Composing with 'meaning': A study of 'associative' compositional approaches in Pelle Gudmundsen-Holmgreen's *Symphony- Antiphony*

Introduction

An often-mounted criticism of post-tonal music concerns a supposed lack of connection to the nature of human perception. Leonard Meyer argues that total serialism does not provide a coherence that is accessible to hearing, which he suggests is dependent on audible patterns and a substantial level of redundancy, while Fred Lerdahl speaks of a disjuncture between compositional and listening 'grammars' in devices like chord multiplication.1 Copland argued that, although there is no a priori reason why post-tonal music cannot be comprehended, when working in this style it becomes the duty of the composer to engage directly with issues of communication.2 It is an uncomfortable admission that perception, while versatile, is perhaps not infinitely plastic and that certain forms of listening and cognition do appear to be largely 'natural'.3

There have been attempts by twentieth century composers to develop compositional methods that engage directly with these issues of perception's 'fixed' elements. Perhaps the most extensive work in this area has been by Fred Lerdahl, whose collaboration with Jackendoff attempted to develop a coherent theory of musical listening, thus providing an empirical basis for his development of approaches to post-tonal composition.4While I consider Lerdahl's work to have been important, his emphasis on what he terms 'syntactic' over 'associational' meaning (a distinction similar to Meyer's 'embodied' and 'designative', or Agawu's use of 'syntagmatic' and 'paradigmatic', or more problematically 'musical' and 'extramusical') leaves an incomplete picture.5

Several recent psychological approaches to music have emphasised how this latter type of meaning is of great significance for the listening experience. Gaver, for example, demonstrates how the source, emotional resonances and implied energy of sounds tend to play a more significant part in listener

descriptions than ‘abstract’ sonic qualities. Gjerdingen and Perrott have noted how listeners often seem to process the ‘message’ of the music before its sonic details, Watt and Ash emphasise the importance of ‘human-like’ musical qualities in listener descriptions, and Windsor and Bézenac have applied the theory of ‘affordances’ to suggest that musical listening is concerned with the active construction of meaning.6 In addition, music philosophy has turned in this direction. Davies suggests that musical expression comes from its similarity to human agency and Robinson advocates the idea of a musical ‘persona’.7 Musicologists have supported these ideas by suggesting that ‘extramusical’ meaning cannot be considered truly ‘external’ to music at all. Kramer describes music as ‘worldly through and through’, while Cook argues that music is always ‘multimedia’ in so far as it interacts with a cultural context, and Zbikowski recognises no division between everyday listening and musical comprehension.8

There thus seems to be plentiful evidence for, and theory concerning, the significance of ‘associative’ or ‘extra-musical’ meaning. In this essay I will discuss compositional methods that engage with these ideas and how they can assist in producing engaging music that complements evidence about music perception. While Lerdahl’s method is to construct a compositional ‘system’, I favour a freer attitude that simply suggests possibilities that can be combined in multiple ways. Especially given that I am dealing with elements subject to a high degree of interpretation, this approach allows composition to reflect probabilities of response and engage with listener ‘stances’ without becoming deterministic. 9 As Kramer argues, interpretation always exceeds the elements that give rise to it, and so my aim is rather to discern a ‘richness’ of potential meanings, as discussed by Bauer, that afford a variety of listener responses.10 Pelle Gudmundsen-Holmgreen’s 1982 orchestral work *Symphony- Antiphony* is an excellent case study for this model, due to its strongly referential musical materials, collage-like construction, and combination of multiple compositional methods. The following analysis will apply in turn a mixture of approaches to the piece, gradually shifting the focus from micro- to macro-structure.

