from the house. This stirs her curiosity as well as amplifies the level of intrigue in the plot (see Fig. 14).



Fig. 14. Active Offscreen Sample

Film: *Psycho* (Alfred Hitchcock, 1960)

We find a musical equivalent to this example from the scene in *The Haunted Mansion* (Robert Minkoff, 2003) where Jim Evers and his children suddenly overhear an acapella chorus in the distance. The spatial anonymity of the music leads the characters to gesticulate signs of curiosity. Intrigued, they walk towards the source of the music until they come upon four singing busts (see Fig. 15).



*When the crypt doors creak - and the tombstones quake - spooks come out for a singing wake -
happy haunts materialize - and begin to vocalize Grim grinning ghosts come out to socialize!*



Fig. 15. Cinema Music Sample No. 13: Referential Music
Grim Grinning Ghosts (Buddy Baker and Xavier Atencio)
Film: *The Haunted Mansion* (Rob Minkoff, 2003)

The music in this example is *active offscreen* because it is the music that triggers the curiosity of the characters. But what happens once the source of music is revealed? Does it not, by default, convert into its opposing category? That is to say, as soon as the characters see the busts singing, the curiosity vanishes and, therefore, *active offscreen* theoretically converts to *passive onscreen* (Chion 1994: 85). After all, Chion refers to as onscreen sounds whose source of music is visualized and relative to the story world (Chion 1994: 72).

Thus, we argue that the music in this example is categorically ambiguous, in that it practically assumes two categories in only a span of a few seconds: *active offscreen* (before the source of music is shown) and *passive onscreen* (after the source is shown).

Moreover, since both *active offscreen* and *passive onscreen* are essentially *diegetic*, does it not suffice to simply categorize the music as ‘diegetic’ (or for our purposes, ‘referential’)? In other words, we question whether it is at all necessary to conceive categories whose meanings are similar or overlapping. Holding that ‘aroused curiosity’ is too insignificant to consider as a categorical factor, we present a simpler way to classify such music in the following way:

Q. *How does the music serve its function in the narrative?*

A. The music makes reference to supernatural and jocular elements (such as the singing of barbershop vocal harmony by ‘haunted busts’) which is consistent with the film’s genre of horror comedy. Hence, under the ternary system, this music is simply ‘**referential**’.

2.2.2. Spatiality: *Ambidiegetic*

Another ambiguous category arising from the (equally dubious) criterion of ‘spatiality’ is Morris Holbrook’s concept of *ambidiegetic* music, examples of which can be found throughout Robert Stevenson’s perennial family classic, *Mary Poppins* (1964). Limiting ourselves to one example, let us consider the scene in which the character Bert sings in sprightly tune spurring the Banks children to hop along with him on their way to his work as a chimney sweep (see Fig. 16).



Chim chiminey, chim chiminey, chim chim cheree a sweep is as ucky as lucky can be!



Fig. 16. Cinema Music Sample No. 14: Complementary
Music: *Chim Chim Cheree* (Robert B. Sherman and Richard M. Sherman)
Film: *Mary Poppins* (Robert Stevenson, 1964)

This scene's *ambidiegetic* status results from an attempt to reconcile the dual spatial status of the music, in that it is considered *diegetic* because the song belongs in the story, but at the same time, is considered *nondiegetic* because the orchestra accompanying Bert's singing comes from 'outside' the story. This overlapping of the binary is innate to musicals which, unfortunately, only heightens the difficulty of classifying cinema music. Historically, film music scholars have debated whether such musical numbers arise from reality or fantasy (or from somewhere in between): Does Bert actually hear the orchestral accompaniment or is it just playing in his mind or imagination? As Neumeyer puts it:

Offscreen diegetic sound [...] is fraught with ambiguity when considered in relation to onscreen characters, and it will come as no surprise [...] that this attribute is exploited frequently in the sound film (2015: 999).

In response to the ambiguity such musicals introduce, John Richardson established a further category of *extranarrative* sounds (having found Holbrook's *ambidiegetic* too simplistic and Rick Altman's *supra-diegetic* too utopian to resolve the debate).²⁰ Hence, depending on whose side we take, Bert's vocal number can be any of the following: *supra-diegetic* (Altman 1987: 70), *ambidiegetic* (Holbrook 2011: 29), or *extranarrative* (Richardson 2012: 6).

²⁰ John Richardson's 'extranarrative' explores that transition from diegetic to nondiegetic world in musicals. The approach to the intermediary state "is signaled in the physical feel of the music and the kinaesthetic qualities of the dancing and camera movement" (2012: 85). Richardson relates 'extranarrative' to (i) 'liminality' in reference to Stilwell's 'fantastical gap' (see: Stilwell 2007: 186); (ii) Gilles Deleuze's view that haptic qualities of visual imagery reinforce cross-modal awareness of objects (see: Deleuze 1989: 12) – Laura Marks calls this 'haptic visuality' (2000: 164) an experience where images convey tactile impressions through the eyes – and to (iii) Chion's 'materializing sound indices' which "directs our attention to the physical nature of its source to whatever it is that is blowing, scraping, rubbing – the indices or resistance of the real, reminding us that a [...] violin's sound comes not from the air but from horsehair rubbing against catgut" (Richardson 2009: 244-245). See also Elsaesser and Hagener 2000: 124-125). Rick Altman's 'supra-diegetic' explains the switch between diegetic and nondiegetic in musicals through his idealized realm of transcendence: "like so many sources of diegetic music introduced into musical films with the specific function of creating a bridge between time-bound narrative and the timeless transcendence of supra-diegetic music, the music box exists only to the silences, surpassed, and left behind like some latter-day Virgil handing the spectator on to a heavenly Beatrice" (1987: 67).

This unending pursuit of the absolute is but a regenerative practice. That is to say, the term *diegetic* alone has produced a superfluous array of subcategories, sub-subcategories, and opposites. Clearly, *ambidiegetic* is just one of them (i.e. Appendix I lists other variegated forms of ‘diegetic’). We present a simpler way to classify such music as follows:

Q. *How does the music serve its function in the narrative?*

A. The music underscores Bert’s merry mood. It is not necessary to reconcile the character’s diegetic singing and the nondiegetic orchestral accompaniment for the simple reason that musicals are set up that way. By highlighting the mood of the scene, the music exercises a ‘complementary’ function. Hence, under the ternary system, this music is simply ‘**complementary**’.

2.2.3. Spatiality: Source Scoring

Our next ambiguous category arising from the criterion of ‘spatiality’ is that of *source scoring*. This time we take as our example a scene from the film *Dead Again* (Scott Frank, 1991).

The scene in question begins with an argument brewing between the characters of Mike and Grace. As they exchange increasingly heated words, Mike hears their neighbour Trudy practise the scales on the piano clumsily. In frustration, he screams “Trudy, shut up!” At this point, the playing gradually gains speed (see Fig. 17). As Mike’s temper escalates, the music matches the event as the playing escalates in speed and volume with a surprising level of proficiency. Detecting Grace’s fear of him, Mike gets angrier and drags Grace across the apartment. As they sit down, Mike calms down, regrets his behaviour, and pacifies Grace. Matching the decline of intense atmosphere. Trudy’s playing returns to its normal and clumsy pace.





Fig.17. Cinema Music Sample No. 15: Complementary
 Film: *Dead Again* (Scott Frank, 1991)

Earle Hagen defines ‘source scoring’ as “like source in its content, but tailored to meet scoring requirements [...]. It follows the framework of the scene more critically and matches the nuances of the scene musically” (1971: 190). However, source scoring is another superfluous distinction, Kassabian for example noting how since source scoring emanates from the story world, it roughly corresponds to diegetic music (2001: 47).

Indeed, source scoring can be shown to either overlap or is even synonymous with a number of other subcategories. For example, source scoring can be seen to correspond either in part or whole with concepts like *unrealistic music* (because the music is not visually performed on screen), *synchronous music* (because the music portrays the flow of the visuals) (Chion 1994: 63-64), *empathetic music* (because the music matches the mood of the action) (Chion 2009: 43; see also Stam et al. 1992: 63), *mediated level* (because the music externalizes the characters’ inner dimension) (Miceli & Morricone 2013: 102), and *underscoring* (because the music enhances the scene’s mood) (Cohen & Rosenhaus 2006: 67).

Further, our example of source scoring here is effectively synonymous with both *ambient* (Chion 1994: 71) and *territorial* music (Harper 2009: 169), because Trudy’s piano playing is a sound that Mike and Grace often hear in their apartment complex. In effect, the same music is also synonymous with other diegetic

subcategories such as *simple diegetic* (Bordwell & Thompson 1979: 204), *screen music* (Chion 1994: 80), *culturally coded music* (Neumeyer 2015: 46), *internal level* (Miceli and Morricone 2013: 78), *sound on*, as well as *unmarked sound* (Percheron 1980: 21-22). Not surprisingly, *source scoring* is likewise synonymous to *ambidiegetic* because it has dual diegetic and nondiegetic purpose (Gorbman 2007: 152). To an extent, *source scoring* is even synonymous with Chion's *acousmêtre*, in so far as the sound source is not seen on screen (Chion 1994: 129). By default, *source scoring* is antonymous with *passive offscreen*, where the musical source of not only *not* shown, but it equally fails to interest the characters. To the contrary, Mike not only registers the piano playing; he actively wishes for it to stop.

We can say that the arbitrariness of *source scoring* exemplifies the overdetermination of cinema music as a site of seemingly interminable distinctions. We have repeatedly observed how miscellaneous categories arise from vagueness or from this unrealizable pursuit of theoretical accuracy. We thus present a simpler way to classify this kind of music as follows:

Q. *How does the music serve its function in the narrative?*

A. The music underscores, dramatizes, or highlights the emotional tonality of the scene by 'mickey-mousing' Mike's behaviour. By highlighting the mood of the scene, the music exercises a complementary' function. Hence, under the ternary system, this music is simply 'complementary'.

2.2.4. Temporal Relationship: *External Analepsis*

Our first example of a problematic category arising from the ambiguous criterion of 'temporal relationship' is *external analepsis*. We argue that this category results from the strong link between film and narratology. According to Anahid Kassabian:

many film theorists who have considered the relationship between the score and the narrative have come from a background in literary theory and have tended to treat this issue in dichotomous terms because they consider it in terms of narratology (2001: 43).

We can say that narratology contributes the greatest amount of ambiguity to the field. As Guido Heldt observes, "as with semiotics, narratological concepts had been

applied to film music long before narratology came into play by name [...] i.e. music on different levels of narration” (2016: 111). *Metadiegetic prolepsis*, *oneiric hypnagogic*, and *hypodiegetic autodiegetic* are just a few examples of the numerous categories claiming narratological origin.

In his 2003 essay on ‘Narratology as Discipline’, Jan Christoph Meister suggests that the system of narratology is itself difficult to pin down when he asks:

So what is narratology – approach, praxis, project, school, sub-discipline, discipline, science? And/or which narratology is what? [...]. The frequent shift in categorization which we observe in these taxonomies clearly demonstrates [...] considerable difficulties in coming to grips with questions of principle, and particularly with the problem of defining narratology's methodological identity (2003).

This conundrum is highlighted “by the increasingly frequent recourse to hyphenated and modified expressions (structuralist narratology, post-classical narratology, socionarratology, psychonarratology)” (Prince 2003: 1).

We can see by now that the treatment of cinema music in terms of narratology is a confusing practice simply because narratology is a precise, specific, and complex field which deals with an infinite array of narrative variables and nuances intrinsic to storytelling; whereas, cinema music can only represent emotional and mood settings – not specify narrative events. All of which is to say that interpreting film narrative as literary narrative is a fraught practice. As Markus Kuhn and Johann Schmidt observe:

their specific mode of [films’] plurimedial presentation and their peculiar blending of temporal and spatial elements set them apart from forms of narrative that are principally language-based. The narratological inventory, when applied to cinema, is bound to incorporate and combine a large number of ‘co-creative’ techniques ‘constructing the story world for specific effects’, and creating an overall meaning only in their totality (2014: 384).

For our example of a narratologically-conceived category, we will examine Gérard Genette’s concept of *external analepsis* (1988: 49-50). As James Phelan

explains, while *analepsis* refers to flashback that “typically occurs within the retrospection of narration” (2016: 242), *external analepsis* refers to flashback that reaches back to “points that remain outside the temporal borders of the primary narrative” (245).²¹

Our example for *external analepsis* comes from Milos Forman’s *Amadeus* (1984). The scene begins in a mental asylum where the elderly Salieri ‘confesses’ to a priest by recounting his time as court composer to Emperor Joseph II of Austria, and his personal experiences with Mozart (see Fig. 18).



On the page, it looked nothing. The beginning, simple, almost comical, just a pulse—bassoons, basset horns, like a rusty squeeze box – and then suddenly, high above it an oboe; a single note hanging there unwavering until a clarinet took it over sweetened it into a phrase of such delight. This was not composition by a performing monkey. This was music I have never heard filled with such longing, such unfulfillable longing. It seemed to me that I was hearing the voice of God.

j = 25

Fig. 18. Cinema Music Sample No. 16: Epistemic
 Music: *Serenade in Bb for 13 Winds* (Wolfgang A. Mozart)
 Transcription: Public Domain
 Film: *Amadeus* (Milos Forman, 1984)

²¹ Exploring the complexity of Genette’s analysis of analepsis, James Phelan notes that: “without a stable primary narrative, such matters as reach and extent become much more difficult to identify, and so too do such matters as whether an analepsis or prolepsis is internal, external, or mixed, and whether it is partial or complete” (249).

As Salieri narrates, the clarinet music by Mozart plays only in his mind. Since the music exists outside Salieri's present space and time, it is categorizable as *external analepsis*. However, *external analepsis* may just as well be *metadiegetic*, because the music only exists in the mind of the character (Gorbman 1987: 22-23), or perhaps *internal diegetic*, because it is a mere reflection of the character (Stam et.al. 1992: 60), or even *subjective internal*, because it constitutes a mental voice, presenting us with the memories of the character (Chion 1994: 76). In response to this conceptual chaos, we present a simpler way to classify this music in the following manner:

Q. *How does the music serve its function in the narrative?*

A. The music paints a compromised perception of reality and annotates the destructiveness of malcontent. The music annotates that *Salieri's advanced decrepitude is more a result of his mental disposition than simple old age.*²² Hence, under the ternary system, this music is 'epistemic'.

2.2.5. Temporal Relationship: Oneiric Hypnagogic

Our next example of a questionable category arising from the ambiguous criterion of 'temporal relationship' is *oneiric hypnagogic* (which itself has a 'complementary' category in the form of *oneiric hypnapompic*).

This category refers to sound that emanates from the state of falling asleep or drifting away from reality (Carroll 2016: 69). This type of music is played in James Mangold's *Kate and Leopold* (2001) when the two realities in the story collide (see Fig. 19).

²² In the context of the film, our meaning of Salieri's 'mental disposition' resonates psychiatrist W. Béran Wolfe's thesis on human ambition. He writes, "The ambitious are constantly in a state of tension. In their hurry and scurry strategy, the ambitious not only ruin their own health and make enemies of those with whom they should be cooperating, but involve themselves to such an extent [...] that they become slaves of their own ambition. [...]. The only normal goal of human ambition is [...] to live so that life is richer and fuller because of the quality of our cooperation. All other ambitions end in death, insanity, or the tragic crippling of soul and body" (1932: 140-141).



Fig. No. 19. Cinema Music Sample No. 17: Complementary
Music: *You Have to Cross the Girder* (Rolfe Kent)
Film: *Kate and Leopold* (James Mangold, 2001)

The film is set in New York but at two different time periods. Leopold belongs in 1876 while Kate exists in the twenty-first century. In order for Kate to leave her ‘reality’ and migrate back in time to 1876, she must jump off the Brooklyn Bridge through the ‘rip’ in the fabric of time.

The problem with ‘oneiric’ categories lies in their arbitrariness. That is to say, the narrative presents two constructed realities. However, the first reality is as spatiotemporally valid as the second one, depending on which side of the reality the character wakes up from (or drifts away from).²³ Hence, *oneiric hypnagogic* may just as well be its converse, *oneiric hypnapompic*, which refers to sound from the state of drifting back to reality or waking up.

The point is that “the laws of physics do not distinguish between time going backward and time going forward. And so we make a choice about which sort of physical law we would like to have” (Goldenfeld 2012: 58). We hold that a simpler way to classify this kind of music as follows:

²³ Oneiric sounds are like the dream states of David Sonnenschein explores in his *Sounds Spheres* article. He writes: “The importance of localization of sound in our real world is explored and compared with the use of diegetic sound in film, which has been usefully codified by Michel Chion as onscreen and offscreen. To further develop the theory of filmic psychoacoustic space, the Sound Spheres model offers six levels of sonic experience, beginning from the most inner personal sphere and expanding toward the most outer unknown sphere: I Think I Am, I Touch, I See, I Know, and I Don’t Know. Real world experiences and perception exercised of these spheres informs us how they can be applied to the creation of filmic stories” (2011: 13).

Q. *How does the music serve its function in the narrative?*

A. Imitating the sound of a ticking clock, the first three measures of the music represent the process of the fusion of two spatiotemporal “realities”. The last three measures come in the shape of sustained dissonant notes which underscore the mystery of physical science or the inconceivability of ‘time travel’ or the time warp when two worlds dissolve into one. Hence, under the ternary system, this music is simply ‘**complementary**’.

2.2.6. Diminished Borderline: *Onomatopoeic*

Our first example of a problematic category arising from the ambiguous criterion of ‘diminished borderline’ is that of *onomatopoeic* (Gallez 1970: 47).²⁴ Our example of this music is taken from the scene of W.S. Van Dyke’s *Tarzan the Ape Man* (1932), where Tarzan summons his jungle friends with his famous yell (see Fig. 20). However, this imitative music can overlap in meaning with both *ambient* (Chion 1994: 75) and *territorial sounds*, where the latter characterizes sounds of a geographical, cultural, social or ethnic nature (Harper 2009: 169).



Fig. 20. *Onomatopoeic*: Unclassifiable as cinema music
Film: *Tarzan the Ape Man* (W.S. Van Dyke, 1932)

Further, given that this film sound bears five distinct ‘singing’ sound phases (i.e. sustain, ululation, sustain at a higher frequency, second ululation, sustain at the starting frequency), it can be vaguely perceived as musical in as much as it can

²⁴ Drawing on Siegfried Kracauer’s taxonomy of film music and other authorities in the field, Douglas Gallez organized film music into *introductory and descriptive, mood background, realistic source, dynamic, imitative onomatopoeic, and suspensory and terminal*. Gallez further subdivided ‘onomatopoeic’ into two types of imitative music as follows: a) sounds that imitate mechanical or natural sounds other than human, and b) sounds that imitate human speech or utterance (screams, sighs, moans, etc.) (1970: 46-47).

be replicated by most people. Nonetheless, since we regard Tarzan's call as a vociferation which is a form of speech, we do not classify this sound as music.

