

CAIS Paper: Sounds of Yesterday: Case Study Taxonomy of *Topoi* from Dutch Silent Film Music

Abstract: Taxonomy is the rigorous act of distinguishing differentiated concepts by naming and defining them with precision. One of the roles of taxonomy is to shed light on the core knowledge base of a domain. An interesting case of taxonomic research arises from film music history with regard to musical cues, *topoi*, used for the accompaniment of silent film. This study reports a case study of music from the Eyl Collection of Dutch silent film music.

1.0 Introduction: Taxonomy

In many fields of study, the simple act of classification of observations usually leads to a more rigorous enterprise of distinguishing differentiated concepts by naming and defining them with some precision. Such activity is known as taxonomy. From a term list to a taxonomy is often some distance metaphorically and chronologically, greater or lesser distance depending on the complexity of the domain involved. In knowledge organization a taxonomy is (Smiraglia 2014a, 51): “an ordered list of terms together with their definitions or other determinant characteristics. Taxonomy is a way of defining the component entities in a domain.” Taxonomies, unlike ontologies, tend to be limited and tightly constrained conceptual lists, representing the most essential elements of a specific knowledge base in a domain, rather than a large functional vocabulary. By distance, we understand that there might be much variation existing in the applied dimension of a domain that stretches the potential boundaries of taxonomic objects. An example is a concept such as “ontology” itself, which in knowledge organization is a term used frequently to mean either a philosophical understanding of being, and thus of categorization, but also is used to mean an ordered vocabulary.

Knowledge Organization Systems (such as taxonomies, classifications, ontologies, thesauri, etc.) contain and to some extent control essential conceptual elements in a domain. Many knowledge organization researches have attempted to test the degree to which a KOS represents the domain’s concepts (e.g., Hjørland 2002; Tennis 2006, 2007). But few studies have addresses how well a KOSs individual concepts are populated by real target objects. A recent research stream (Salah et al. 2012; Scharnhorts and Smiraglia 2012; Smiraglia et al. 2013; Smiraglia 2013 and 2014b) has demonstrated the use of empirical methods to analyze the mapping over time of the Universal Decimal Classification.) This paper contains a preliminary report of domain analytical study of the population of taxonomy of silent film music cues.

2.0 *Topoi* as taxonomic objects

In the early days of film, silent films were screened in theaters equipped with pianos or organs, in fact, often these were the same venues used for stage shows passing through town. Similarly, the musical cues used to create the individual accompaniment for silent films came from a list of musical terms originally settled as the vocabulary of vaudeville. Recent attempts to demonstrate the connection are discussed by Rosar (2012) and Plebuch (2012).

Rosar (2012, 209) describes the manner in which music was used by accompanists as a form of audio illustration for silent film. In order to facilitate performance, “much generic ‘stock music’ was written ... and the *agitato*, *misterioso*, and *appassionato* virtually defined the musical idiom.” A repertoire of short pieces, mostly lasting only a minute or two and matching moods represented in the visual imagery of the film were called “cues.” The titling practice evolved over time into a form of classification in film studio music libraries, where librarians assigned generic mood musical terms to cues in newly composed scores (Rosar 2012, 210). The music of the silent film era is often referred to in English as “photoplay” or in German as “*Kinothek*” (a contraction of *Kinobibliothek*) (Rosar 2012, 210). The most prominent compendia of the repertoire were those by Rapee ([1925], 1970) and Erdmann, Ecce and Brav (1927).

Lazarus (2012) and Wilson (2012) contributed articulate explanations of the actual musical practice for the musician. Lazarus reproduces a cue sheet with two examples of “hurry music,” one for struggles and another for duels (p. 36). On the other hand, improvisation was strictly controlled by professional practice and the concept of “respect” for both the film and the musical illustrations utilized (Wilson 2012). Wilson includes a photo of an actual “cue sheet” for Douglas Fairbanks movie *The Thief of Baghdad*, in which we can see musical incipits together with appropriate musical references alongside the actual cues “Action. Thief grabs man at well ... Overture Comique ... Keler Bela ... 1 ½ Min.” Specific and detailed exemplars from Beckerman and Rosar (2012) and Brooks (2012) demonstrate the practice of *Kinothek* in silent westerns and in linked performances of Sarah Bernhardt, respectively.

Plebuch (2012, 77) describes the ubiquitous application of musical illustrations to nineteenth-century stage melodrama “which is itself, largely based on stereotypical roles, generic plots, standardized gestures, and familiar locations.” Plebuch relates this practice to the use of what he calls “musical *topoi*” or characteristic musical expressions that are habitual and symbolic, yet flexible enough to admit a wide degree of interpretation and improvisation. In other words, although the cues of stage music that have made their way into silent film are easily recognized and categorized by terms such as *agitato* or *misterioso*, the actual instantiation of *topoi* in each category will be variable and dependent on the evolving practice of the musicians involved at any given moment. Although handbooks from the period recorded the *topoi*, or standard musical cues representing emotional expressions, there has been little research to date demonstrating how the cues actually used correlate with the *topoi*. In other words, there are taxonomic manuals from the era, but to date there have been no domain analytical studies to demonstrate the breadth of usage.