Topic Theory

Topic theory is useful in suggesting how compositional materials can relate to the interpretative quality of the listening experience. It responds to the high degree of consistency among listener responses – as noted by Clarke, Windsor and Bézenac – while recognising that that these will, and should, vary.11 Topic Theorists, such as Gjerdingen, Hatten, Agawu, and Ratner, have since the 1980s discussed how 18th century composition was explicitly concerned with the combination of stylistic tropes, as an effective means of communicating with audiences.12 This is still the case today for film music composition, which is often dependent on the recognition of certain meaning-carrying elements to be functional.13 I would suggest that a similar approach is useful in writing contemporary classical music, which, not coincidentally, as Ashby points out, has had substantial success through the medium of cinema.14 Rochberg has noted that 'the perspective available to the composer today is potentially larger today than at any previous time', thus providing rich potential for the use of topic-style approaches.15

Symphony- Antiphony is particularly relevant to this discussion, because it is largely concerned with the interactions between various clearly distinguished musical units, conceptualisable as 'topics', making it a strong example of how the compositional process can be concerned with creating possibilities for interpretation. The expressive connotations of the topics are an integral element of its form; a particularly clear instance of Tarasti's or Zbikowski's opposition to the distinction between meaning and syntax.16 Given that my emphasis is on the process of hearing music, the analysis is largely based on my own listening to the piece and access to a score should not be required. The references I make to points in the music all refer to the recording by Leif Segerstam and the Danish National Radio Orchestra (1992). A basic structural outline is contained in table 1, using descriptions from Grimley's description of the piece.17 Table 2 lists the main topics in play, in order of introduction, with primary examples on the left and some more minor ones on the right.18

Table 1: Symphony-Antiphony basic structure

Section	Length (in recording)	Description[16]
Symphony	2:13	Gradual expansion towards collapse
Antiphony 1	3:58	Ostinato, wind intrusions
Antiphony 2	5:17	Wind intrusions, mandolin
Antiphony 3	0:45	'Ragtime cadenza'
Antiphony 4	4:39	'Orgiastic climax'
Antiphony 5	3:25	'Hymnic meditation'
Antiphony 6	7:33	'Mahlerian paraphrase'

Table 2: List of Topics

Name	Introduced at[17]	Name	Introduced at
String ostinato	2) 0:00	Bassoon	2) 1:05
Bells	2) 1:05	String stabs	2) 1:05
Blaring horn and leaping winds	2) 2:50	Fourths	2) 1:20
Mandolin	3) 0:00	Violin solo	3) 0:03
Broken chord	3) 0:03	Woodwind cluster	5) 0:00
Snap	3) 1:06	Growls	5) 1:50
Ragtime piano	3) 1:06	Scales and trills	5) 1:50
Orgiastic	5) 2:11	Flautando	6) 2:00
Mahlerian paraphrase	7) 0:00	Soltando	7) 3:40

This taxonomy begins with the '*Antiphony*' section of the piece because, although these topics do seem to be referenced in the opening section (a form of 'bells' at the opening and, 'string ostinato' at 0:33, becoming 'orgiastic' at 1:10), their presentation is unclear by comparison to later passages. Table 2 shows how most topics are introduced in sections 2 and 3, while in the latter part of the piece the topical density is markedly reduced, contributing to an expressive trajectory that will be further discussed at a later stage. Most of these topics have relatively clear and direct characterisation which allows us to predict fairly accurately their likely expressive interpretation, relying on well-known musical tropes:

• String ostinato: *simplicity* or *naivety* using only 3 pitches (D-E-F♯) and monody; *unsteady* motion or energy through the frequently arrested semiquavers; *distance* through the ***ppp*** dynamic.

• Bells: *brightness* or *optimism* through the timbre of flute, horn, trumpet, tubular bells, harp and vibraphone; *energy* from the percussive elements from string pizzicatos, harp, vibraphone and bells; *spaciousness* from wider range and 'open' harmonic formulations based on interval class 5.

• Horn blaring: *intrusion* or *interruption* from loud dynamic and layering effect; *violence* or *primitivism* from flutter tongue and dissonance which create an unpitched effect; *unmusical* through animalistic quality or urban car-horn type sounds.