2.2.7. Diminished Borderline: *Ambient*

Another problematic category arising from the ambiguous criterion of 'diminished borderline' is that of *ambient* sound (Chion 1994: 75). Our example for this category is the sound of chirping birds during the opening visual tracks in Robert Wise's 1965 film *The Sound of Music* (see Fig. 21).

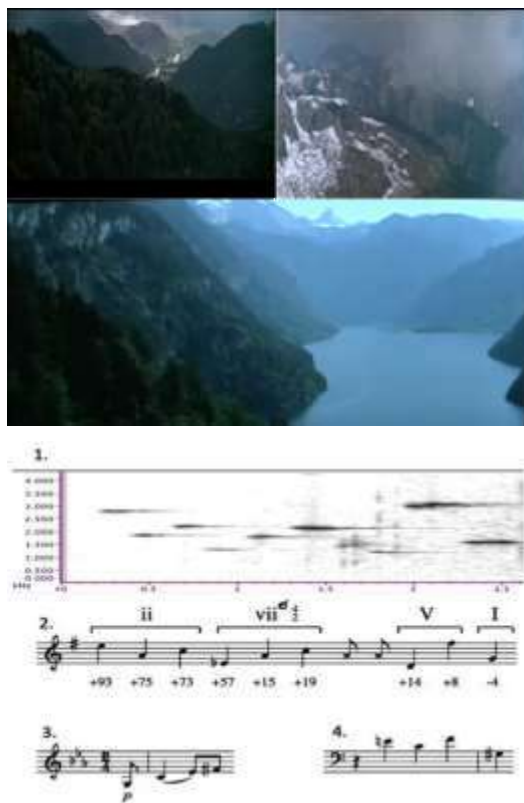


Fig. 21. Ambient (bird songs): Unclassifiable as cinema music

Title: *Wren Song and its parallelism to human compositions*

Legend: 1. The wren's song; 2. Transcription; 3. Opening melody of Haydn's *Symphony No. 103*

(Second Movement); 4. Opening of Bach's *Fugue XX in A minor*

Transcription: Max Planck Institute for Ornithology

Film: *The Sound of Music* (Robert Wise, 1965)

In our view, bird songs are ambient sounds notwithstanding their parallelism to human compositions. These are 'atmospheric' sounds that filmmakers often use in order to create a sense of space. To this end, they are not qualitatively different to the sound of rustling leaves (which also create a sense of space).

As Percheron puts it, “the chirping of birds must be considered chiefly as an *effet de réel* (the general rule is that sound is an element which reinforces the impression of reality, completes it” (1980: 17-18). Hence, although bird songs may appear inherently ‘musical’ and highly transcribable, we do not generally classify them as cinema music, but rather as an element of space.

2.2.8. Counter Emotional Tonality: *Contrapuntal*

Our first example of an indistinct category arising from the ambiguous criterion of ‘counter emotional tonality’ is *contrapuntal* music. Music is ‘contrapuntal’ if it goes against the overall mood or tone of the scene. For example, if the event is sad, the music may be fast and uplifting; likewise, if the scene is intense, the music may be light and breezy, etc. A famous example of such music is found in Quentin Tarantino’s *Reservoir Dogs* (1992), a film detailing the aftermath of a bank heist gone awry (see Fig. 22).



*Well I don't know why I came here tonight, I got the feeling something ain't right
I'm so scared in case I fall off my chair, and I'm wondering how I'll get down the stairs.
Clowns to the left of me, jokers to the right, here I am stuck in the middle with you.*



Fig. 22. Cinema Music Sample No. 18: Epistemic
Music: *Stuck in the Middle with You* (Stealers Wheel)
Film: *Reservoir Dogs* (Quentin Tarantino, 1992)

The contrapuntal nature of this scene lies in the stark contrast between the torture depicted on-screen and the playful nature of the music, which Mr. Blonde’s violent actions simultaneously correspond to and negate (on both a *physical* and an

emotional level). In the scene in question, the character of Mr. Blonde turns the radio on and gleefully dances to the tune *Stuck in the Middle with You*, while sadistically attacking a police officer he had earlier taken hostage.

Isolating a *contrapuntal* emotional tone involves first discerning whether the music is responding to the visual tracks being presented or not. The problem that arises here concerns the extent to which the opposition of sound and image is perceived as contrasting. Emotional tonal categories are often subject to interpretation because they sometimes claim a hidden message behind its incongruity (Burt 1994: 7). For instance, *contrapuntal* music can equally fall under the category of *supra-reality* where hidden messages are amplified by using slow motion, for instance, to indicate stress, scream, danger, etc. At the same time, however, it is also synonymous with both *asynchronous* (Percheron 1980: 16-23) and *anempathetic* music (if the criterion is the emotional tonality of sound), in addition to the category of *didactic counterpoint* (if the context is ironic). As George Burt puts it:

a problem arises in how we perceive the relationship between music and film [...]. In combined music and film, one voice – that of film – is of overriding delineation with respect to literary information, drama, and pictures. Another voice – the music – is subtle, abstract, and symbolic. With this difference in mind, could we ever say with assurance that in a given situation the music is primary and the film performs a subsidiary role? I think not [...]. It is how and to what extent music catches hold of the spirit or meaning of a film and works with or develops this aspect in its own way that is the key issue in how the two media interrelate in contrapuntal terms (1994: 8-9).

We can see how such terminological indeterminacy only generates evermore convoluted regroupings and relabellings. We present a simpler way to classify this music as follows:

Q. *How does the music serve its function in the narrative?*

A. The filmmaker uses a light rock folk music to contrapuntally accompany the brutal tone of the torture scene. The lyrics to the song suggest the thoughts that go through the police officer's mind. For

instance, he wonders why he ends up in the torture chair in the first place. The intense apathy of the music to the scene annotates that *Mr. Blonde simply enjoys giving torture and is actually uninterested in what the cop knows and what he does not*. Hence, under the ternary system, this music is categorized as ‘**epistemic**’.

2.2.9. Counter Emotional Tonality: *Didactic Contrapuntal*

Our final example of a problematic category arising from the ambiguous criterion of ‘counter emotional tonality’ is that of *didactic contrapuntal*. Our textual example comes from the brawl scene in Pasolini’s *Accattone* (1961) in which the pimp Vittorio, nicknamed ‘Accattone’ (meaning ‘beggar’ in Italian), assaults a rival (see Fig. 23).



Fig. 23. Cinema Music Sample No. 19: Epistemic

Music: *In Deepest Grief* from *St. Matthew Passion* (Johann Sebastian Bach)

Transcription: Public Domain

Film: *Accattone* (Pier Paolo Pasolini, 1961)

We bear in mind here the ‘theory of opposites’ whereby we make a concept obvious when we emphasize with its converse (see fn. 15). According to Chion, *didactic contrapuntal* refers to sounds that create distance from the film text or the event depicted in the scene in order to generate a dispassionate understanding of an idea. Just as Bach’s music sample from *Seven* (cf. §1.9.3) creates critical distance between heroism and savagery, Bach’s music here from *Accattone* establishes a

distance between virtue and sin in order “to depict the everyday life struggle of the poor as spiritual” (Cousins 2013).²⁵

However, the concepts of *didactic contrapuntal*, *contrapuntal*, *anempathetic*, and *asynchronous* all overlap in their meaning and, therefore, are practically subcategories of each other. We present a simpler way to classify this form of music as follows:

Q. *How does the music serve its function in the narrative?*

A. Through music, the subtext (or implicit data) annotates that *from the Christian standpoint, suffering predicates spiritual grace (and vice versa)*. Hence, according to the ternary system, this music is understood as being ‘**epistemic**’.

2.3. The Functionality of Cinema Music

As we have seen, our categorization process establishes *functionality* as the sole criterion according to which cinema music might be classified. To cement our understanding of the functionalities of music, we will now present more examples of cinema music whose functions of *denotation*, *underscoring*, and *annotation* subsume all other conceived functions that are presented in the literature (a comprehensive list of which is provided in Appendix II).

2.3.1. The Functionality of Referentiality

The music in the church scene from Wise’s *The Sound of Music* exemplifies a referential function. This scene shows nuns chanting their morning hymns. After the

²⁵ In an interview in *The Story of Film: An Odyssey*, Mark Cousins refers to the connection of poverty, spirituality, and the ‘*beatitude of the poor*’ in the context of the relationship of the poor to the teachings of Jesus Christ (see: Cousins 2013). The New Testament records that in the Kingdom of God, satiety, and laughter await the poor, the hungry, and the weeping (Luke 6: 20-21). In other words, the beatitude “can be seen in the empowerment it gives to the poor themselves: “Poverty is against God’s will; it is no divine punishment and does not separate from God. The poor will be liberated from suffering. Poverty has no place in the kingdom but will be eradicated” (Kügler 2012). Kügler’s statement that ‘poverty is against God’s will’ here plausibly amounts to saying that poverty, hunger, and grief are not normal states in the eyes of God, and thus, these states will find repose at the end. By analogy, virtues and prayers support relief to a stricken soul just as medicine and a healthy lifestyle support cure to a stricken body.

twelfth bar, the Angelus bells ring for three bars. The music lends further realism to the scene by allowing the audio-viewers to almost participate in the actual morning lauds (see Fig. 24).



Rex admirabilis et triumphator nobilis, dulcedo ineffabilis

Totus desiderabilis, totus desirabilis.

♩ = 45

Soprano

Mezzo-soprano

Alti

Fig. 24. Cinema Music Sample No. 20: Referentiality

Music: *Morning Hymn* (Richard Rodgers and Oscar Hammerstein)

Transcription: Oystein L. Olafsen

Film: *The Sound of Music* (Robert Wise, 1966)

2.3.2. The Functionality of Complementarity

We know by now that complementary music easily creates dramatic impact by underscoring what we ‘physically see’ on screen (usually by ‘mickey-mousing’). The other function of complementarity occurs when the music underscores what we ‘emotionally see’ on screen are inner human expressions or concepts that are abstract in nature (e.g. dreams, virtues, feelings, imaginings, wishes, etc.). How then can mere ‘tonally moving forms’ possibly depict concepts?²⁶ Our answer lies in the ability of music to mimic the ‘motion’ of emotions. That is to say, the motion of music morphologically resembles the motion of feelings. In other words, it is the motion of music – not the music itself – that translates the mental or emotional life of man. This happens because music presents “auditory equivalents of some structural or kinetic aspects of that life” (Beardsley 1958: 333). Susanne Langer notes:

²⁶ The term ‘tonally moving forms’ is Geoffrey Payzant’s compromise of Hanslick’s *tönend bewegte formen*, which literally means ‘*soundingly moving forms*’ (Hanslick 1986: 101-102).

there are certain aspects of the so-called “inner life” – physical or mental – which have formal properties similar to those of music – patterns of motions and rest, of tension and release, of agreement and disagreement, preparation, fulfillment, excitation, sudden change, etc. (1957: 228).

Late in the same text, Langer observes that:

what music can actually reflect is only the morphology of feeling; and it is quite plausible that some sad and some happy conditions may have a very similar morphology [...] as algebraic expressions are related to arithmetic (238).

Thus, we stand by Hanslick’s view that, phenomenologically speaking, music most assuredly does not possess any ‘objective’ emotional quality. Rather, music and inner human expression are simply bound by the *resemblance of their motions*.²⁷ Wolfgang Köhler explains the resemblance further:

Quite generally, the inner processes, whether emotional or intellectual, shows types of development which may be given names usually applies to musical events such as: *crescendo* and *diminuendo*, *accelerando* and *ritardando*. As these qualities occur in the world of acoustical experiences, they are found in the visual world too, and so they can express similar dynamic traits of inner like indirectly observable activity (1929: 11).

Now, Royal S. Brown puts the foregoing views in the perspective of film thus:

It is, then, the merging of the cinematic object-event and the musical score into the surface narrative that transforms the morphological affect of music into specific emotions and allows us to “have them” while also imputing them to someone and/or something else, namely the cinematic character and/or situation [...]. Most music can also be considered to be unconsummated affect, and as such it is ripe as an art form for the

²⁷ Hanslick writes, “music can, in fact, whisper, rage, and rustle. But love and anger occur only within our hearts” (Payzant 1986: 9). This is Hanslick’s response to feeling-theorist Richard Wagner who wrote, “the voice of the heart is tone, and its artistically intentional speech is music” (Wagner 1850).

consummation provided by the representational nature of the moving picture and/or of the specific, narrative situation (1994: 27).

In cinematic situations, music does not portray the characters' feelings but rather the concepts which the mood of the film text elicits. While it is not accurate to say that a minor version of any given key is 'sad' and its major version 'happy' – indeed, such 'emotional' comprehension is inherently subjective and can vary from culture to culture – we can consider that the motions of minor modes, certainly in the context of Hollywood cinema, generally depict dark, sombre, or sad moods and, conversely, that the motions of major modes depict bright, upbeat, or happy moods.

Although we can in practice correlate music to the mood of the scene at hand, we can only do so in morphological terms – and even then only in general terms. After all, only the score composer, who stands as the primary interpreter of visual tracks in relation to music, really knows why certain musical features might articulate certain scenic moods. As Susanne Langer puts it, “music is a limited idiom” (1957: 240). This is why we can only present the function of complementary music in morphological and normative terms. For Langer, music is limited it is, at base:

an unconsummated symbol. Articulation is its life, but not assertion; expressiveness, not expression. The actual function of meaning, which calls for permanent contents, is not fulfilled; for the *assignment* of one rather than another possible meaning is never explicitly made (1957: 241).

That being said, we will now consider three examples of complementary cinema music which underscore abstract concepts. In the following subsections, we will reference musical features that have been reported as being suggestive of discrete emotions. These features include tempo, mode, harmony, tonality, pitch, micro-intonation, contour, interval, rhythm, sound level, timbre, timing, articulation, accents on specific notes, tone attacks and decays, and vibrato – all of which either correlate or induce emotions in music (Juslin and Lindstrom 2010: 335). As Anahid Kassabian puts it, “we learn through exposure what a given tempo, series of notes, key, time signature, rhythm, volume, and orchestration are meant to signify (2001: 23).

2.3.1.A. Abstract Concept: *The Tonality of Pain*

Music in romance and ‘relationship’ films often functions to underscore abstract concepts related to pathos or feelings. Our example of a complementary function which underscores the emotional life of man is the theme score from Robert Fuest’s *Wuthering Heights* (1971) (see Fig. 25).



Fig. 25. Cinema Music Sample No. 21: Abstract Concept (Pain)

Music: *I Was Born in Love with You* (Michel Legrand)

Film: *Wuthering Heights* (Robert Fuest, 1971)

In this film, the emotion of pain dominates the pathos that Heathcliff and Catherine share. The first screenshot below shows the characters as they promise not to leave each other. The second screenshot portrays the enormity of anguish from their broken promise. In both scenes, the mournful tonal arrangement of the score highlights the abstract concept of pain.

Many of the following musical features in the music here generally depict unhappy emotions: the minor key of C (which is made darker or more vulnerable by its continuous chord in dominant seventh), the gliding slow tempo in descending pitch, the small intervals between notes, the low pitch and soft timbre, the accents on tonally stable notes, the absence of *forte* (strong) or *sforzando* (forcibly strong), etc. All of these features further articulate the tonal mood of dominant seventh: a yearning to go ‘home’.

Above all, the minor key of the music is set in Dorian mode which renders the music’s tonality significantly darker. As Howard Goodall notes, “Modes were one thing or another, the Ionian and Lydian being sunnier, like modern ‘major keys’, and the Dorian and Phrygian being darker, like modern minor’ keys” (Goodall 2013: 93).

2.3.2.A. Abstract Concept: *The Tonality of Valor*

Music in war films often underscores abstract concepts associated with life-or-death combat situations – virtues such as ‘courage’, ‘sense of duty’, and ‘hope’ – which can be grouped together under the heading of *valor*. Our example of music that underscores valor (or the ‘moral or spiritual life of man’) comes from *Black Hawk Down* (Ridley Scott, 2001) (see Fig. 26).



Fig. 26. Cinema Music Sample No. 22: Abstract Concept (Valor)

Music: *Leaving No Man Behind* (Hans Zimmer)

Film: *Black Hawk Down* (Ridley Scott, 2001)

This example utilises the following musical features that generally depict heroic virtue (valor): simple and consistent major key, consonant harmony, minimal timing variability, large articulation in the last fifteen bars using dotted half notes, and majestic waltz tempo in 3/4 time signature.

2.3.1.A. Abstract Concept: *The Tonality of Madness*

Our example of complementary function which underscores the mental life of man comes from the final scene in *Victor Frankenstein* (Paul McGuigan, 2015). This scene shows the crazed scientist Dr Frankenstein on the cusp of creating life out of death, thus, at the height of his madness. To underscore this pursuit of the impossible, the composer uses tonal forms to depict not only Frankenstein’s madness, but also his deep melancholia resulting from the futility of his “dream of a world where a murdered man can stand in court to face his murderer”. The music’s arpeggiated structure comes in triplets that punctuate its running tempo to further portray the pursuit of that which can never be (see Fig. 27).



Prometheus Ascending!! Liiii-----ve!!!



Fig. 27. Cinema Music Sample No. 23: Abstract Concept (Madness)

Music: *Prometheus Ascending* (Craig Armstrong)

Film: *Victor Frankenstein* (Paul McGuigan, 2015)

2.3.2. The Functionality of Informativity

We find a strong annotative function of epistemic music in Gary McLean's *Jungle* (2017). The film centers on adventurer Yossi Ghinsberg who is stranded in an uncharted part of the Amazon jungle for three weeks without supplies or food. The scene below shows Yossi during an episode of delirium (see Fig. 28).



Fig. 28. Cinema Music Sample No. 24: Informativity

Composer: Johnny Klimek

Film: *Jungle* (Gary McLean, 2017)

For approximately five minutes, melodious music underscores a sequence showing Yossi with company. This invites the receiver to believe that the character is not alone. Suddenly, the music becomes immersed in dissonance (comprised of tritones and displaced tonal patterns). This trajectile annotation of epistemic music prompts the receiver to infer or realize the converse: *apart from Yossi, there was really never anyone else in the jungle.*

2.4. How to Catalogue Cinema Music

Table 2 below lays out a sample matrix for classifying cinema music in addition to illustrating how relevant keywords are applied in the categorization process.