3.0 The Eye Film Music Institute, Amsterdam, Netherlands

This paper contains a preliminary report from a case-study attempt to use the tools of knowledge organization domain analysis to record the actual usage of musical cues in a corpus of silent film. Specifically, domain analytical methods have been used to generate a term-list of *topoi* used, by which the population of the taxonomy of silent film music cues can emerge. The case in question is the entire catalog of the silent film collection of the EYE Film Music Institute, Amsterdam, Netherlands.¹ The EYE Institute preserves Dutch films, and also foreign films that have been screened in the Netherlands, dating from 1895. A 1992 catalog of silent film music by van Houten gives details of the musical resources collected by Ido Eyl, who built on the working collection of the Utrecht Rembrandt Theater (van Houten 1992, 51). The catalog contains entries for 3,235 musical works from the Eyl collection.

4.0 Term extraction

The contents of the van Houten catalog were entered into *WordStat*TM software. Specifically, terms used to identify the musical works were sorted by frequency of occurrence; this generated a list of 1,792 words. The top end of the distribution included fifteen keywords that each occurred forty times or more; these are shown in Table 1.

	FREQUENCY	% TOTAL	NO. CASES
POTPOURRI	151	2.5%	148
SCENES	108	1.8%	100
WALZER	107	1.8%	105
FANTAISIE	105	1.7%	105
VALE	97	1.6%	97
OUVERTURE	78	1.3%	78
FOXTROT	71	1.2%	66
MARSCH	65	1.1%	64
FANTASIE	61	1.0%	61
SUITE	56	0.9%	55
INTERMEZZO	55	0.9%	55
OPERETTE	49	0.8%	49
MELODIE	47	0.8%	46
MARCHE	40	0.7%	39

Table 1. Top tier of keyword frequency distribution

Of course, these are only keywords. But, in each case, the keyword can be considered an anchor term in a set of clusters, which are musically related by reference to the specific keyword. For example, Table 2 shows the set of such clusters associated with the keyword “Romance.”

	KEYWORD		
Celebre	Romance		3
Fin de l2me scene et 3me scene.	Romance	à l'etoile du soir	1
Petite	Romance		1
	Romance		3
	Romance	sans paroles	3
Walzer -	Romance		1

Table 2. Clustered terms associated with “Romance”

Six specific phrases occur; some such as “Celebre romance” or “Petite romance” are potential *topoi*. We also can see how the analysis associated specific *topoi* with particular film cues, such as “Romance à l’etoile du soir” which is used for the end of the second and third scenes in the associated film. Table 3 shows an excerpt from a more complex example, in which different linguistic variants of the keyword “waltz” are collocated and sorted by frequency of occurrence. Sixty-four separate iterations of “waltz” occur, the most frequent is “walzer,” which occurs 91 times in the collection.

	KEYWORD		Frequency
Celebre	valse	hesitation	2
	Valse		49
	Valse	Intermede	
	Valse	berceuse	
	Valse	Boston	5
Suite de	vases		8
Suite de	Vases	Espagnoles	
	Vases		9
English	Waltz		3
Hawaiian-	Waltz		
	Walzer		91
Russische	Walzer		
Spanischer	Walzer		
Wiener	Walzer		

Table 3. Excerpt from collocated “Waltz” clusters

From these simple illustrations the complexity of the task of term is clear.

5.0 Using population to evaluate a KOS.

Frequencies are used in domain analytic research to distinguish the most used terms with the expectation that these form the core vocabulary of a domain. It is important to acknowledge that there is no musical correlation with the term frequencies discovered here, except to say that those appearing most often represent the *topoi* that were most frequently used in the performance of silent films represented by the Eyl collection. What this project can generate is empirical visualization of the *topoi* represented by this one particular national film industry.

For example, in Rapee ([1925], 1970) “Romances,” the core term in Table 2 above, occurs with the reference “See ‘Andantes.’” Under “Andantes (Neutral) we find “Romance” and “Romantic Melody.”

This is a case study to demonstrate the utility of the method and the research is still underway. The next step is to correlate the terms with dates of publication to generate a timeline of the introduction of musical cues. A final step will be to correlate the terms extracted here with those in both the Rapee and Erdmann handbooks of musical terms. The efficacy of any knowledge organization system is the extent to which it represents reality in its domain; by comparing the population of used *topoi* to the list of preferred terms in the handbooks we will have one such measure of knowledge as memory and participation.

Notes

1. The catalog used for this study was acquired by Jasper Aalbers of the University of Utrecht, Netherlands in conjunction with the eHumanities Group of the Royal Netherlands Academy of the Arts and Sciences, Amsterdam.

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