• Mandolin: *nostalgia* from timbre of mandolin and winds and descending contour; *distance* or *memory* from quiet dynamic and fragmentation; *solitude* from solo quality; *folk* character through harmony and timbre; *spaciousness* on repeat in section 6

• Broken Chord: *optimism* and *simplicity* from horn timbre, loud dynamic, straightforward rhythm and triadic pitch content; *signal* effect from timbre, brevity and triadic formation; *intrusion* from dynamic and layering against other elements

• Snap: *violence*, *primitivism* or *unmusical* quality from unpitched effect, abrupt attack and lack of development; *energy* from attack and decay effect similar to bells; *intrusion* through layering effect.

• Ragtime: *unsteady motion* from rhythms and caesuras; *distance* from fragmentation and different tempo suggesting emanation from another place; both *nostalgia* and *optimism* from connotations of ragtime style, *solitude* from solo piano instrumentation.

• Orgiastic: *unsteady motion* and *energy* from rhythms in uneven groupings, heavy percussion, *violence* or *primitivism* from heavy brass, dissonance, percussion and extreme dynamic; *intrusion* or *interruption* through layering effect and abrupt appearances and disappearances of elements

• Mahlerian paraphrase: *nostalgia* from connotations of style, and eschatological quality of cadences; *distance* from fragmentation and dynamic as well as layering other materials above; moving towards greater *simplicity* and *spaciousness* or *the sublime* through dissipation into sustained chord

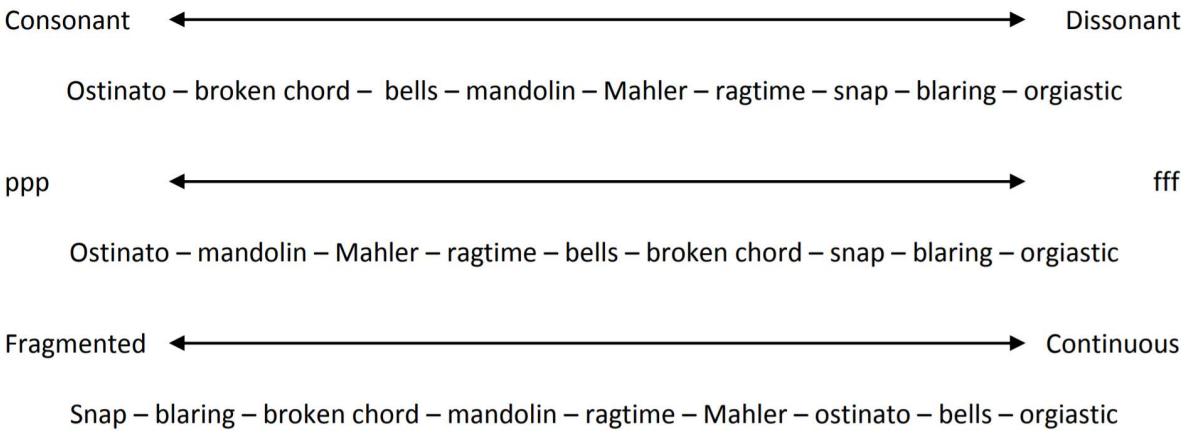
As can already be seen, there are many shared connotations between different topics that suggest connections (table 3).

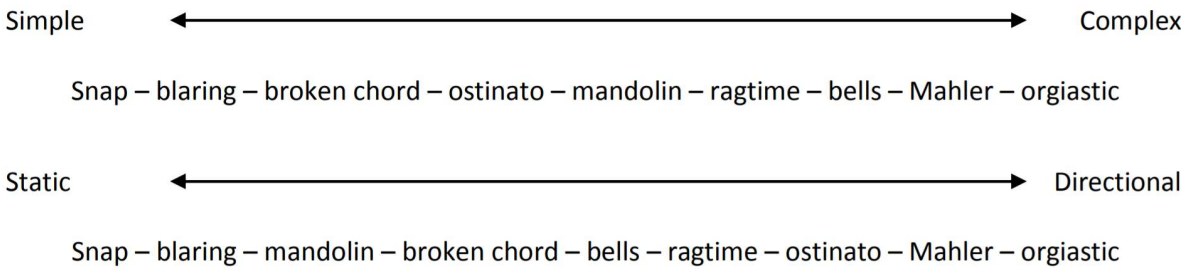
Table 3: Shared interpretations of topics