Following this is a diagram summarizing what we have learned in this chapter and charting our complete categorization process (see Fig. 29).

SAMPLE #	CATEGORY UNDER THE TERNARY DISTINCTION	FUNCTION	FUNCTIONALITY	DATA	IMPLICIT FORM	TRAJECTORY
1 (Fig. 1)	Referential	Denotes	Referentiality	Explicit	N/A	N/A
3 (Fig. 3)	Epistemic	Annotates	Informativity	Implicit	Authorial Commentary	Narrative
13 (Fig. 15)	Referential	Denotes	Referentiality	Explicit	N/A	N/A
27 (Fig. 32)	Epistemic	Annotates	Informativity	Implicit	Inner State	Psychophysical
28 (Fig. 33)	Epistemic	Annotates	Informativity	Implicit	Displaced Reality	Perceptual
38 (Fig. 56)	Complementary	Underscores	Complementarity	Explicit	N/A	N/A

Table 2. Sample Catalogue of Categorized Cinema Music

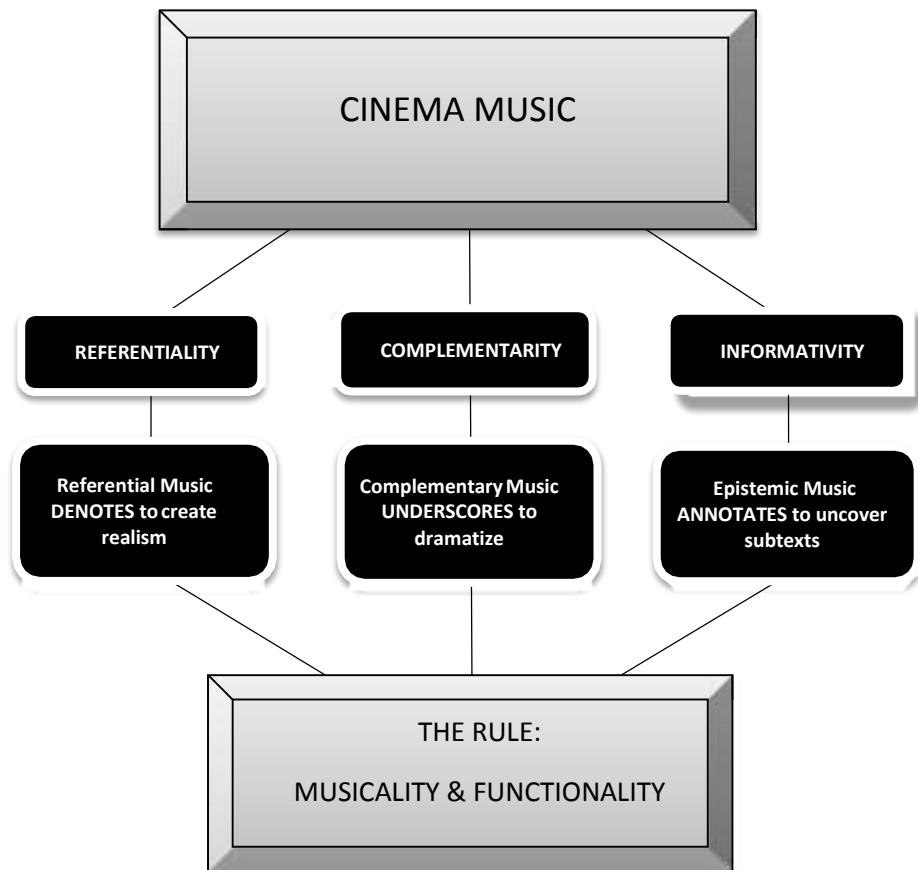


Fig. 29. The Categorization Process of Cinema Music

Further, [Table 2](#) visually demonstrates the parsimony of the ternary schemata in classifying sound cinema. As to what sounds we classify as cinema music, Fig. 29 provides a useful flow chart to help the analyst differentiate our approach from the various categorical trappings of ‘the deluge’. Clearly, our delineation of the category of ‘epistemic music’ is absolutely central to this project’s attempt to contain this deluge, in as much as it functions within a single, coherent theory, the plethora of otherwise inconsistent, confounding and overlapping categories currently found in the literature.

Our contention has been that epistemic music, whose function is to annotate, brings subtexts to light. In the next chapter, we will examine this music in full detail in six short sections.

CHAPTER THREE

Epistemic Music

This chapter consists of six different sections which together aim to vigorously expose the presence of epistemic music. Section One defines epistemic music, while Section Two addresses our argument concerning its pre-existence in film theory. Section Three examines the manner in which epistemic music functions through what we call ‘implicit data’. Section Four examines how epistemic music instigates the mental process of inference. Section Five presents our argument on the difference between epistemic music and complementary music. Finally, Section Six reflects on the philosophical beauty or value of cognition and compares its similarity to epistemic music’s narrative value through juxtaposition.

3.1. What is Epistemic Music?

Epistemic music is a form of cinematic annotation which augments the viewer’s understanding of the film’s diegesis. Unlike both referential music (which simply denotes what is already presented in the scene) and complementary music (which underscores and thereby highlights select aspects of this existing presentation), epistemic music advances our understanding of the narrative *as a whole*.

As a structural part of dramatic productions, epistemic music is, therefore, “not just an emotional prop filling the soundtrack with false stimulants” (Alwyn 1957: 26). Rather, epistemic music is like a separate character, or “another protagonist” (Miceli 2011: 15), or a commenting spectator because “the more it participates in co- authoring, the more it loses its diachronic flow” (Neumeyer 2015: 30).

Said differently, epistemic music enters in an altered state because it is fueled only by literary ideas and hence, as Bernard Hermann puts it, “it’s almost music, but not quite” (Hermann cited in Bazelon 1975: 186-187). Hilary Schaefer encapsulates our full meaning of epistemic music and its significance to sound cinema thus:

Film music offers a kind of sub-text; it serves as thought bubbles on the screen. When stories are transferred from the page to the screen, inner

thoughts and commentary are lost [...]. This sort of commentary is somewhat replaced by the music (2001).

3.2. The Pre-Existence of Epistemic Music

Epistemic music has long transcended cinema music's basic function of echoing moods and emotions already contained in the images depicted on the screen. As Jessica Green puts it:

the film score has progressed into actually shaping the narrative [...]. Film music [i.e. epistemic music] fulfils the more complex role of working in conjunction with the other channels of information to rhetorically influence the audience's interpretation of the film and the message that the viewer takes from the film (2010: 93-94).

It is, moreover, our contention that the 'epistemic' quality of cinema music was in fact an indirect topic of discussion several decades before the terms 'diegetic' and 'nondiegetic' were introduced and popularized (by Gérard Genette and Claudia Gorbman). For example, in 1916 Hugo Munsterberg notes that "the musical piece as a whole unveils to us a whole world of emotions" (cited in Langdale 2002: 126), while in 1936 Kurt London observes how music serves "the psychological advancement of the action" (1936: 135). Aaron Copland, for his part, quickly recognized the ability of music to underscore or articulate subtexts insofar as it provides "psychological refinements" to the film, giving the audience access to "the unspoken thoughts of a character or the unseen implications of a situation" (1957: 256-257). Yet despite our long-lived awareness of the existence of epistemic music – as strongly evidenced by the relevant literature – the idea of 'music that informs' or *what the audience should know* has never been semantically addressed or concretized until now.

Indeed, we argue that several other film theorists – including Kalinak, Spottiswoode, and Bordwell & Thompson – unbeknownst to themselves, refer to epistemic music regularly in their writings. Likewise, numerous score composers and sound editors have unknowingly created epistemic music to advance the narrative. In point of fact, it is safe to assume that all references to music contained in the various quotations scattered throughout this chapter invariably allude to 'epistemic music' (further reinforcing its pre-existence).

Thus we can say, for instance, that Kathryn Kalinak is effectively referring to ‘epistemic music’ when she notes that “music works as part of the process that transmits narrative information to the spectator, that it functions as a narrative agent” (1992: 30). In other words, there are times when visuals alone cannot tell the story. As George Burt clearly states, “music releases into the drama subtextual elements that you cannot see but need to think about” (1994: 7).

With regard to subtexts, Neumeyer observes “the audio-viewer must be given a means to discern that the world depicted is not simply what is seen and heard but something more or other than what it appears to be” (2015: 41). Martin Marks concurs, noting that a mere heightened presence of mind is not sufficient for the receiver to understanding the film. He further argues, “even the most attentive (in the analytical sense) viewer has great difficulty in comprehending all there is in a film” (1982: 5).

In light of the above, we hold that epistemic music functions as the ‘means’ by which the receiver make sense of the fabula, a process that usually involves uncovering subtextual elements in the story. Moreover, when epistemic music uncovers subtexts (i.e. when it *annotates*), it assumes the shape of ‘implicit data’. This data comes in three forms which we will examine now.

3.3. Implicit Data: The Three Forms

We use the term ‘implicit data’ to refer to any subtextual element in the film text. We hold that such data to be *trajectile* in nature, and as such also consider implicit data in terms of ‘trajectories’. It follows then that if the music in question does not follow a specific trajectory, we can safely say that this music will be either referential or complementary. All of which of course begs the question: what exactly are trajectories?

Broadly speaking, trajectories are narrative signals that imply the presence of inferable subtexts. Since epistemic music elicits inferable information that is not immediately in view, it surprises the receiver with unforeseen trajectories which, in turn, spur equally unexpected cognitive reactions. As they indicate perspective alteration in the plot, character or even setting, a trajectory “takes the part of a spectator commenting on the visual film, usually ironically” (Spottiswoode 1950: 50). Hence, trajectories represent film texts where plots suddenly twist, characters’ minds change, or constructed realities shift to different spatiotemporal dimensions.

We further contend that implicit data comes in three distinct forms, namely, *authorial commentary*, *inner state*, and *displaced reality*. Respectively, these forms produce trajectories we call *narrative*, *psychophysical*, and *perceptual*. In sum, epistemic music navigates the storyline (authorial commentary), gives the receiver access to the characters' subjectivity (inner state); and transports the characters to another space or time (displaced reality). We will now study each of these forms with examples.

3.3.1. Authorial Commentary: Narrative Trajectory

Authorial commentaries present themselves through *narrative trajectories* in the form of 'change of direction'. Our meaning of 'authorial commentary' relates to the filmmaker's decision to shift the plot in midstream. In other words, when the director wishes to imply a change of plot, this will ordinarily be accompanied by a change in the music's structure. For example, a blithesome, rhapsodic orchestral piece that suddenly resolves into a slow tempo *kalimba* usually indicates that a plot twist is at hand. In essence, authorial commentaries impart information like an intelligence outside the film's world because they are pointing to something beyond what the characters already know (Wierzbicki 2009: 168).

Our first example of 'authorial commentary' is from Richard Berry's *L'Immortel* (2010). The scene begins with images showing Charly as he reforms his life as a family man. He takes his son on a fun trip downtown. Along the way, he plays his favorite aria from *Tosca*. The music implies that the historical context of the aria *E Lucevan le Stelle* from *Tosca* is linked to the narrative context of the film text or sequence (see Fig. 30).

The constructed setting of *Tosca* is an amalgam of two short-lived constitutions of the Roman and Parthenopean Neapolitan Republics which followed Napoleon's invasion of Italy in 1796 (Carner 1985: 62). The story features Cavaradossi, a painter incarcerated for political reasons and condemned to die by execution. In preparation for his demise, he sings farewell to his life and to his lover named Tosca.



E lucevan le stelle, ed olezzava la terra stridea l'uscio dell'orto, e un passo sfiorava la rena, entrava ella fragrante, mi cadea fra le braccia, O! dolci baci o languide carreeze, mentr'io fremente le belle forme disciogliea dai veli, svani per sempre il sogno mio d'amore, l'ora e fuggita, e muio disperato, e non ho amato mai tanto la vita, tanto la vita!



Fig. 30. Cinema Music Sample No. 25: Authorial Commentary

Music: *E Lucevan le Stelle* (Giacomo Puccini)

Libretto: Luigi Illica & Giuseppe Giacosa

Film: *L'Immortel* (Richard Berry, 2010)

If the receiver is familiar with the background story of the aria from the opera, it is safe to assume that the subtext (that is, the violent scene to follow) is inferable. In other words, we can presume that the music will juxtapose the fate of Charly Mattei, the film's character, to that of Cavaradossi, the opera's character. Thus, we evaluate that Charly will likewise face violence.

The scene ends with images showing Charly as he meets his assailants. The fatal attack on Charly (in the film) corresponds to Cavaradossi's execution (in the opera). That is to say, the timing in which the aria is heard in the film correlates precisely to when it occurs in the opera: the music plays in the film just before

Charly is gunned down, just as in the opera Cavaradossi sings the aria before he is executed and Tosca leaps to her death.

In the music, ‘authorial commentary’ annotates as follows: *just as Tosca’s only guilt is her association with her incarcerated lover – an association punishable by death – the only guilt Charly holds is his past association with the mafia*. Overall, the tragedy of Tosca correlates to that of Charly in that “man’s helplessness and impotence against evil, absolute, and abusive power” (Fisher 2005: 43) is the theme that inflames the drama of both the opera and the film.

3.3.2. Inner State: Psychophysical Trajectory

By way of trajectories, inner states present elements relating to four kinds of narrative shifts in mental and physical processes:

- i. *emotional* (e.g. happiness, sadness, fear, surprise, disgust, anger, etc.)
- ii. *psychical* (e.g. insight, analysis, reflection, inner voice, epiphany, deduction, recollection, wonderment, curiosity, etc.)
- iii. *neurological* in reference to mental stress (e.g. anxiety, panic attack, shock, catatonia, hysteria, depression, histrionics, insomnia, etc.)
- iv. *physical* in reference to physical stress or neurodegeneration (illness, deafness, blindness, vertigo, malaise, fatigue, seizure, dementia, amnesia, etc.)

For the sake of brevity, we will only study the first narrative shift (i.e. *emotional*) which comes from the diegetic piano score in Michael Cimino’s *The Deer Hunter* (1978). The film itself is a powerful parable of lives torn apart by war which centers on a strongly bonded group of five Russian-American steel-workers (Mike, Nick, Steve, Stanley, Alex, and John) who grew up together in a small town in Pennsylvania. The scene we are concerned with shows the group returning from a hunting trip and raucously singing a country tune (see Fig. 31).



Drop kick me Jesus through the goalposts of life -- End over end neither left nor to right -- straight thru the heart of them righteous uprights-- Drop kick me Jesus thru the goalposts of life !



Fig. 31. Cinema Music Sample No. 26: Referential (For contrast only)
 Music: *Drop-Kick me Jesus through the Goalposts of Life* (Paul Craft)
 Film: *The Deer Hunter* (Michael Cimino, 1978)

Note that we classify this song as ‘referential’ because it denotes the lifestyle and camaraderie of foundry workers in Western Pennsylvania during the late 1960s. Note also that we present this song in order to accentuate the trajectory element in the following scene when the piano music starts (see Fig. 32).



Fig. 32. Cinema Music Sample No. 27: Epistemic (Inner State)
 Music: *Nocturne in G minor Op. 15. No. 3* (Frédéric Chopin)
 Film: *The Deer Hunter* (Michael Cimino, 1978)

After the rowdy singing, epistemic music gradually reveals the inner state of the characters when John heads to the piano and plays a haunting classical tune.

At first, the group delights in John's playing. Towards the middle of the piece, a moment of wistful reckoning cuts through the heavy air. The affective trajectory manifests itself on the screen as the group's countenance gradually changes, depicting a shift in their disposition which we infer as somber. We further infer that the reality dawns on the group as follows: three of them will be deployed to war in a few hours, and that some of them may not come back alive. This music not only brings the group back to 'reality' but simultaneously reveals to the receiver the inner states of the characters as the crushing weight of reality sets in.

3.3.3. Displaced Reality: Perceptual Trajectory

We understand 'displaced reality' to refer to any film sequence that is presented as existing outside of the natural temporal and spatial order (of character and events). Displaced realities are manifested as trajectories which reference an alternate or 'warped' reality, one which is cut off from the film's 'natural' time and space, and which is brought about as a result of some form of mental disturbance. Their symptoms are related to forms of altered states, ranging from dreams all the way to psychopathy.

Often employed by filmmakers for their dramatic narrative impact, displaced realities can be the result of trance, illusion, spiritual possession, out-of-body states, paranormal states, metamorphosis, psychosis, hallucination, schizophrenia, etc. A typical example of displaced reality cinema music comes from Brad Anderson's *The Machinist* (2004).

The film focuses on Trevor Reznik, a lathe operator whose perception of reality becomes increasingly twisted and detached from the 'real' world. Trevor is haunted by a grim past which surfaces each time he drives and lights a cigarette. The scene shows Trevor driving his truck – and smoking. Suddenly, his world stops and his truck stands still in the middle of the road. Here, the implicit data of epistemic music in the form of displaced reality plays out.

Indeed, this 'displacement' is arguably registered in the very structure of the music, in so far as the four-note ostinatos in the lower register (bass clef), which serves as the melody line, contrasts with the three-note ostinatos in the upper register (treble clef), which serves as the accompaniment. At the end of the sequence, we see Trevor's reality transported to another dimension where he finds himself talking to a woman who does not exist outside of his mental space (see Fig. 33).



Fig. 33. Cinema Music Sample No. 28: Epistemic (Displaced Reality)

Composer: Roque Baños

Film: *The Machinist* (Brad Anderson, 2004)

Thus far we have seen how epistemic music navigates the plot through ‘authorial commentary’, reveals the subjective state of characters through ‘inner state’, and transports characters to another space or time through ‘displaced reality’. We will now examine how implicit data is transmitted as *additional* (i.e. not visually represented) information. The conversion of transmitted information into knowledge is processed by the receiver through the mental activity of ‘inference’.

3.4. The Inferential Process

As Eisler (1947: 62) and Copland (1957: 256-257) for example note, in the early days of the sound cinema, music predominantly served as a device to either establish heightened realism (currently referred to as ‘diegetic music’ – which we call ‘referential music’) or provide dramatic effects (currently referred to as ‘nondiegetic music’ – which we call ‘complementary music’). Today, however, music does more than simply refer to cinematic elements or encourage pathos: it *comments* and *explains*. We have called this fundamentally *informative* music ‘epistemic music’.

Much in the manner of footnotes, epistemic music *annotates* the scene, providing additional information not provided by the images alone.

This additional information must however be actively inferred by the receiver. That is to say, the film's overall intelligibility can only be realized through some "work of thought which consists in deciphering the hidden meaning in the apparent meaning, in unfolding the levels of meaning implied in the literal meaning" (Ricouer 1980: 245). This 'work of thought' is precisely the process of 'inference'.

The act of inference is a mental activity linked with other cognitive processes which enables the mind to detect and decipher meanings implied by textual cues (Bordwell 1991: 3). According to Tobias Pontara, implied meanings are managed by "the viewer's mental operations in response to the cues and information provided by the film's representation" (2016: 39).

Bordwell contends that due to film's miscellany of verbal, visual, and auditory stimulants, film is able to cue the audience "to execute a definable variety of operations" (1991: 29). One such example is the camera technique of the 'close-up'. Although close-ups clearly 'position' the viewer to pay particular attention to the object in heightened focus, complex psychological engagement is often still required to catch and absorb what is happening. We argue that such engagement entails inferential activity.

While "the artwork or text is taken to be a container into which the artist has stuffed meanings for the perceiver to pull off" (Bordwell 1991: 2-3), cinema, on the other hand, is a complex presentational form "without narrational mediation" (Pfister 1993: 2-3). As Christian Metz puts it,

The cinema has no distinctive units [...]. It proceeds by whole "blocks of reality," which are their total meaning in the discourse. These blocks are the "shots" [...]. The shots present the receiver with a quantity of undefined information [...] like the complex statement of undefined length (how is one to describe a film shot completely by means of natural language?) (1974: 79-88).

That is to say, the film's constant flow of verbal, visual, and auditory stimulants does not necessarily guarantee a coherent fabula. Fortunately, epistemic music commits itself to communicating meanings (Kassabian 2001: 21; see also Kalinak 2010: 4), and therefore supports the intellectual connection

between the receiver and the *fabula*. In short, meanings are now musically transmissible as a result of epistemic music's annotative function.

As we have seen, it is epistemic music – and not referential or complementary music – that instigates inferential activity. The intellection involved in inference is simple. The manner in which epistemic music annotates lies foremost in its ability to externalize subtexts (or implicit data) from which the receiver may infer additional information. Put differently, epistemic music participates in “the workings of the human mind” (Kalinak 2010: xiii) and helps “externalize various mental processes” (Frykholm 2015: 130).

Like other narrative tools of cinema, epistemic music functions to make the receiver's audio-visual encounters as cohesive as possible.²⁸ As George Burt argues:

[Music] can have a telling effect on how the characters in the story come across – on how we perceive what they are feeling or thinking – and it can reveal or expand upon subjective aspects and values associated with places and events intrinsic to the drama (1994: 4).

Moreover, epistemic music “has connotative values so strongly codified that it can bear a similar relation to the images as a caption to a news photograph [...]. It supplies information to complement the potentially ambiguous images and sounds” (Gorbman 2003: 40). Jessica Green concurs, noting that music creates meaning “to create a mood or feeling that suggests or emphasizes something that the audience might not have paid attention to or realized” (2010: 90).

Inferring meanings out of frames that continuously condense space, time, and information may well be a “purely rationalist activity” (Buckland 2007: 14). As Edward Lippman notes, music involves a process which is not a “direct response of feeling to an auditory provocation but a reconstitution of the formulated inner experience in which intelligence and understanding are active participants” (2006: 131).

²⁸ Other narrative tools of cinema include: title; caption; plot; soundtrack; dialogue; score; image; characters; props; costume; sound effects; make-up; title; camera technique; special effects; colour; CGI; period setting; cinematography, and screenplay. We can suppose that more tools will appear over time as sound design practice, story-telling techniques, and camera technology further develop.

Put differently, epistemic music supports both the film’s assiduous effort to *mean* and the receiver’s corresponding effort to *infer* these meanings.²⁹ Analogously, epistemic music translates cinema language just as the camera works to translate visual information. Just as epistemic music creates (or at the very least, *sharpens*) meanings that are associated with the film’s visual elements, so too the camera can establish either harmony or tension depending on which techniques are used. For example, while the two images below show the same materials used for the set of *Psycho*, the second image obviously bears grim and forbidding elements that significantly alter the overall tone of the film text (see Fig. 34).



Fig. 34. Perspectives: An Analogy between Camera and Epistemic Music
 Props: *Psycho* (Alfred Hitchcock, 1960)

3.5. The Difference Between Epistemic and Complementary Music

Since both epistemic and complementary music are essentially nondiegetic, in that they emanate from outside the screen world, it is crucial that we distinguish their functional difference. On the one hand, Noël Carroll alludes to complementary music when he writes that “music [...] is the expressive prop that assures the untutored spectators [...] see the given scene under its aegis” (1988: 143). On the other, George Burt alludes to epistemic music when he notes that “music opens frames of reference to elicit new meanings or insights about the story” (1994: 7).

²⁹ Film’s effort to *mean* is in reference to Robert Scholes’s distinction between film and novel: “novels work hard to show [whereas] films work hard to mean [...]. But in cinematic narrative, the spectator must supply a more categorical and abstract narrativity [...]. A well-made film requires interpretation, while a well-made novel may need only understanding. [Film] must achieve some form of reflection, of conceptualization in order to reach its optimum condition as narrative” (Scholes 1982: 67-72). See also Neumeyer 201: 67.

Overall, epistemic music ascribes an intellectual dimension to cinema music, whereas complementary music is more elemental in its support of cinematic presentation.³⁰ We might even say that epistemic and complementary music are diametrically opposed in that epistemic sounds externalize implicit data, whereas, complementary sounds internalize explicit data. Let us further explore their differences.

3.5.1. When Complementary Music Seems Epistemic

One could still legitimately query as to whether the basso ostinato in Spielberg's *Jaws* is complementary (based on the argument that the music characterizes and emphasizes the approach of the shark) or epistemic (based on the argument that the music functions like a newscaster in so far as it adumbrates the arrival of terror). But is the music epistemic to begin with?

We hold that while the score indubitably dramatizes the terror, no new information is transmitted in the process. From the title or movie posters alone, the audience is made sufficiently aware that a shark exists in the film. Hence, the sound of 'dun-dun-dun-dun' reveals no new information or hidden subtext that is suddenly unveiled producing a narrative trajectory. Like "a matter of musical memory" (Grey 2008:114), or a *leitmotif*,³¹ the score merely manages the audience's expectation of an already given fact: a shark will appear. As such, the score serves as an explicit (not implicit) embodiment or counterpart of menace and, therefore, we must classify the music as complementary.

³⁰ We can say that the intellectual nature of epistemic music is in pace with the current times of cinema. In an interview in *The Story of Film: An Odyssey*, filmmaker Paul Schrader notes, "movies were becoming an intellectual process more and more [...]. The first generation of film makers that are coming at film from college. Before that, you came from newspaper, you came from theatre, you came from TV. Now you come as 'film buffs'. Therefore, the average film director is more intellectual, more self-aware. As a result, he tries to look at Europe because that tradition [of French Existentialism, etc.] was already alive and well at that time (Schrader 2013).

³¹ By 'leitmotif', we refer to what Sir Hubert Parry explains as: "figures, or short passages of melody of marked character which illustrate, or as it were label, certain personages, situations, or abstract ideas which occur prominently in the course of a story or drama of which the music is the counterpart; and when these situations recur, or the personages come forward in the course of the action, or even when the personage or idea is implied or referred to, the figure which constitutes the leit-motif is heard" (Parry 1889, cited in Britzner-Stull 2015: 7-8).

Unlike epistemic music, which does not ‘reiterate’ what has already been presented, complementary music is usually redundant or denotative of what is already explicit within the film’s diegesis. Hence, Theodor Adorno and Hanns Eisler contend that the:

illustrative use of music today results in unfortunate duplication. It is uneconomical [...]. The music of the Wagnerian era was actually a means of elucidation. But in the cinema, both picture and dialogue are hyperexplicit. Conventional music can add nothing to the explicitness, but instead may detract from it [...]. It should stick to its task – even if it is only as questionable a one as that of creating a mood – renouncing that of repeating the obvious (1947: 13-14).³²

3.5.2. When Epistemic Music Transcends its Annotative Function

To further clarify the relationship or difference between epistemic and complementary forms of music, let us turn the relationship on its head and consider instances where it is the music which drives the image (and not the other way around). In situations like these, music does not so much ‘annotate’ as *dictate*. That is to say, here the standard situation is reversed, such that it is the image that follows the rules laid out by the music. The key point being that, in such instances, the music is functionally *epistemic* while the image is by contrast *complementary*. An example of this apparent role-reversal can be found in the pool cue-assisted fight scene in *Shaun of the Dead* (Edgar Wright, 2004).

The film centers on Shaun, an electronics salesman whose life revolves around spending time with his best friend and housemate Ed at *The Winchester* pub and playing video games together at home. During the height of a zombie apocalypse in London, Shaun and his friends take refuge inside *The Winchester* as zombies mass outside, surrounding the pub and battering at the doors and windows to get inside. Suddenly, the recently-zombified pub owner bursts into the scene and attacks (see Fig. 35-41).

³² It is on this account of complementary music’s illustrative character that we give more categorical weight or value to epistemic music (and to referential music for that matter). We will discuss this categorical weight in more detail in our final chapter (§ 4.3.1).



The ‘acoustical being’ or *acousmêtre* (Chion 1994: 129) in the jukebox suddenly ‘sings’. Shaun exclaims, “who could have put that on?” to which Ed replies, “it’s random!” This unpredicted event serves the first trajectory element in the sequence.

Fig. 35. Narrative Trajectory No. 1

As the music hurls ‘authorial commentaries’ at the characters, trajectories occur where the music and the image seem to operate in a form of relay. This example accentuates the strong trajectile quality of epistemic music, in that the music virtually drives the image into a series of specific actions, co-authoring the scene (Neumeyer 2015: 30) in the manner of a “commenting spectator from the audience’ (Spottiswoode 1950: 50). We will now juxtapose the lyrics against the visual tracks in order to demonstrate how the music in this scene is ‘epistemic’ while the image (as mentioned) is by contrast ‘complementary’.



Music: The song starts in slow tempo (at 115 bpm): “Tonight I’m gonna have myself a real good time and the world I’ll turn it inside out [...]. Don’t stop me not now don’t stop me” (see this slow tempo in the first twelve bars in brackets in Fig. 37 below).

Image: The characters grab pool cues and ready themselves for attack as they wait for the music’s tempo to pick up.

DON’T STOP ME NOW



Fig. 36. Cinema Music Sample No 29. Narrative Trajectory No. 2

Music: *Don’t Stop Me Now* (Freddie Mercury)

Film: *Shaun of the Dead* (Edgar Wright, 2004)



Music: Indicated by brackets in Fig. 38 below, the music's fast tempo begins (at 158 bpm): *"I'm a shooting star leaping through the sky like a tiger defying the laws of gravity I'm a racing car passing by like Lady Godiva..."*

Image: The characters dash across the room with frenzy towards their target.



Fig. 37. Narrative Trajectory No. 3



Music: *"I'm gonna go go go. There's no stopping me. I'm burning through the sky yeah two hundred degrees. That's why they call me Mister Fahrenheit!"*

Image: The characters club the zombie to the song's beat. They deliver three consecutive blows in seemingly conscious response to the lyrics 'go-go-go'. See these lyrics in brackets in Fig. 39.

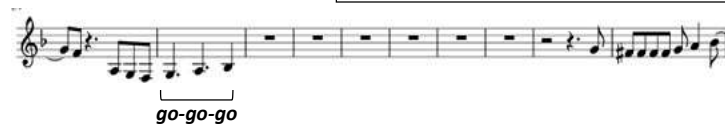


Fig. 38. Narrative Trajectory No. 4



Music: *"I'm traveling at the speed of light. I wanna make a **supersonic man** out of you!"*

Image: The music describes a man's superpower. Accordingly, the screen shows a male character (David) running as he rushes towards the fuse box to fix the faltering lights in the building. See the correlation of David's appearance to the lyrics as shown in brackets in Fig. 40 below.

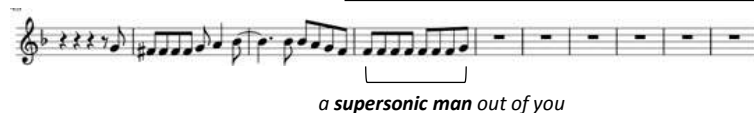


Fig. 39. Narrative Trajectory No. 5



Music: “I’m traveling at the speed of light, I wanna make a *supersonic woman* of you”!

This line repeats itself in the music except for the word ‘woman’.

Image: Accordingly, the screen shows a female character (Dianne) hastily propelling a dart at the zombie (although it misses its target and lands in Shaun’s head instead). See the correlation of Dianne’s appearance to the lyrics shown in brackets in Fig. 41 below.

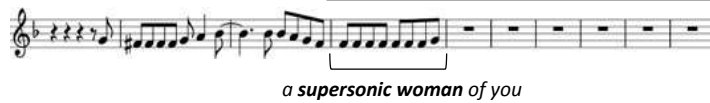


Fig. 40. Narrative Trajectory No. 6



Music and Image: The scene ends, and so does the music, when Shaun kills the zombie by smashing its head through the jukebox.

Fig. 41. Narrative Trajectory No. 7

3.5.3. Comparative Analysis: Epistemic and Complementary Music

To further illustrate the difference between epistemic and complementary music, [Table 3](#) below contrasts how the receiver is plausibly engaged when interpreting an inferential encounter with epistemic music or when comprehending an auditory and neuro-physical encounter with complementary music.

Epistemic Music	Complementary Music
inferential, reflective or intellective encounter, music addresses itself to the mind: mentally arousing	physical where ear, neural system and brain (i.e. the auditory anatomy dealing with mechanical and neuro-physical responses) are involuntarily activated: emotionally arousing

active, intellective, structured, motivated, contemplative, sophisticated, logical, accessible to few	passive, unmotivated, accustomed comprehension due to culture, popular, subjective association or association by sheer habit
---	---

Table 3. Comparative Chart: Epistemic and Complementary Music

Adapted from Eduard Hanslick (1854), Geoffrey Payzant (2002), and Theodore Gracyk (2002)

3.6. A Reflection on Epistemic Music: The Beauty of Cognition

In this final section, we use rain as analogy for epistemic music. We know that outside of actually beholding or physically feeling rain’s materiality, there equally exists a cognitive space in which the contemplative observer might embrace its beauty simply by hearing the sound the rain makes. The same is true of epistemic music, in that there exists a cognitive space outside of music’s tonal forms which the receiver can ‘mentally’ (or ‘intellectually’) discover and thereby, relish.

We contend that, just as beauty exists for a blind individual in the soundscape of rain, so too beauty exists for the receiver in the intellectual space of epistemic music. We can clearly discern such ‘intellectual’ beauty in blind academic John M. Hill’s description of his experience of hearing rain (see Fig. 42):

This evening, I came out the front door of the house and it was raining. I stood for a few minutes, lost in the beauty of it. Rain brings out the contours of what’s around you in that it introduces a blanket of differentiated and specialized sound which fills the whole of the audible environment. If there could be something equivalent to rain falling inside, then a life of a room would take in shape and dimension. Instead of being isolated, cut off, pre- occupied internally, you’re presented with a world. You are related to a world. You are addressed by a world. Why should this experience strike one as being beautiful? Cognition is beautiful. It is beautiful to know (John M. Hill, 2016).



Fig. 42. A Reflection on Epistemic Music: The Beauty of Cognition
 Text: Excerpt from audio tapes of John M. Hill
 Film: *Notes on Blindness* (Peter Middleton and James Spinney, 2016)

In this chapter, we have described the functional and ontological structure of epistemic music. In sum, we argued that in ‘annotating’ the scene through the provision of additional implicit data, epistemic music serves to establish altogether new subtexts that would otherwise not be in evidence.

Implicit data serves as inferential material that represent the conceptual ‘shifts’ or changes we call ‘trajectories’. Such data comes in three forms: ‘authorial commentary’, ‘inner state’, and ‘displaced reality’. ‘Authorial commentary’ produces narrative trajectories like change in the story plot or film setting. ‘Inner state’ produces psychophysical trajectories such as change in the character’s mental, emotional, or physical processes. Lastly, ‘displaced reality’ produces perceptual trajectories in the form of alterations in the character’s view of spatiotemporal reality. The diagram below captures at a glance the above summary (see Fig. 43).

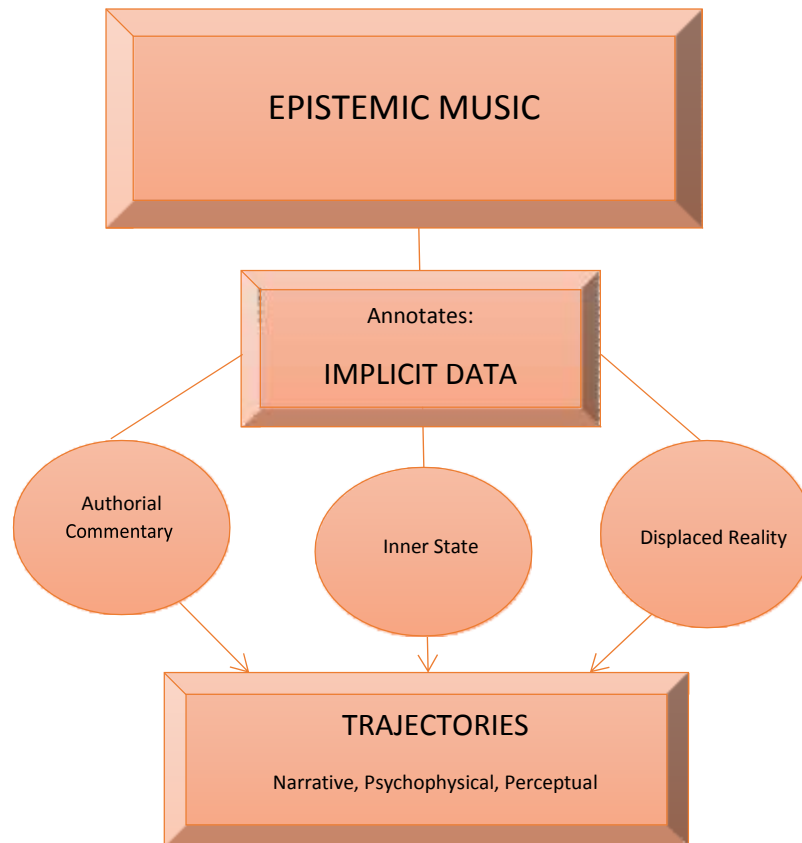


Fig. 43. The Ontological Structure of Epistemic Music

Our next and final chapter examines our full meaning of cinema music, and hence, will take the form of an exegesis. We will present cinema music as autonomous, symbiotic, parsimonious, and confluent – in that order.