Interpretation	Topics	Interpretation	Topics
Simplicity	Ostinato, broken chord, (Mahler), fourths	**Non-musical**	Blaring, snap, soltando
Energy	Ostinato, bells, snap, ragtime, orgiastic, stabs, scales and trills	**Nostalgia**	Mandolin, ragtime, Mahler, violin solo
Distance	Ostinato, mandolin, ragtime, Mahler, flautando,	**Solitude**	Mandolin, ragtime, violin solo
Optimism	Bells, broken chord, ragtime	**Urban**	Blaring
Spaciousness	Bells, mandolin, Mahler, flautando	**Signal**	Broken chord
Intrusion	Horn blaring, snap, broken chord, orgiastic, cluster, growl	**Folk**	Mandolin
Primitivism	Blaring, orgiastic, growl, scales and trills	**Sublime**	Mahler

It is also possible to plot the topics along various scales such as consonance, dynamic, fragmentation, complexity, and motion (fig. 1), which demonstrate further types of connection and interaction as well as possibilities for ways that these elements can be grouped according to criteria of similarity and difference.

Figure 1: Suggested relationships of topics through various parameters





The combination of topics in the piece is thus able to give rise to two types of meaning: *identity* coming from the specific connotations of the topic in isolation and *interaction* coming from how the topics are grouped, their similarities and differences, and how they relate to each other. As Agawu suggests, this second area appears to be the more powerful source of potential meanings, due to the immediate increase in complexity providing more potential for diversity of interpretation.19 According to Kramer, the relationships between topics will always create ambiguity that demands listener interpretation, but there are also compositional devices that can be used to facilitate certain meanings.20

Grouping and Structure

One way that *Symphony-Antiphony* facilitates interpretation is through grouping the entries of certain topical elements together so that they are understood as categories, or 'clusters', that are part of a wider 'topical field' in Hatten's terminology.20 In order of introduction, these clusters appear roughly as shown in table 4.

Table 4: 'Clusters' of topics

	Introduced at:	Topics
A	2) 0:00	String ostinato
B	2) 1:05	Bells, string stabs, bassoon, fourths (introduced slightly later)
C	2) 2:50	Horn blaring, woodwind leaps
D	3) 0:00	Mandolin, Harp arpeggios, violin solo, broken chord
E	3) 1:06	Ragtime, snap, doleful
F	5) 0:00	Woodwind cluster, distortion, ostinato
G	5) 1:50	Scales and trills, growl
H	5) 2:46	Orgiastic, ostinato
I	6) 0:00	Mandolin (on piano), flautando
J	7) 0:00	Mahlerian paraphrase, horn and bassoon melodies, saltando

Frequently, the elements that are clustered together recur in combination. The **B** cluster for example is consistent in its combination of elements, even when at the beginning of section 5 it appears against cluster **F**. Other clusters tend to come apart. Cluster **D** for example never recurs in the same form, with 'broken chord' and 'mandolin' becoming more opposed; 'broken chord' aligning itself with **E** in section 4, for example, and 'mandolin' going on to recur as the main component of cluster **I**. There are also come clusters that are clearly closely related. The introduction of **B** at 1:05 of section 2 has the character of an abrupt expansion of **A**, although it goes on to recur independently from the ostinato. Similarly, **I** acts like an intensification of **D**, while **F** and **G** have an equivalent relationship to **C**. Given that most topics are introduced at an early stage, the meanings of the piece increasingly turn towards the 'interaction' type of meaning rather than 'identity', making the recontextualisation of topics very significant for creating a sense of development and variety. These changes are summarised in table 5 and figure 2.