CHAPTER FOUR

Cinema Music: An Exegesis

Theodor Adorno and Hanns Eisler define cinema music as that which “seeks to breathe into the pictures some of the life that photography has taken away from them” (1947: 59). In this way, film music facilitates the suspension of disbelief necessary for the receiver to immerse themselves in the ‘reality’ presented on the screen (a ‘reality’ constituted by pre-recorded images projected onto a two-dimensional – and fundamentally *stationary* – frame).

In particular, cinema music is comprised of sounds whose function is to assist in moving the film’s diegesis forward.³³ These musical sounds coordinate with image and other narrative tools (cf. fn. 38) in creating narrative significance. ‘Narrative significance’ involves two things having been successfully communicated to the receiver: first, the cognized plot is communicated to the audience as intended by the filmmaker; and second, the *fabula* is also correctly constructed in the mind of the receiver based on the cognized plot.³⁴

4.1. The Autonomy of Cinema Music

We firmly distinguish cinema music from what is generally referred to as ‘absolute’ music. Simply put, cinema music is foremost shaped by cinematic need, whereas, absolute (non-cinema) music is governed by its own constitutive laws. In other words, no laws of ‘traditional’ Western art music govern cinema music. By this, we mean that when the “higher-order concepts” of music such as key, melody, harmony, and meter (Levitin 2006: 17) are dropped, the music instantly breaks its ties with formal integrity.

As such, simple musical principles like the need to keep perfect time (or to establish the right pitch, intensities, duration, harmony, etc.) become, if not totally irrelevant, then at the very least considerably less important when it comes to

³³ See: Kassabian 2001: 21.

³⁴ Since viewers typically use “plot” and “story” indiscriminately to mean “narrative”, some film scholars prefer the terms *syuzhet* (to mean cognized plot) and *fabula* (to mean story constructed in the mind of the receiver as defined in §1.3.). We agree with Pramaggiore & Wallis that the latter terms are “far better suited to the precise terminology of film analysis” (2005: 36).

creating cinema music. As pointed out earlier, the more narrative duties such music takes on, the greater independence it gains from the rigid formal laws of high art music.³⁵

4.2. The Symbiosis of Cinema Music and Image

Chion writes that “with film we can say that the image is projected and the sound is a *projector*, in the sense that the latter projects meanings and values onto the image”. Yet, Chion continues, there is a discrepancy in the sound/image relationship, in as much as “a film without sound remains a film; a film with no image, or at least without a visual frame for projection, is not a film” (1994: 143-144).³⁶

In other words, cinema music primarily exists in the *service* of the visual, its principal function being to accompany visual tracks within the story world. This amounts to a symbiotic (if uneven) relationship between sound and image. Similarly, Goldmark, Kramer, and Leppert describe music as, “an agent, a force, an object engaged in ongoing negotiations with image, narrative, and context” (2007: 3).

We now present scores from two films we have in fact already examined in previous chapters, and which staunchly exemplify the symbiosis of music and image,

³⁵ This brings to mind the use of sonic forms as ‘film music’. One of the most recent deconstruction of art music is evident, for instance, in the music of sonic art György Ligeti which “say” what a “constructivist” does with the sound material: it is channelled through a mincing machine to get it fragmented, splintered, pulverized, and then somehow put together again – but the notes do not connect ... The resulting material is not something living, organic, breathing, but comparable to sand, gravel, or the concrete of modernist buildings -- life has been ground out of the sound. (John Borstlap 2017: 6-7). Elsewhere, Borstlap further argues: “A form of music which is not organized on the basis of the “gravity force” of tonality is not music at all, but something else. It is indeed nothing less and nothing more than “sound art” or “sonic art,” an art form typical of the last century and which does without the entire range of communication and expression that had been the normal territory of art music for ages. Sonic art has to be judged according to its own intentions and not to be compared to music, which distorts both the nature of music and of sonic art. Sonic art emerged and developed on its own accord like photography emerged, next to painting, in the nineteenth century; also then there was a discussion about the role of painting that was now more or less freed from an “obligation” to represent reality in a realistic way:” (36). For our purposes, we regard such sonic forms (similar to Walter Murch’s ‘helicopter music’ in *Apocalypse Now*) as cardinal to the promotion of the ‘deluge’ by way of one of our ambiguous categories: *diminished borderline*.

³⁶ Chion however adds the following caveat: “Except conceptually: Walter Ruttmann’s 1930 limit-case film *Weekend* is an ‘imageless film,’ according to its creator, consisting of a montage of sounds on an optical soundtrack [...]. It becomes a film only with reference to a frame, even if an empty one” (Chion, 144).

these being Hitchcock's *Psycho* and Spielberg's *Jaws*. We have already seen how in *Psycho*, the cinematic brilliance of the atonal violin-screaching score during the shower scene is derived from the way that sound and image are attached to each other (see Fig. 44). As such, and provided the listener has seen the film, if this score was played as a soundtrack alone, we can say it would be difficult not to picture in the mind the scripted scene.

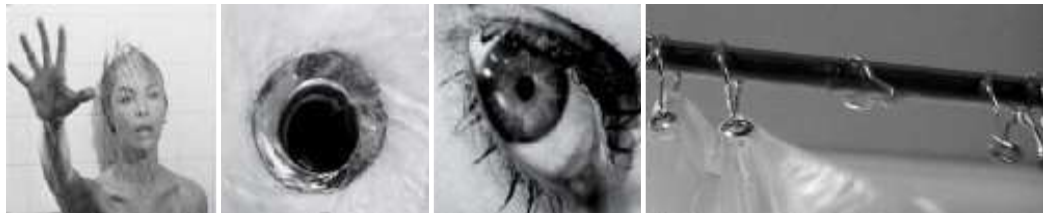


Fig. 44. Symbiosis of Sound and Image (I)

Music: *The Murder* (Bernard Herrmann)

Film: *Psycho* (Alfred Hitchcock, 1960)

In *Jaws*, where element A is the motivic ostinato bass notes, and element B is the idea that a beast is currently ploughing through the waters towards its prey, it is epistemically difficult to separate A from B as both have alchemized into AB (see Fig. 45).





Fig. 45. Symbiosis of Sound and Image (II)

Music: *Theme from Jaws* (John Williams)

Film: *Jaws* (Steven Spielberg, 1975)

Aesthetically, AB are glued together as a single audiovisual masterpiece that is ‘cinema music’. Compare such symbiosis to, for example, Rachmaninoff’s *Piano Concerto No. 3 in D minor* which contrarily represents a stand-alone piece of work that is ‘music’ (see Fig. 46).



Fig. 46. A Stand-alone ‘Music’ Sample
(For contrast only)

Music: *Piano Concerto No. 3 in D minor*
(Sergei Rachmaninoff)

Transcription: Public Domain

As we saw above, Chion argues that image and sound corroborate much in the same manner, in so far as “the image is projected and sound is a *projector*” (1994: 144). Indeed, cinema music interplays with images to fulfil various functions demanded by the narrative as a whole. This music-image symbiosis may be usefully compared to Edgard Varèse’s comparison of musical forms to crystals when he writes that “possible musical forms are as limitless as the exterior forms of crystal” (1966: 18).

By this, he means that an idea exists where the core of a structure – like that of a crystal – is constantly expanded or split into various shapes and forces so as to establish an altogether new structure. Analogously, the narrative represents the core of the film, its basic ‘idea’, which is constantly encircled and educed by the combined force of image and sound as one. Just as ‘crystalline form’ is the

consequence of the interaction of attractive repulsive forces, the fabula is the net result of continuous fusion of music with image.

4.1. The Parsimony of Cinema Music

Parsimony abounds in cinema music. In place of the recognizable beginning, middle, and end sections that usually constitute ‘music’, cinema music restricts itself to a sequence of musical figures. Since these figures are strictly shaped by the story, they can come in any length, depending on the requirements of the narrative at hand. Indeed, given that a single tonal shift suffices to create cinema music, these figures can be as short as two tones.

Noted for its powerful economy, the first two notes of *Jaws*’ instantly-recognizable musical theme already creates ‘cinema music’.³⁷ In the diatonic scale, the added second note (F) to the first note (E) already create ‘cinema music’ even without the rest of the ostinato being played (see Fig. 47).



Fig. 47. Cinema Music Sample No. 30. Parsimony

Another example of parsimonious cinema music is Bruce Wayne’s tonal signature in Christopher Nolan’s 2008 film *The Dark Knight*. This motif plays during the scene where the young Bruce Wayne is shown falling into the well. The music we hear here is a recurring bi-tonal figure that is built around the notes D and F in the lower string (see Fig. 48).



³⁷ Steven Spielberg recalls how the simplicity of the ostinato in *Jaws* can create great audio-visual impact, noting how “when he [John Williams] finally played the music [...] I expected to hear something like weird and melodic you know a little like tonal but eerie and almost like outer space [...] but inside the waters. But what he played with his two fingers on the lower keys was dun-dun-dun-dun [...]. At first, I began to laugh. I thought he had a great sense of humor [...]. When I first heard it, it seemed wrong because it was too simple – so simple. Often the best ideas are the simplest ones (Spielberg, *10th Anniversary Edition DVD: Jaws*, 1985).



Fig. 48. Cinema Music Sample No. 31: Parsimony
 Music: *Young Bruce Falls* (Hans Zimmer)
 Transcription: Mark Richards
 Film: *The Dark Knight* (Christopher Nolan, 2008)

Interestingly, later in the film Hans Zimmer uses the same bi-tonal figure as a counter-motif for the Joker, Batman's nemesis and the film's anti-hero. For eerie effects, we now hear a harsh glissando that executes the tonal drift between the same pair of notes (D and F) that is played during the Joker's confrontation with one of his victims. This twisted and eerie *ostinato* version of the 'Bruce Wayne theme' music accentuates the Joker's menacing traits and the tension he instills in his victims (see Fig. 49).



Why so serious? Let's put a smile on that face?

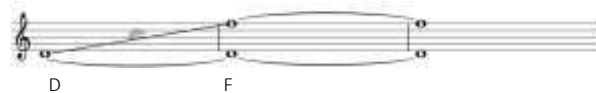


Fig. 49. Cinema Music Sample No. 32: Parsimony
 Music: *Why So Serious* (Hans Zimmer)
 Film: *The Dark Knight* (Christopher Nolan, 2008)

Our last example of parsimonious cinema music is the music from Atom Egoyan's *Remember* (2015). The film centres on an elderly man named Zev Guttman who embarks on a mission to hunt down a Nazi he believes to be responsible for the death of his family. Throughout the film, tritones of B and F accompany scenes that capture the surrealistic essence of the plot, one of which is shown in the frame below. This shot – equally the final shot of the film – shows a letter which documents the true identity of Zev (see Fig. 50).

The tritone achieves its dissonance in just two tones. Historically, its frugal but brutally dark sound has been “considered so unpleasant that it was given the names ‘the devil in music’ and the ‘wolf tone’” (Goodall 2013: 35). The diabolical sound of the tritone creates a distance of six half-steps between two tones which creates discomfort to the Western ear by the combination of just two notes.



Fig. 50. Cinema Music Sample No. 33: Tritone

Composer: Justin Matheson

Film: *Remember* (Atom Egoyan 2015)

4.2. Confluence: How We Can Still Classify Parsimoniously

At this point, we need to investigate a peculiarity of cinema music that presents a (literal) complication to our argument, and which we call *confluence*. In brief, confluence occurs when cinema music is multi-tasking, that is, when the music serves two or more functions in a given scene or sequence.

Confluence in music (or ‘confluent music’) usually produces a lavish audio-visual experience due to the fact that we are encouraged to become completely engrossed in the film by virtue of the fact that our faculties of seeing, hearing feeling, and thinking are all engaged at the same time. Which of course leads us to ask ourselves: how might we categorize music that simultaneously denotes and underscores? Likewise, how might we categorize music that denotes while annotating? And more than this, how can we even begin to categorize music that denotes, underscores, and annotates *all at the same time*?

Needless to say, music that fulfills multiple functions presents an immediate challenge to our rule of parsimony. In response, we offer simple solutions based once again on our rule of parsimony, in that we maintain only what is necessary and sufficient. This process eliminates overdetermination by allocating more categorical weight to epistemic elements than to both referential and

complementary elements. Thus, we establish a simple ordered sequence, such that epistemic > referential > complementary (where the sign > means ‘is greater than’). Our suggested categorical solutions to issues relating to musical confluence are further illustrated in Fig. 51 below.

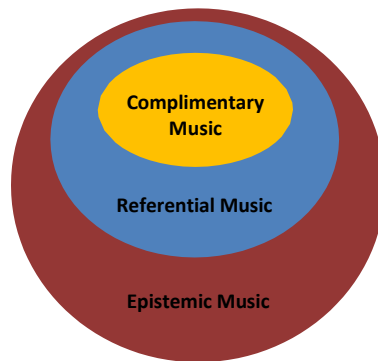


Fig. 51 Categorical Solutions for Confluent Music

In this figure, the relative sizes of the *spheres* (analogous to our primary musical distinctions) correlate to the *extent* of their narrative significance. As the diagram shows, referential music subsumes complementary music, while epistemic music subsumes referential music. Accordingly (by the property of transitivity), epistemic music also subsumes complementary music. Or as we noted above: epistemic > referential > complementary. Let us discuss this a bit further.

4.2.1. Referential Precedence Over Complementary

We contend that referential music holds more narrative significance than complementary music. As we have already argued, referential music grounds the audio-visual experience by establishing the receiver’s belief in the ‘reality’ of the film.

Complementary music, on the other hand, does not necessarily signpost any narrative point as its focus lies primarily on the enhancement of whatever is already presented on the silver screen. As we have seen, such music chiefly functions to elevate the film’s dramatic effects. Overall, complementary music is not entirely dissimilar to so-called ‘furniture music’, that purposely unobtrusive music that has been moulded to fit a particular environment and create a soothing ambience.³⁸

³⁸ Coined by Erik Satie, the term ‘furniture music’ refers to music that creates a relaxing ambience of

Likewise, complementary music goes to great lengths to ‘fit’ and even enhance the already-established cinematic atmosphere. Andy Birtwistle describes complementary music as a “primitive form of audiovisual expression” (2010: 195). Irwin Bazelon similarly notes the vulgar quality of parallel scoring thus:

‘Mickeymousing’ [...] often vulgarized the scenes [...]. This redundancy – the viewer already sees the action unfolding before him – acts as a distraction, amplifying its own musical shortcomings. By constantly calling attention to itself, the Mickeymoused score becomes offensive and tiresome (1975: 24).

The emotionally rousing effects of drama are usually already given in film narrative (especially with musicals). Therefore, it makes sense for the receiver to pay more attention to what the other music (i.e. referential music or epistemic music) may be saying about the story.

It is for all of these reasons that referential music can be said to hold more narrative significance (or ‘categorical weight’) than complementary music. This allows us to categorize, for example, the music during the wedding reception scene in Cimino’s *The Deer Hunter* as ‘referential’. One of the film’s key set-pieces, this scene depicts Steven’s marriage to Angela in an elaborate Russian Orthodox ceremony and reception which is rolled into a send-off party for Mike, Nicky, and Steven before they are deployed to Vietnam (see Fig. 52).

Ultimately, we give more categorical value to music that makes reference to significant narrative elements specific to the story world, as in the case of the above sequence from *The Deer Hunter*. That is to say, the extent of specificity this song presents is too significant to the story for us to classify the music as simply ‘complementary’. Of course, this song may be exciting and rousing, but the same can arguably be said of all such ‘celebratory’ musical pieces (in that the purpose of festive music is precisely to exhilarate spectators or participants). As we will see however, this particular song, ‘Katyusha’, contains content that is highly specific to the film as a whole, and hence transcends mere complementarity.

‘Katyusha’ makes exclusive reference to the Russian wartime folksong sung when sending someone off to battle (mirroring the narrative events). In fact, not only did the song gain fame as a patriotic song during the second world war, but

atmosphere (Vanel 2013: 21-22; see also Potter 2016: 164).

the term *Katyusha* also served as the name for the rocket launchers the Red Army used (Prenatt 2016). At the same time, the music also depicts authentic wedding rituals specific to 1970s Russian-American culture.



*Rastsvetali iabloni i grushi, poplyli tumany nad rekoj,
Vykhodila na bereg Katyusha, na vysokij bereg na krutoj!*



Fig. 52. Cinema Music Sample No. 34: Referential
Music: *Katyusha* (Matvei Blanter and Mikhaillsakovsky)
Film: *The Deer Hunter* (Michael Cimino, 1978)

We also observe that the *mise-en-scène* of this sequence involves a view of their oversized portraits hanging on the walls. If that backdrop was meant to forge some kind of connection to the later ‘Russian Roulette’ scene (a pivotal event in the lives of the main characters, as well as the film itself), then we can say that even the image is referential in nature. It is for all the above reasons that we categorize music like ‘Katyusha’ – namely, that denotes and underscores at the same time – as *referential*.

Our next example of music with highly specific content concerns the song ‘Tradition’ from the opening scene in Norman Jewison’s *The Fiddler on the Roof* (1971) (see Fig. 53).



Who day and night – must scramble for a living – feed the wife and children – say his daily prayers. And who has the right as master of the house to have the final word at home? The papa, the papa... tradition-- [...] tradition!



Fig. 53. Cinema Music Sample No. 35: Referential
 Music: *Tradition* (Jerry Bock and Sheldon Harnick)
 Transcription: MusicNotes.com
 Film: *The Fiddler on the Roof* (Norman Jewison, 1971)

The film is set in a Russian *shtetl* occupied by orthodox Jews established in the Imperial Russia. The *shtetl* developed as smaller towns invited Jews to settle and offered them protection. Jews often established their own small towns to serve the nobility with their skills. In exchange, they were able to follow a protected communal life ruled by Jewish law, and maintain insular customs and rituals (Karesh and Hurvitz 2005: 476).

The music provides key referential elements to establish the film’s ‘reality’, including: *period* (1905 Russia during the reign of Tsar Nicholas II); *location* (the

little *shtetl* of *Anatevka*); and *culture* (the way of life of the townspeople that is steeped in traditional practices and beliefs). The opening scene shows Tevye, the *shtetl*'s milkman, delivering the film's musical prologue.

The more specific the referential elements contained in the music are (or the higher its narrative content), the more prominence this music will have in the film's diegesis, for the simple reason that its referential elements are so specific to the story world that they serve as a useful means to quickly flesh out the fabula. It is for these reasons that we categorize the song 'Tradition' – despite its undeniably rousing quality – as 'referential', and that we categorize music that underscores and highly denotes at the same time as 'referential'.

4.2.2. Epistemic Precedence Over Both Referential and Complementary

Why do we give the highest categorical value to epistemic music? We argue that while a film narrative will ordinarily (except under specific circumstances) struggle to survive without both referential and complementary music, *it can easily make do without epistemic music*.

In fact, it is common for films to hold off revealing key elements of the plot until towards the end of the story, not just for 'shock value' but also for reasons of style. We can find such examples in *The Others* (Alejandro Amenabar, 2001), or Egoyan's *Remember* where the key plot elements are not revealed until the final segment of the narrative. In other words, referential and complementary music are today so integral to the filmmaking process as to appear inseparable, whereas the use of epistemic music in narrative film is, to the contrary, something of a rarity.

Indeed, the use of music to annotate narrative subtexts is a sophisticated strategy that remains infrequently employed in cinema for the simple reason that important story trajectories are almost invariably given high visual significance (and hence, do not require any further 'musical' instruction).

Cinema music, especially epistemic music (with its trajectory nature), grabs our attention in a very particular way. When cinema music suddenly appears – or alternatively, drops out without warning – it is clear that the meaning contained in the music must be worthy of attention. For example, this allows us to classify the violin solo (*Cadenza*) from *The Fiddler on the Roof* as 'epistemic' (see Fig. 54).



Fig. 54. Cinema Music Sample No. 36: Epistemic

Music: *Cadenza* (John Williams)

Transcription: Public Domain

Film: *The Fiddler on the Roof* (Norman Jewison, 1971)

Since musicals innately delight and excite, a thoughtful receiver would tend to focus (either consciously or unconsciously) more on the subtexts the music may be articulating. In *Fiddler*'s violin piece, an analogous subtext is presented in the form of inferable implicit data or annotation as follows: *the Tsar's edict is to evict the villagers but the people of Anatevka remain grounded like a fiddler on the roof who never loses his balance while playing*. Despite this music's referential quality (in that it belongs in the story) and complementary function (in that it underscores the analogy between the townspeople of Anatevka and the fiddler) – and despite its emotionally stirring musical structure – we thus contend that this music exhibits a primarily annotative function.

We now come to our last example of cinema music, which is the march song in David Ayer's *Fury* (2004) entitled 'Marchiert in Fiendesland'. This example shows how the ordered sequence of epistemic > referential > complementary guides our categorization process in as much as the music here denotes, underscores, and annotates all at the same time (see Figs. 55-56).



SS marschiert in Feindesland, und singt ein Teufelslied. Ein Schütze steht am Wolgastrand, und leise summt er mit, wir pfeifen auf Unten und oben, und uns kann die ganze Welt, Verfluchen oder auch loben, grad wie es ihnen gefällt, wo wir sind da geht's immer vorwärts, und der Teufel der lacht nur dazu, ha, ha, ha, ha, ha, wir kämpfen für Deutschland, wir kämpfen für Hitler!



MARCHIERT EN FIENDESLAND (The March Song)



Fig. 55. Cinema Music Sample No. 37: Epistemic
 Music: *Marchiert in Feindesland* (Traditional)
 Film: *Fury* (David Ayer, 2014)

CROSSROADS (The Score)



Fig. 56. Cinema Music Sample No. 38: Complementary
 Title: *Crossroads* (Stephen Price)
 Film: *Fury* (David Ayer, 2014)

We say that this march song *denotes* because it belongs in the story world (and also it references the Nazi army), *underscores* because it highlights the tension of the scene (which is even enhanced by an accompanying score entitled ‘Crossroads’), and *annotates* because, as we will see momentarily, it announces an extremely significant narrative trajectory.

The film is set in the final days of World War II and focuses on Sergeant Don Collier, who commands a US Sherman tank and its five-crew platoon. During the film, Collier is ordered to hold a crossroads to prevent the enemy from attacking a vital US supply base. While approaching the crossroads, Collier's tank is hit by a landmine. Collier orders Private Norman to head up to the hilltop and watch out for any incoming enemy troops. As the private settles in, the sound of distant singing alerts him. He then peers into the distance and spots enemy troops. What we hear is a diegetic march song, the content of which is deeply self-referential (in that it announces who they are and why they are there).³⁹ On this account – and in addition to the fact that the music emanates from the 'onscreen' world – the music might be categorized as referential. Why do we then classify it as 'epistemic'?

The music reinforces a strong narrative trajectory while embracing an 'authorial commentary', thereby establishing a new and pivotal *subtext*. This new subtext articulates a message that shapes the rest of the story. Inferred from the music (first by Norman and then later by Collier), this message states: *despite their imminent loss to the Allied forces, the enemy troops are still gearing up to engage in combat*. Given that Germany is on the brink of defeat, the narrative trajectory created by the music delivers the most significant factor to the story.

It is for this reason that the epistemic function of the march song overshadows the importance of the song's referential function. It is for the same reason that we classify the musical distinction of the march song as 'epistemic'.

To further support our claim that the march song is epistemic, let us briefly visit the next scene, where Norman races back down the hill to report what he has witnessed. He suspects combat is about to take place even though he failed to see the tanks further in the distance which could have confirmed his suspicion. To confirm the report, Collier observes and listens to the march song.

As the music gains volume and clarity, he infers that it is the Waffen-SS troops heading their way to engage in battle. Ultimately, it is the epistemic sound of the march song that provides Collier and his crew with information that shapes the rest of the film's story (see Fig. 57).

³⁹ The German verse (see Fig. 56) translates to: *SS marches in enemies' land and sings a devil's song, a rifleman stands in Volga's shore, and silently hums along, we care about nothing around us, and can tell us the entire world, curse or praise us, just as everyone pleases, where we go it is always forwards, and the devil merely laughs, ha ha ha ha ha, we fight for Germany, we fight for Hitler!*



It's a goddam SS battalion !

Fig. 57. The Inference

4.6. Epilogue

Our manner of ‘seeing’ music in film follows Heinsheimer’s imploration (quoted in our epigraph) to understand cinema music (or what he calls ‘picture music’) as fundamentally different from ‘ordinary’ music: to look at it with different eyes, listen to it with different ears, and judge it with a different frame of mind.

Accordingly, we posited that it was possible to classify cinema music by austere means. In our commitment to both economy and clarity, we refurbished the original binary (which we showed to be both insufficient and ineffective) by simply identifying a pre-existing but nebulous concept we designated ‘epistemic music’. To this end, we theorized the ‘ternary distinction’ as presenting the simplest analytical framework through which we might not only categorize cinema music, but moreover rid ourselves of the myriad unwieldy and ambiguous categories that have sprung up around the original binary (what we called ‘the deluge’), and thereby finally ‘close’ this ‘knowledge gap’. This framework is presented in its ‘complete’ form or a snapshot for heuristic aid in Fig. 58 below.

Moreover, this framework allowed us to proclaim not only the pre-existence of epistemic music (both as a form and as a concept) but also this music’s functional relation to narrative film as a whole. As Chion suggests, while it may be that “sound’s ‘quantitative’ evolution [...] has not shaken image from its pedestal, sound still has the role of showing us what it wants us to see in the image” (1994: 144). Epistemic music however takes us one step further, transcending this fundamental role by not simply directing us to what it wants us to *see*, but moreover, pointing us to what we need to *know* in the image.

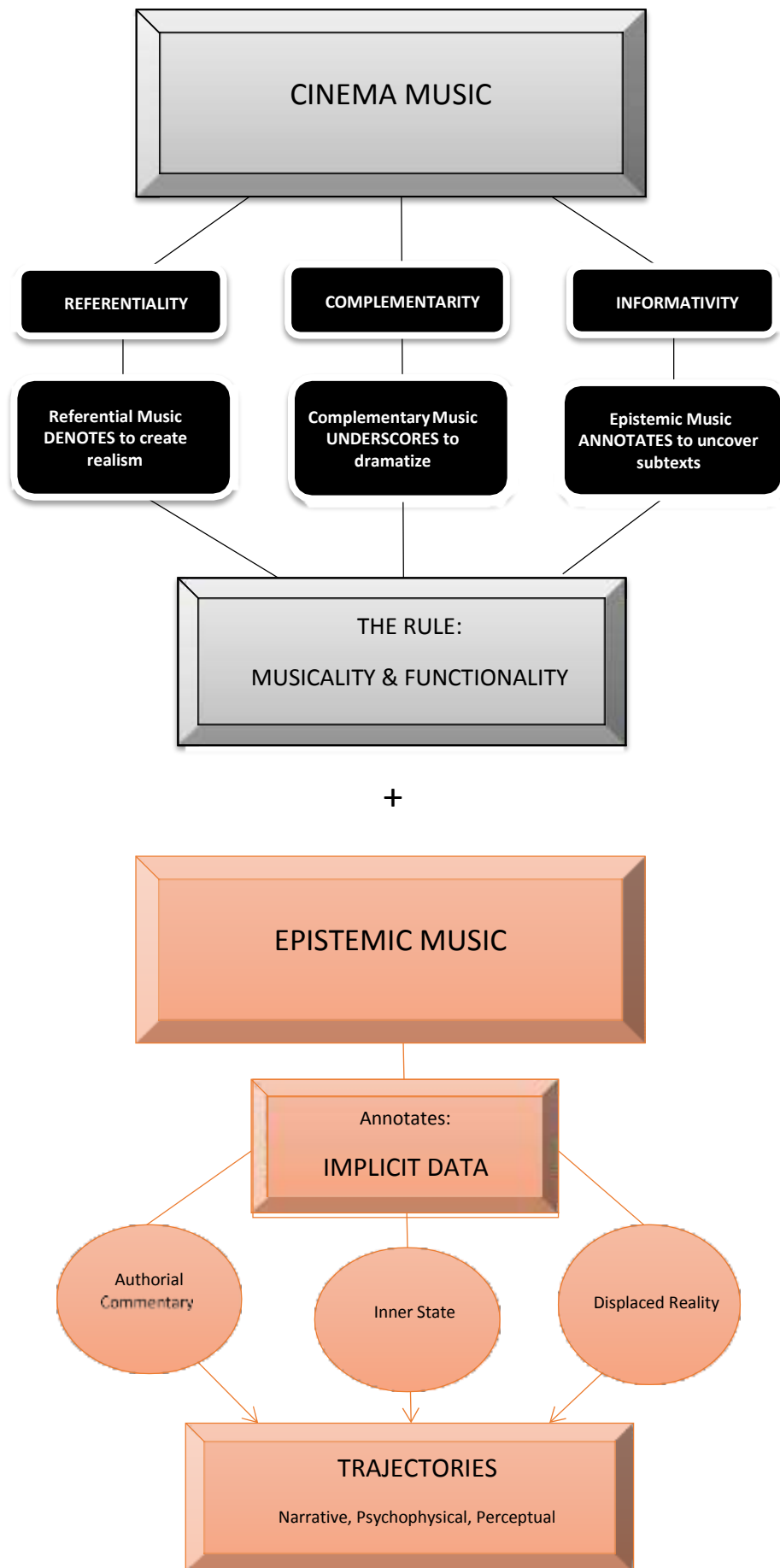


Fig. 58. THE TERNARY DISTINCTION OF SOUND CINEMA

Commenting on the relative ‘correctness’ of successive (or supplanting) theoretical models, Neil Gershenfeld makes the important observation that simply because the great names behind the laws of physics “differed in their assumptions, accuracy, and applicability”, this does not mean that they differed “in their truth”: “Kepler did not become wrong because of Newton’s being right, just as Newton didn’t then become wrong because of Einstein’s being right” (2012: 72). Like any theoretical model, the ternary distinction presents us with a *possibility*; an insight into what might *plausibly* function, or to what might *possibly* be the case – not to objective truth.

Notwithstanding the limits of precision, our position is ultimately pragmatic, in so far as it obviates the need to overdetermine musical sounds in the narrative. Only in the abandonment of the pursuit of such *absolute* precision might we find the means to reassess the present system of classifying cinema music with economy and clarity in mind.

APPENDIX I

The Deluge

NOTE: The final column of this index shows our plausible reclassification of the entries using the ternary distinction. We mark entries that are *unclassifiable as cinema music* with the letter 'X'.

CATEGORY	DESCRIPTION	SOURCE	EXAMPLE	RECLASSIFICATION under the ternary schema
ACOUSMATIC	same as offscreen; source not shown on screen	Chion 1994: 71	any sound from story world	referential
ACOUSMÊTRE	off screen sound from a phantom image	Chion 1994: 129	The band <i>Queen</i> in the jukebox during the bar fight scene (<i>Shaun of the Dead</i> , Edgar Wright, 2004)	X
ACTIVE OFFSCREEN	same as offscreen with audience's cognitive desire	Chion 1994: 85	singing busts in <i>The Haunted Mansion</i> (Rob Minkoff, 2003)	complementary
AMBIDIEGETIC	dual diegetic and nondiegetic purpose	Gorbman 2007: 152; Holbrook 2015: 38-53; Stillwell 2007: 194	vocal piece by character turned orchestral	complementary
AMBIENT	territorial sound	Chion 1994: 75	radio, siren, church bells, jukebox, etc.	referential
ANALEPSIS PROLEPSIS	not supplied	Phelan 2016: 240-254	not supplied	epistemic
ANEMPATHETIC	similar to incongruence indifferent to the emotional climate of drama	common reference term	radio music during brutal scene in <i>Reservoir Dogs</i> (Quentin Tarantino, 1992)	epistemic
ASYNCHRONOUS	same as nondiegetic	Percheron 1980: 16-23	score, voiceover, soundtrack	epistemic
AUDIO DISSOLVE	from diegetic to nondiegetic	Altman 1987: 63	from conversation to orchestral music	complementary
AUGMENTATION	visible object is replaced by sound from another source	Harper 2009: 175-176	clacking sound of tin spoons to indicate hallucination, stress, etc.	X
AUTODIEGETIC	same as autodiegetic except the character tells his story	Fludernik 1993: 436	first person "I felt something odd when I"	referential
CINEMATICALY CODED	same as nondiegetic	Neumeyer 2015: 46	scores, voiceovers, soundtrack	complementary
COUNTERPOINT	music and film interact to create unitary entity	Stam et. al. 1992: 63	radio music during brutal scene in <i>Reservoir Dogs</i> (Quentin Tarantino, 1992)	epistemic
CONTRAPUNTAL	same as counterpoint	Chion 1994: 430	see above	epistemic
CULTURALLY CODED	same as diegetic; also referred to as 'pure'	Neumeyer 2015: 286	from story world	referential
DIDACTIC COUNTERPOINT	creates distance for dispassionate understanding of an idea	Chion 2009: 431; Stam et. al. 1992: 63	any asynchronic music to image or event	epistemic
DISPLACED DIEGETIC	takes place in the past or future	Bordwell & Thompson 1979:246-249	flashbacks, dreams	epistemic
DRAMATIC SCORING	mickey-mousing	Kassabian 2001: 46-50	horse runs ergo music runs	complementary

DIEGETIC	appears from screen, story world, or diegetic space	Genette 1980: 229; Gorbman 1987: 22-23	siren, jukebox, radio, singing character	referential
DYNAMIC MUSIC	provides continuity; psychologically advances action	Gallez 1970: 47	transitional music	epistemic
EMPATHETIC	conveys dominant emotion of character; mood matches mood of action	Chion 2009: 431; Stam et. al. 1992: 63	sombre music in funeral scene	complementary
EXTERIOR METALEPSIS	occurs between extradiegetic and diegetic level	Richardson 2001:35	narrator's speech	complementary
EXTERNAL ANALEPSIS	flashback to a time before the narrative started	D.W. Griffith used in his films 1908-1931	inner thoughts from past	complementary
EXTERNAL DISPLACED DIEGETIC	taking place in past or future	Bordwell & Thompson 1979: 246-249	flashforward images or thoughts	complementary
EXTERNAL LEVEL	same as nondiegetic	Miceli 2011: 1-29	presence of author commenting	complementary
EXTERNAL SIMPLE	taking place in the present	Bordwell & Thompson 1979: 246-249	spoken aloud by character	X
EXTRADIEGETIC	same as metadiegetic except it is narrative in the first degree not involved in the story world	Genette 1980: 84; Gorbman 1987: 22-23	third person perspective: <i>There once lived a king...</i>	X
EXTRADIEGETIC-HETERODIEGETIC	same as extra-heterodiegetic; comments evaluatively	Herman 2009: 67	combined mental time travel, memory and imagination	X
EXTRADIEGETIC-HOMODIEGETIC	same as extra-homodiegetic; character narrates own life experience	Herman 2009: 67	time travel, memory imagination	X
EXTRA-FICTIONAL	hints at what we are about to see; forms a musical frame around the fiction and narrative.	Larsen 2005: 211	opening and closing music during showing of film credits	X
EXTRA-HETERODIEGETIC	same as extradiegetic-heterodiegetic	Rimon-Kenan 1989: 93-97	omniscient narrators e.g. narrator in <i>Homer</i>	X
EXTRA-HOMODIEGETIC	same as extradiegetic-homodiegetic; retrospective narrative in the first person	Rimon-Kenan 1989 :93-97	retrospective narrative in the first person	X
EXTRA-METALEPSIS	same as exterior metalepsis	Genette 1980: 234-235	not supplied	X
FORESHADOWING	same as dramatic scoring; music that prepares the audience	common reference term	motivic ostinato in <i>Jaws</i> (Steven Spielberg, 1975)	X
HETERODIEGETIC	same as metadiegetic, extradiegetic or intradiegetic	Genette 1980: 84	reflections, inner thoughts	X
HOMODIEGETIC	same as intradiegetic from a third person 's view	Genette 1980: 84	third person perspective: <i>There once lived a king. His name was ...</i>	X
HYPNOPOMPIC	oneiric transition from sleep to reality	Sonnenschein 2011	not supplied	X
HYPODIEGETIC	embedded narrative, narrator tells yet another story	Herman 2009: 66; Rimon-Kenan 1989: 93-97	combined mental time travel, memory and imagination	X