Table 5: Changing relationships between topics

2)	**A**	**B**	**C**
0:00	Ostinato		
1:05		Bells, bassoon, stabs	
2:05	*Drops out*	Fourths, bassoon	
2:50			Blaring, leaping
3:00	*Returns*	*Full*	

3)	**A**	**B**	**C**	**D**	**E**
0:00	*Drops out*	Stabs		Mandolin, violin solo, broken chord, ww. melodies	
1:01				Broken chord in minor	
1:06					Snap, ragtime
1:45			*Disappears*	*Thins to solos*	
1:55	*Fragments*	Fourths			
2:37	*Drops out*	*Fragments*		*Fragments*	*Fragments*
3:30				Minor, bassoon melody	
4:20				Broken chord in harp, violin solo	

4)	**B**	**D**	**E**
0:00	Stabs	Broken chord	Snap, ragtime

5)	**A**	**B**	**E**	**F**	**G**	**H**
0:00	Ostinato	Bells, string melody		Ww. clusters		
0:56	*Drops out*	*Melody out*, stabs			Heavy percussion	
1:50					Growl, scales and trills	
2:11	Agitato hn. ostinato				*Ends*	Orgiastic
2:46	*Ends*	Hn. melody				
3:41			Snap			
3:52					Growl	Low winds
4:02			Ragtime		Scales	
4:32					Growl	Tutti chord

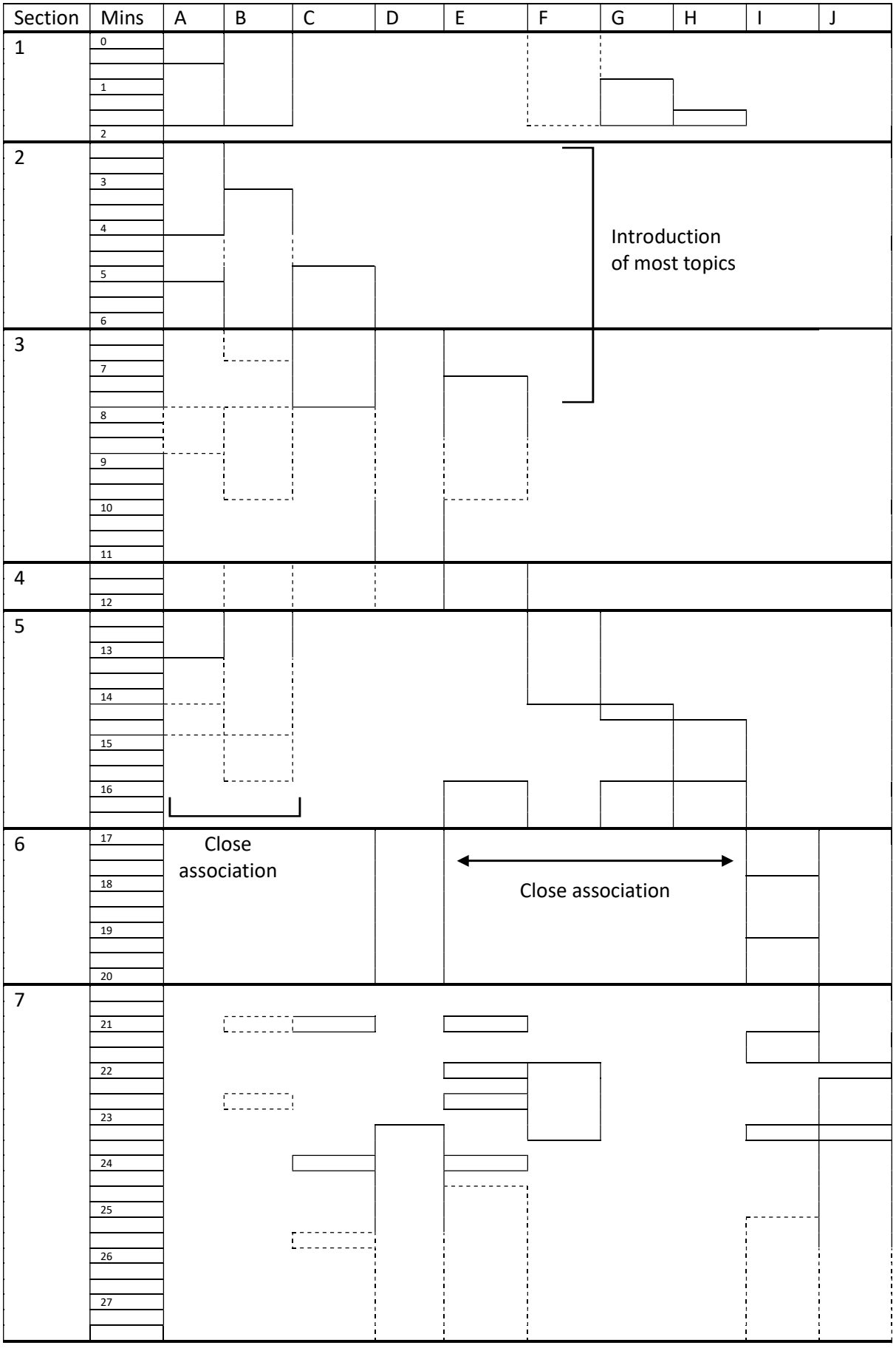
6)	**E**	**I**
0:00	Mandolin	
0:53		Archaic harmony
2:00		Flautando