HYPODIEGETIC AUTODIEGETIC	embedded narrative, character tells yet another story.	Herman 2009: 67	combined mental time travel; memory; imagination	X
HYPONARRATIVE	same as metanarrative, hypodiegetic	Bal 2004: 284	story within a story	X
INCONGRUENCE	same as asynchronous/ counterpoint; can be diegetic if music is from inside	common reference term	horse runs but music goes slow	epistemic
INTERIOR METALEPSIS	from embedding to embedded level	Richardson 2001: 35	occurs between two levels of the same story	X
INTERNAL ANALEPSIS	flashback to an earlier point in the narrative	D.W. Griffith used in his films 1908-1931	flashbacks, memories	X
INTERNAL DIEGETIC	same as metadiegetic; subcategorized further by Bordwell &Thompson (see below)	Stam et. al. 2005: 62	reflections, inner thoughts	epistemic
INTERNAL DISPLACED DIEGETIC	taking place in past or future depends on source of sound	Bordwell & Thompson 1979: 246-249; Weis and Bolton 1985: 197	imagined thoughts by character	X
INTERNAL LEVEL	same as diegetic	Miceli & Moriccone 2013: 78	radio, siren, church bells, jukebox, etc.	referential
INTERNAL SIMPLE	taking place in the present depends on source of sound	Bordwell & Thompson 1979: 246-249	imagined thoughts by character	X
INTRADIEGETIC	same as metadiegetic except relates to character in the story	Genette 1980: 229	reflections, inner thoughts	X
INTRADIEGETICAUT ODIEGETIC	character tells the story of how same character narrated previous version of the same story	Herman 2009: 67	combined mental time travel; memory; imagination	X
INTRADIEGETIC- HETERODIEGETIC	same as intra- heterodiegetic; character but narrator tells events he did not take part	Herman 2009: 67	combined mental time travel; memory; imagination	X
INTRADIEGETIC- HOMODIEGETIC	same as intra- homodiegetic; character narrator tells his own experience in another event	Herman 2009: 67	combined mental time travel; reproduced memory; imagination	X
INTRA- HETERODIEGETIC	same as intradiegetic- heterodiegetic	Rimon-Kenan 1989: 93-97	not supplied	X
INTRA-METALEPSIS	same as interior metalepsis	Pier 2014: 333	not supplied	X
INTRODUCTORY AND DESCRIPTIVE MUSIC	same as extra-fictional, adjusts audience to what is to come	Gallez 1970: 47	opening and closing music during showing of film credits	complementary
INWARD METALEPSIS	same as interior metalepsis and intrametalepsis	Malina 2002: 46-50	not supplied	X
MARKED	same as nondiegetic (re communication mode)	Percheron 1980: 16- 23	scores, voiceover, soundtrack	complementary
MEDIATED LEVEL	the character expresses itself through music	Miceli & Morricone 2013: 102	connotative tonal forms	epistemic
METADIEGETIC	perception from the character's mind, second degree narrative; imagined sound	Gorbman 1987: 22	reflections, inner thoughts	X
METADIEGETIC ANALEPSIS	highly chronological	Genette 1988: 30	not supplied	X
METADIEGETIC PROLEPSIS	explanatory function	D.W. Griffith used in his films 1908-1931	flashbacks, memories	X
METALEPSIS	any intrusion by extradiegetic narrator or by diegetic characters into a metadiegetic universe	Genette 1980: 234- 235	story movement through embedded narratives	X

METANARRATIVE	same as hyponarrative, hypodiegetic and metadiegetic	Bal 2004:295	story within a story	X
MOOD BACKGROUND MUSIC	same as mood music; intensifies current climate of drama	Gallez 1970: 47	score, voiceover, soundtrack	complementary
MUSICALIZED RENDERING	accompanying music to enhanced sound	Heldt 2013: 1967	whirr and clang of swords to symbolize speed and agility	complementary
NONDIEGETIC	Chion's nondiegetic; is visualized as external to the story world but whose source is not visible (Chion 1994: 73)	Genette 1980: 56; Gorbman 1987: 22-23	score, voiceover, soundtrack	complementary
OBJECTIVE INTERNAL	physiological sounds	Chion 1994: 76	breathing, moan, heartbeat, sigh, scream, etc.	X
NULL EXTENSION	when the world has shrunk sounds heard by single character	Chion 1994: 87	possibly including inner voices	X
OFF SCREEN MUSIC	same as nondiegetic	Neumeyer 2015: 46	score, voiceover	complementary
OFFSCREEN SOUND	sound relative to the story world but whose source is not visible	Chion 1994: 73	any sound from story world	referential
OFFSCREEN TRASH	subcategory of passive offscreen of collected noise outside the visual field	Chion 1994: 84	thuds, explosions, crashes	X
ONOMATOPOEIC MUSIC	physiological sounds	Gallez 1970: 40-47	heartbeats, throbs, pulse, etc.	X
ONEIRIC HYPNAGOGIC	sound of the state of falling asleep or drifting away from reality	B. Carroll 2016: 69; Milicevik 2013: 3216-3220	in-between states	X
ONEIRIC HYPNAPOMPIC	sound of the state of waking up or coming back to reality	not supplied	in-between states	X
ONSCREEN SOUND	sound relative to the story world but whose source is visible	Chion 1994: 73	any sound from story world	referential
ON-THE-AIR	electronically transmitted, not from natural sounds	Chion 1994: 76	radio, siren, church bells, phone, etc.	X
OUTWARD METALEPSIS	same as exterior metalepsis and extrametalepsis	Malina 2002: 46-50	not supplied	X
PASSIVE OFFSCREEN	opposite of active offscreen in the sense of non-curious viewing	Chion 1994: 85	city sound	X
PRIMARY DIEGETIC	same as extra homodiegetic, metadiegetic	Genette 1980: 248	character's inner story within the story	X
PRIMARY NONDIEGETIC	same as extra heterodiegetic, intradiegetic, metadiegetic	Genette 1980: 248	character's inner story outside the diegesis	X
PSEUDO-DIEGETIC	second-hand narrative brought to first level	Genette 1980: 240	memories, inward narrative	X
PSYCHODIEGETIC	same as metadiegetic	Citron 2010: 189	planted in consciousness of character then expressed	X
PURE	same as culturally coded	Neumeyer 2015: 286	not supplied	referential
REALISTIC DIEGETIC	audio dissolve due to transfer of music	Altman 1987: 74	music changes from nondiegetic to current truth of the story	complementary

REALISTIC MUSIC	same as diegetic; same as source music except music is visually done on screen, opposite of underscoring	Cohen & Rosenhaus: 2006: 67	wedding orchestra or singer in <i>The Godfather</i> (Francis Ford Coppola, 1972)	referential
REALISTIC SOURCE MUSIC	provides musical realism	Gallez 1970: 47	integrated production numbers in the film story or justified incidental music	complementary
REDUNDANT	same as accompaniment; imitates emotional climate	Chion 2009: 430	horse runs ergo music runs	complementary
REVERBERATION	shift perspective of the character, expresses mental state of character	Harper 2009: 174	any subjective shift of reality through visual or auditory means	X
SCREEN MUSIC	opposite of pit music same as diegetic	Chion 1994: 80	any sound inside time and place of action	referential
SECONDARY DIEGETIC	same as intra-homodiegetic	Genette 1980: 248	Story within a story by inside narrator	X
SECONDARY NONDIEGETIC	same as intra-heterodiegetic	Genette 1980: 248	story within a story by outside narrator	X
SIMPLE DIEGETIC	opposite of displaced diegetic sound, time occurs in the story space	Bordwell & Thompson 1979: 204	any sound taking place in the present	X
SLOW MOTION	perspective shift of narrative elements indicating stress, etc.	Harper 2009: 175	any subjective transformation of reality through visual or auditory means	epistemic
SOUND OFF	same as nondiegetic	Percheron 1980: 16-23	score, voiceover, soundtrack	complementary
SOUND ON	same as diegetic	Percheron 1980: 16-23	any sound from story world	referential
SOURCE MUSIC	another term for 'diegetic'	Hagen 1989: 190; Kassabian 2002: 46-50	radio, siren, church bells, jukebox, etc.	referential
SOURCE SCORING	cross between diegetic and nondiegetic	Hagen 1989: 190; Kassabian 2001: 46-50	sound heard outside place of event such as neighbour playing musical instrument	complementary
SUBJECTIVE	same as diegetic	Chion 1994: 80	from story world	referential
SUBJECTIVE INTERNAL	mental interior of character	Chion 1994: 76	mental voices, memories	X
SUBJECTIVE TRANSFORMATION	physiological sounds indicate stress or ill condition of character	Harper 2009: 176	breathing, heartbeat	X
SUPRA REALITY	amplifies hidden meanings as opposed to surface-level ones	Burt 1994: 7	slow motion to indicate stress, danger, etc.	epistemic
SUPRADIEGETIC	audio dissolve from diegetic to nondiegetic as music takes over upon diegesis suspension	Altman 1987: 67-85	source switch; popular device in musicals	complementary
SUSPENSORY MUSIC	suspends action	Gallez 1970: 40-47	diminished sevenths	epistemic
SYNCHRONOUS	in synch with visuals	Percheron 1980: 16-23	sound from story parallel to image	complementary
TERMINAL MUSIC	terminates film	Gallez 1970: 40-47	ending music	complementary
TERRITORY	characterizes sound whether geographical, cultural, social, ethnic, temporal	Harper 2009: 169	barking of dog plus cicadas indicate southern night	X
TERTIARY DIEGETIC	same as meta-homodiegetic	Genette 1980: 248	story embedded within an embedded story by inside narrator	X
TERTIARY NONDIEGETIC	same as meta-heterodiegetic	Genette 1980: 248	story embedded within by outside narrator	X

THEMATIC TRANSFORMATION	change in tempo, colour, etc. to depict altered state, character, event, etc.	Green 2010: 88	altered motifs	epistemic
UNDERSCORING	same as complementary, articulating a mood, unrealistic device to amplify spectator's affective state	Cohen & Rosenhaus 2006: 67	motivic ostinato in <i>Jaws</i> (S. Spielberg, 1975)	X
UNMARKED	another term for 'diegetic'	Percheron 1980: 16-23	any sound from story world	X
UNREALISTIC MUSIC	same as diegetic but whose source is not visible	Neumeyer 2015: 46	any sound from the story world	referential
VISUALIZED SOUND	opposite of acousmatic sound	Chion 1994: 72	source of music is shown	X
VAST EXTENSION	a subcategory of ambient where sounds outside the room are also heard	Chion 1994: 87	sounds in the hallway, traffic, siren farther away, etc.	X

APPENDIX II

Functions of Cinema Music

<p>NOTE: Refer to §4.4 regarding our argument concerning classifying music that fulfils more than one function at the same time. In summary, referential music precedes complementarity in categorical value; epistemic precedes both referential and complementary music in categorical value. We keep in mind how we use our key words: i.e. the functionality of <i>referentiality</i> produces <i>referential music</i>, the functionality of <i>complementarity</i> produces <i>complementary music</i>, and the functionality of <i>informativity</i> produces <i>epistemic music</i>.</p>	<p>Legend: R: Referentiality C: Complementarity I: Informativity</p>
FUNCTIONS OF CINEMA MUSIC	FUNCTIONALITY
Comments (Neumeyer 2015: 286)	I
Establishes setting, place, or location (Kalinak 2010: 1)	R
Serves psychological advancement of the action (London: 1936: 135)	I
Intensifies apparent mood of sequence by synchronous imitation (i.e. ‘mickey-mousing’) (Gallez 1970)	C
Psychologically adjusts audience by establishing general moods (Gallez 1970: 47, citing Kracauer)	C
Externalizes various mental processes (Frykholm 2015: 130)	I
Creates specific mental condition	I
Fashions mood and create atmosphere (Kalinak 2010: 1)	C
Provides continuity by carrying on development of thought (Copland 1957; Reay 2004: 33)	R
Integrating production numbers in the story (Gallez 190: 47)	R
Embellishes or characterizes onscreen persons, objects, actions and events, scenes and sequences (Carroll 1996: 141)	C
Calls attention to elements onscreen or offscreen to clarify plot and narrative progression (Kalinak 2010: 1)	I
Directs and manages attention (Vitough 2001: 71)	R
Imitates human speech or utterances (Gallez 1970)	R
Accentuates emotions (Vitough 2001: 71; Reay 2003: 33)	C
To justify the movement of the rhythm of the motion picture (Eisler 1947: 62)	C
Emphasizes cutting rhythm (Gallez 1970)	R
Heightens aesthetic effects of films	R
Intensifies current mood by evocation (Gallez 1970)	C
Provides realism through real situation musicR	
Depicts social and cultural reference	R
Psychologically advances action by providing transitions or prepares for further action (Gallez 1970: 47)	R
Depicts time-of-the-day reference (dawn, morning, noontime, afternoon, dusk, evening); period reference (Stone Age, 1950’s, 1980’s 18 th cc. etc.); season reference (winter, spring, autumn, summer)	R
Creates structural unity by connecting scenes or montages (Kalinak 1992: 79)	R
Depicts alternate time perception (displaced reality)	I
Implies spatial sense	R
Elucidates motivations of characters to let us know what they are thinking (Kalinak 2010 :1)	I
Provides ironic contrast of mood by asynchronous counterpoint (Gallez 1970)	C
Portrays parody	C
Unifies images that seem disconnected on their own and imparts a rhythm to their unfolding (Kalinak 2010: 1)	R
Implies size relationships	R
Encourages our absorption into the film by distracting us from its technological basis – its two-dimensional celluloid constitution (Kalinak 2010: 1)	R
Psychologically unites audience	I
Provides dynamism when sight and sound correspond each other (Spottiswoode 1962: 192- 193)	C
Underlines psychological refinement – hints at the unspoken thought of a character or the unseen implications of a situation (Copland 1957: 256-257)	I
Foreshadows narrative developments (Kalinak 2001: 1)	I

Evokes its fullest value by assisting towards insight into the characters they are attached to –usually through motifs (Spottiswoode 1962: 192-193).	R
Reinforces narrative developments (Kalinak 2001: 1)	C
Creates a more convincing atmosphere of time and place (Copland 1957: 256-257)	R
Provides narrative cueing	R
Depicts specific emotion or emotionalization (Vitough 2001)	C
Transfers information through auditory communication (Vitough 2001: 71)	I
Creates contrasting effects to heighten the effects of visual tracks (Spottiswoode 1962: 192-193) or contradictions (Hoffman 2011)	C
Participates in the workings of the human mind (Kalinak 2010: xiii)	I
Heightens aesthetic effects of films	R
Provides realism through real situation music (diegetic sounds)	R
Manipulate plot twists (Kalinak 1992: 79)	I
Imply spatial sense	R
Create displaced reality	I
It takes the part of a spectator commenting on the visual film (Spottiswoode 1962: 192-193)	I
Signifies an emotion (Vitough 2001: 71)	C
Provides referential cueing (Reay 2004: 33)	R
Provides as part of dramatic structure (Alwyn 1957: 29)	C
Provides connotative cueing (Reay 2004: 33)	I
Suspends action (Gallez 1970: 46)	R
Underpins mental states	I
Terminates action (Gallez 1970: 46)	I
Participates in the workings of the mind (Kalinak 2010: xiii)	I
Transfer of information through auditory communication (Vitough 2001: 71)	I
Serves as thought bubbles on the screen (subtext) (Schaefer 2001: 1)	I
Conveys pace (Lipscomb & Tolchinsky 2005: 396)	R
Conveys overall perspective or message by the director (Lipscomb & Tolchinsky 2005: 393)	I
Serves to lower 'the threshold of belief' (Gorbman 1987: 6; see: Lipscomb & Tolchinsky 2005: 396)	R
Conveys the internal thoughts, feelings of a character (Lipscomb and Tolchinsky 2005: 394)	I
It underpins the theatrical buildup of a scene (Vitough 2001: 29, 70-83)	C
Gives a sense of finality (Copland 1963: 154-155)	I

BIBLIOGRAPHY

- Adams, Marilyn McCord. *William Ockham: Volume 2*. Notre Dame, Indiana: University of Notre Dame Press. 1987.
- Adler, Alfred. *The Pattern of Life*. Chicago and New York: Cosmopolitan Book Corporation. 1930.
- Adorno, Theodor & Hanns Eisler. *Composing for the Films*. Oxford: Oxford University Press. 1947.
- Altman, Rick. *The American Film Musical*. Bloomington: Indiana University Press. 1987.
- Alwyn, William. *The Technique of Film Music*. London: Focal Press. 1957.
- Arendt, Hannah. *The Human Condition*. University of California Press. 1998.
- Aristotle. *Nicomachean Ethics*. Trans. Roger Crisp. New York: Cambridge University Press. 2014.
- _____. *On the Heavens*. Cambridge: Harvard University Press. 1971.
- _____. *Posterior Analytics*. Trans. Jonathan Barnes. Oxford: Oxford University Press. 1994.
- Bal, Mieke (ed.). *Narrative Theory: Critical Concepts in Literary and Cultural Studies*. Vol. 1. New York: Routledge. 2004.
- Bazelon, Irwin. *Knowing the Score: Notes on Film Music*. New York: Can Nostrand Reinhold. 1975.
- Beardsley, Monroe C. *Aesthetics: Problems in the Philosophy of Criticism*. New York: Harcourt, Brace, and World. 1958.
- Binns, Alexander. 'Desiring the Diegesis: Music and Self-Seduction in the Films of Wong Kar-Wai'. *Cinema Music: Constructing the Film Score*. Eds. David Cooper, Christopher Fox and Ian Sapiro. Newcastle: Cambridge Scholars. 2008: 127-140.
- Birtwistle, Andy. *Cinesonica: Sounding Film and Video*. Manchester: Manchester University Press. 2010.
- Bordwell, David. *Making Meaning: Inference and Rhetoric in the Interpretation of Cinema*. Cambridge: Harvard University Press. 1991.
- Bordwell, David & Kristin Thompson. *Film Art: An Introduction*. New York: Addison and Wesley. 1979.
- Borstlap, John. *The Classical Revolution: Thoughts on New Music in the 21st Century*. Mineola: Dover Publications. 2017.
- Branigan, Edward. *Narrative Comprehension and Film*. New York: Routledge. 1992.
- Bribitzer-Stull, Matthew. *Understanding the Leitmotif: From Wagner to Hollywood Film Music*. Cambridge: Cambridge University Press. 2015.
- Brown, Royal S. *Overtones and Undertones: Hearing Film Music*. Berkeley: The University of California Press. 1994.
- Buckland, Warren. *The Cognitive Semiotics of Film*. New York: Cambridge University Press. 2007.
- Buhler, James. 'Analytical and Interpretative Approaches to Film Music (II): Interpreting Interactions of Music and Film' in *Film Music: An Anthology of Critical Essays*. Ed. K. J. Donnelly. Edinburg University Press. 2001.
- Burt, George. *The Art of Film Music: Special Emphasis on Hugo Friedhofer, Alex North, David Raksin, Leonard Rosenman*. Boston: Northeastern University Press. 1994.
- Carner, Mosco. *Giacomo Puccini Tosca*. New York: Cambridge University Press. 1985.
- Carroll, Noël. *Engaging the Theory Image*. New Haven and London: Yale University Press. 2003.
- _____. *Mystifying Movies: Fads and Fallacies in Contemporary Film Theory*. New York: Columbia University Press. 1988.
- Carroll, Beth. *Feeling Film: A Spatial Approach*. Southampton: Palgrave Macmillan. 2016.
- Chion, Michel. *Audio-Vision: Sound on Screen*. Trans. Claudia Gorbman. New York:

- Columbia University Press. 1994.
- _____. *Film: A Sound Art*. Trans. Claudia Gorbman. NY: Columbia University Press. 2009.
- _____. 'Let's have done with the notion of "Noise"'. Trans. James A. Steintrager. *Differences*. Vol. 22. No. 1 (2011): 240-248.
- Citron, Maria. *When Opera Meets Film*. Cambridge: Cambridge University Press. 2010.
- Cohen, Allen & Steven L. Rosenhaus. *Writing Musical Theatre*. New York: Palgrave Macmillan. 2006.
- Collaer, Paul, & Albert Vander Linden, and Frans Bremt. *Historical Atlas of Music: A Comprehensive Study of the World's Music: Past and Present*. New York: The World Publishing Company. 1968.
- Copland, Aaron. *What to Listen for in Music*. New York: McGraw-Hill. 1957.
- Cousins, Mark. *The Story of Film: An Odyssey*. British Film Institute. 2013.
- Cross, Ian & Irène Deliège. 'Introduction: Cognitive Science and Music – an Overview'. *Music and the Cognitive Sciences: Volume 9: Proceedings of Cambridge Conference on Music and Cognitive Sciences*. Cambridge: Psychology Press. 1990: 1-6.
- Currie, Gregory. *Image and Mind: Film, Philosophy, and Cognitive Science*. New York: Cambridge University Press. 1995.
- Davis, Nick. 'Inside/Outside the Klein Bottle: Music in Narrative Film, Intrusive and Integral'. *Music, Sound and the Moving Image*. Vol. 6. No. 1 (2012): 9-19.
- Deleuze, Gilles. *Cinema 2: The Time-Image*. Trans. Hugh Tomlinson and Robert Galeta. London: Continuum. 1989.
- Demers, Joanna. *Listening Through the Noise: The Aesthetics of Experimental Electronic Music*. Oxford: Oxford University Press. 2010.
- _____. *Drone and Apocalypse: An Exhibit Catalog for the End of the World*. Alresford: Zero Books. 2015.
- Donnelly, K. J. *Occult Aesthetics: Synchronization in Sound Film*. Oxford: Oxford University Press. 2014.
- Dubowski, Jack Curtis. *Intersecting Film, Music, and Queerness*. New York: Palgrave Macmillan. 2016.
- Elsaesser, Thomas & Malte Hagener. *Film Theory: An Introduction through the Senses*. New York: Routledge. 2000.
- Erickson, Robert. *Sound Structure in Music*. Berkeley: University of California Press. 1975.
- Fisher, Burton D. *Puccini's Tosca*. Boca Raton: Opera Journeys Publishing. 2005.
- Frykholm, Joel. *George Kleine & American Cinema: The Movie Business and Film Culture in the Silent Era*. New York: Palgrave Macmillan. 2015.
- Fludernik, Monika. *The Fictions of Language and the Languages of Fiction: The Linguistic Representation of Speech and Consciousness*. New York: Routledge. 1993.
- Gallez, Douglas W. 'Theories of Film Music'. *Cinema Journal*. Vol. 9. No. 2 (1970): 40-47.
- Gauch, Hugh G. Jr. *Scientific Method in Practice*. Cambridge: Cambridge University Press. 2003.
- Genette, Gérard. *Narrative Discourse: An Essay in Method*. New York: Cornell University Press. 1988.
- Gershenfeld, Neil. 'Truth is a Model'. *This Will Make You Smarter*. Ed. John Brockman. New York: Harper Perennial. 2012: 72-73.
- Goldenfeld, Nigel. 'Because'. *This Will Make You Smarter*. Ed. John Brockman. New York: Harper Perennial. 2012. 58-61.
- Goldmark Daniel, Lawrence Kramer, & Richard D. Leppert (eds.). *Beyond the Soundtrack: Representing Music in Cinema*. Berkeley: University of California Press. 2007.
- Goodall, Howard. *The Story of Music*. London: Chatto & Windus. 2013.
- Gorbman, Claudia. *Unheard Melodies: Narrative Film Music*. Bloomington: Indiana University Press. 1987.

- _____. 'Why Music? The Sound Film and Its Spectator'. *Movie Music: The Film Reader*. Ed. Kay Dickinson. New York: Routledge. 2003: 37-47.
- Gracyk, Theodore. 'Outline/Study Guide: Hanslick: On the Musically Beautiful.' Trans. Geoffrey Payzant. Indianapolis. Hackett Publishing. 2002: 58-66.
- Green, Jessica. 'Understanding the Score: Communicating to and Influencing the Audience.' *The Journal of Aesthetic Education*. Vol. 44. No. 4 (2010): 81-94.
- Hagen, Earl. *Scoring for Film*. Alfred Publishing Company. 1971.
- Hanslick, Eduard. *On the Musically Beautiful*. Trans. Geoffrey Payzant. Indianapolis: Hackett Publishing. 1986.
- Harper, Graeme. *Sound and Music in Film and Visual Media*. New York: Bloomsbury Publishing. 2009.
- Heinsheimer, Hans W. *Menagerie in F Sharp*. New York: Doubleday. 1947.
- Heldt, Guido. *Music and Levels of Narration in Film*. Chicago: The University of Chicago Press. 2013.
- _____. 'Film-Music Theory'. *The Cambridge Companion to Film Music*. Eds. Mervyn Cooke & Fiona Ford. Cambridge: Cambridge University Press. 2016: 97-113.
- Herman, David. *Basic Elements of Narrative*. Oxford: Wiley Blackwell. 2009.
- Hill, John M. Extracted from audio tapes. *Notes on Blindness*. The British Film Institute. 2016.
- Hoffman, Roald, Vladimir I. Minkin & Barry K. Carpenter. 'Ockham's Razor and Chemistry'. *Hyle-International Journal for Philosophy of Chemistry*. Vol. 3 (1977): 3-28.
- Holbrook, Morris B. *Music, Movies, Meanings, and Markets: Cinemajazzamatazz*. New York: Routledge. 2011.
- Juslin, Patrik N. & Erik Lindstrom. 'Musical Expression of Emotions: Modeling Listeners' Judgments of Composed and Performed Features'. *Music Analysis*. Vol. 29. No. 1-3 (2010): 334-364.
- Kalinak, Kathryn. *Settling the Score: Music and the Classical Hollywood Film*. Madison: University of Wisconsin Press. 1992.
- _____. *Film Music: A Very Short Introduction*. Oxford: Oxford University Press. 2010.
- _____. *Sound: Dialogue, Music, and Sound Effects*. New Jersey: Rutgers University Press. 2015.
- Karesh, Sara E. & Mitchell M. Hurvits. *Encyclopedia of Judaism*. New York: Infobase Publishing. 2005.
- Kassabian, Anahid. *Hearing Film: Tracking Identification in Contemporary Hollywood Film Music*. New York: Routledge 2001.
- _____. *Ubiquitous Listening: Affect, Attention, and Distributed Subjectivity*. Berkeley: University of California Press. 2013.
- Köhler, Wolfgang. *Gestalt Psychology*. New York: H. Liveright. 1929.
- Kracauer, Siegfried. *The Theory of Film: The Redemption of Physical Reality*. Princeton: Princeton University Press. 1960.
- Kügler, Joachim. 'The (possible) function of the beatitude of the poor in the context of the struggle against poverty'. *Acta Theologica*. Vol. 32. Suppl. 16. Bloemfontein. January 2012, <www.scielo.org.za>. Last accessed 13.09.2018.
- Kuhn, Markus & Johann Schmidt. 'Narration in Film'. *Handbook in Narratology*. Eds. Peter Hühn, Jan Christoph Meister, John Pier, & Wolf Schmid. Berlin: Walter de Gruyter. 2014: 384-405.
- Langdale, Allan (ed.). *Hugo Munsterberg on Film: The Photoplay: A Psychological Study and Other Writings*. New York: Routledge. 2002.
- Langer, Susanne. *Philosophy in a New Key: A Study in the Symbolism of Reason, Rite, and Art*. Cambridge: Harvard University Press. 1957.
- Larsen, Peter. *Film Music*. Trans. John Irons. London: Reaktion Books Ltd. 2005.

- Levitin, Daniel. *This is your Brain on Music: Understanding a Human Obsession*. London: Atlantic Books. 2006.
- Levinson, Jerrold. 'Film Music and Narrative Agency'. *Post-Theory: Reconstructing Film Studies*. Eds. David Bordwell & Noël Carroll. Madison: University of Wisconsin Press (1996): 248-282.
- Lidwell, William, Kritina Holden & Jill Butler. *Universal Principles of Design: 125 Ways to Enhance Usability, Influence Perception, Increase Appeal, Make Better Design Decisions, and Teach through Design*. Beverly: Rockport Publishers. 2010.
- Lipscomb, Scott & David. E. Tolschinky. 'The Role of Music Communication in Cinema'. *Musical Communication*. Eds. Dorothy Miell, Raymond MacDonald & David J. Hargreaves. Oxford: Oxford University Press. 2005: 383-404.
- Lippman, Edward A. *A Humanistic Philosophy of Music: Aesthetics in Music No. 7*. Hillsdale: Pendragon Press. 2006.
- London, Kurt. *Film Music*. New York: Amo Press. 1936
- Macarthur, Sally. 'The Ubiquitous Century: Music and the Digital Arts.' *Musicology Australia*. Vol. 37. No.1 (2015): 76-84.
- Malina, Debra. *Breaking the Frame: Metalepsis and the Construction of the Subject*. Columbus: The Ohio State University Press. 2002.
- Marks, Laura. *The Skin of Film: Intercultural Cinema, Embodiment and the Senses*. Durham: Duke University Press. 2000.
- Marks, Martin. 'Film Music: The Material, Literature, and Present State of Research'. *Journal of the University Film and Video Association*. Vol. 34. No. 1 (1982): 3-40.
- Martineau, Jason. *The Elements of Music: Melody, Rhythm, & Harmony*. New York: Walker & Co. 2008.
- McQuillan, Martin (ed.). *The Narrative Reader*. New York: Routledge. 2000.
- Meister, Jan Christoph. 'Narratology as Discipline: A Case for Conceptual Fundamentalism'. *What is Narratology?: Questions and Answers Regarding the Status of a Theory*. Berlin: Walter de Gruyter. 2003: 55-71.
- Merlin, Didi. 'Diegetic Sound. Zur Konstitution figureninterner und externer Realitäten im Spielfilm', *Kieler Beiträge zur Filmmusikforschung*. Vol 6 (2010): 66–100. <www.filmmusik.uni-kiel.de/KB6/KB6-Merlinarc.pdf>. Last accessed 11 Oct 2018.
- Metz, Christian. *Language and Cinema*. The Netherlands: Mouton & Co. N.V. Publishers, The Hague. 1974.
- Miceli, Sergio & Ennio Morricone. *Composing for the Cinema: The Theory and Praxis of Music in Film*. Trans. Gillian B. Anderson. New York: The Scarecrow Press Inc. 2013.
- Miceli, Sergio. 'Miceli's Method of Internal, External, and Mediated Levels: Elements for the Definition of a Film-Musical Dramaturgy'. *Music and the Moving Image*. Vol. 4. No. 2 (2011): 1-29.
- Milicevic, Mladen. 'Altered States of Consciousness in Narrative Cinema: Subjective Film Sound'. *World Academy of Science, Engineering and Technology. International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*. Vol. 7. No. 12 (2013): 3216-3220.
- Moore, Martin E. *The Universal Mind & I: Intelligent Spiritual Philosophy*. New York: iUniverse. 2004.
- Munsterberg, Hugo. *The Photoplay: A Psychological Study*. New York & London: D. Appleton and Company. 1916.
- Nagari, Benjamin. *Music as Image: Analytical Psychology and Music in Film*. New York: Routledge. 2013.
- Nattiez, Jean-Jacques. *Musical Discourse: Toward a Semiology of Music*. Trans. Carolyn Abbate. New Jersey: Princeton University Press. 1990.

- Neumeyer, David. *Meaning and Interpretation of Music in Cinema*. Bloomington: Indiana University Press. 2015.
- _____. 'Diegetic/Nondiegetic: A Theoretical Model'. *Music and the Moving Image*. Vol. 2. No. 1 (2009): 26-39.
- Newton, Isaac. *The Mathematical Principles of Natural Philosophy*. Trans. Andrew Motte. London: Knight & Compton. 1803.
- O'Callaghan, Casey. *Beyond Vision: Philosophical Essays*. Oxford: Oxford University Press. 2017.
- Olson, Richard. *Science Deified and Science Defied: The Historical Significance of Science in Western Culture. Vol. 2: From the Early Modern Era through the Early Romantic Era ca. 1640 to ca. 1820*. Berkeley: University California Press. 1995.
- Payzant, Geoffrey. *Hanslick on the Musically Beautiful: Sixteen Lectures of Eduard Hanslick on the Musically Beautiful*. Christchurch: Cyber Edition. 2002.
- Pramaggiore Maria & Tom Wallis. *Film: A Critical Introduction*. London: Laurence King Publishing. 2005.
- Prenatt, Jamie. *Katyusha: Russian Multiple Rocket Launchers: 1941-Present*. New York: Bloomsbury Publishing Inc. 2016.
- Percheron, Daniel. 'Sound in Cinema and its Relationship to Image and Diegesis'. Trans. Marcia Butzel. *Yale French Studies*. Vol. 60 (1980): 16-23.
- Phelan, James (2016). 'Analepsis Prolepsis'. Eds. Joel Burger & Amy Elias. *Time: A Vocabulary of the Present*. New York: New York University Press. 2016: 240-254.
- Pfister, Manfred. *The Theory and Analysis of Drama*. Trans. John Halliday. New York: Cambridge University Press. 1993.
- Pontara, Tobias. 'Modest Constructivism and the Issues of Nondiegetic versus Intradiegetic Music in Film'. *Music and the Moving Image*. Vol. 9. No. 2 (2016): 39-57.
- Potter, Caroline. *Erik Satie: A Parisian Composer and His World*. Woodbridge: The Boydell Press. 2016.
- Prichett, James. *The Music of John Cage*. New York: Cambridge University Press. 1993.
- Prince, Gerald. 'Surveying Narratology'. *What is Narratology?: Questions and Answers Regarding the Status of a Theory*. Eds. Tom Kindt & Hans-Harald Müller. Berlin: Walter de Gruyter. 2003: 1-16.
- Reay, Pauline. *Music in Film: Soundtracks and Synergy*. New York: Wallflower Press. 2004.
- Redner, Gregg. *Deleuze and Film Music: Building a Methodological Bridge between Film Theory and Music*. Bristol and Chicago: Intellect. 2011.
- Richardson, John. *Popular Music and the Audiovisual Surreal: An Eye for Music*. Oxford: Oxford University Press. 2012.
- Ricoeur, Paul. 'Existence and Hermeneutics'. *Contemporary Hermeneutics: Hermeneutics as Method, Philosophy, and Critique*. Ed. Josef Bleicher. London: Routledge. 1980: 245.
- Rimon-Kenan, Shlomith. *Narrative Fiction: Contemporary Poetics*. London: Routledge. 1989.
- Schaefer, Hilary. 'Emotion and the Film Scores: An Empirical Approach' *e-Film Music*. 2001. <www.e-filmmusic.de>. Last accessed 11.02.2017.
- Schrader, Paul. *The Story of Film: An Odyssey*. Ed. Mark Cousins. London: British Film Institute. 2013.
- Scholes, Robert. *Semiotics and Interpretation*. New York: Yale University Press. 1982.
- Simpson, J. A., & E.S.C. Weiner (eds.). *Oxford English Dictionary: Vol. I*. Oxford: Clarendon Press. 1989.
- _____. *Oxford English Dictionary: Vol. VI*. Oxford: Clarendon Press. 1989.
- _____. *Oxford English Dictionary: Vol. X*. Oxford: Clarendon Press. 1989.
- Smith, Jeff. 'Bridging the Gap: Reconsidering the Border between Diegetic and Nondiegetic Music'. *Music and the Moving Image*. Vol. 2. No. 1 (2009): 1-25.

- Sonnenschein, David. 'Sound Spheres: A Model of Psychoacoustic Space in Cinema'. *The New Soundtrack*. Vol.1. Issue 1 (2011): 13-27.
- Sorrell, Neil & Ram Narayan. *Indian Music in Performance: A Practical Introduction*. Manchester: Manchester University Press. 1980.
- Speck, Stanley. 'Arousal Theory Reconsidered'. *British Journal of Aesthetics*. Vol. 28. No. 1 (1988): 40-77.
- Spielberg, Steven. *10th Anniversary Edition DVD, Jaws*. 1985.
- Spottiswoode, Raymond. *A Grammar of the Film: An Analysis of Film Technique*. Berkeley: University of California Press. 1950.
- Stam, Robert, Robert Burgoyne, & Sandy Flitterman-Lewis. *New Vocabularies in Film Semiotics*. New York: Routledge. 1992.
- Sterne, Jonathan. *The Audible Past: Cultural Origins of Sound Reproductions*. Durham: Duke University Press. 2003.
- Stilwell, Robyn J. 'The Fantastical Gap between Diegetic and Nondiegetic'. *Beyond the Soundtrack*'. Eds. D. Goldmark, L. Kramer, & R. Lappert. Berkeley: University of California Press. 2007: 184-202.
- Stravinsky, Igor. *Poetics of Music in the Form of Six Lessons*. New York: Harvard University Press. 2003.
- Vanel, Hervé. *Triple Entendre: Furniture Music, Muzak, Muzak-Plus*. Chicago: University of Illinois Press. 2013.
- Varese, Edgard & Chou Wen-chung. 'The Liberation of Sound.' *Perspectives of New Music*. Vol. 5. No. 1 (1966): 11-19.
- Vitough, Oliver. 'When Your Ear Sets the Stage: Musical Context Effects in Film Perception'. *Psychology of Music*. Vol. 29 (2001): 70-83.
- Wierzbicki, James. *Film Music: A History*. New York: Routledge. 2009.
- Winters, Ben. 'The Non-Diegetic Fallacy: Film, Music, and Narrative Space'. *Music & Letters*. Vol. 91. No. 2 (2010): 224-244.
- Wolfe, W. Béran. *How to be Happy Though Human*. London: George Routledge & Sons. 1932.
- Yacavone, Daniel. *Film Worlds: A Philosophical Aesthetics of Cinema*. New York: Columbia University Press. 2014.
- Zhmud, Leonid. *Pythagoras and the Early Pythagoreans*. Trans. Kevin Windle & Rosk Ireland. Oxford: Oxford University Press. 2012.

+