7)	**B**	**C**	**D**	**E**	**F**	**I**	**J**
0:00							Mahler
0:50	Fourths?	7^{th} chord		Snap			
1:04						flautando	
1:34			Hn. bsn. melodies	Snap	Ww. clusters		*Drops out*
1:47							*Returns*
2:17	Fourths?			Snap			
3:05			Hn. bsn. melodies		*ends*		*Drops out*
3:23			mandolin				
3:40				Snap			*Returns*
4:01		7^{th} chord					Soltando
4:50							Isolated string entries
5:28		Dark chord	*Fading out*				*Fading* to sustained chord
7:15			Mandolin	Snap			

Figure 2: Relationships of clusters

Full lines indicate the presence of a cluster, dotted lines indicated an altered or incomplete presence.

The sections indicated on the right refer to ideas about larger scale structure discussed later.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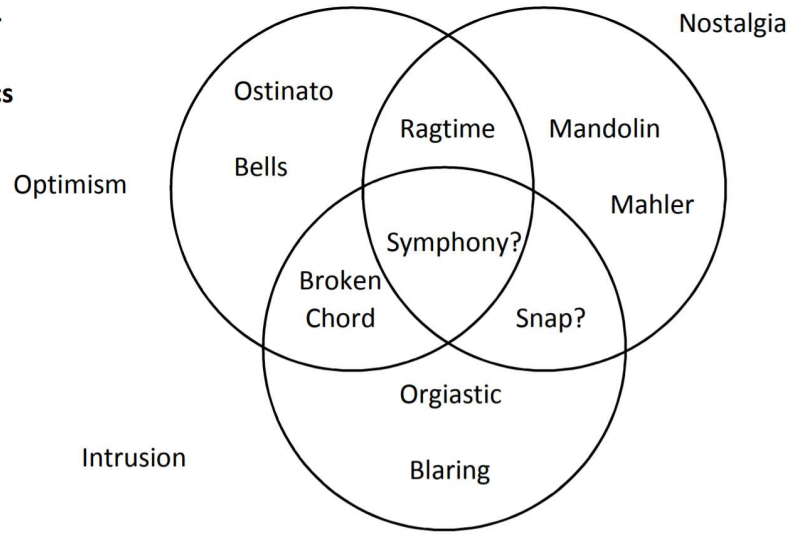
Some particularly striking examples of recontextualisation include the combination at 3) 4:20 of 'broken chord' in harp harmonics and 'mandolin' in solo violin, which brings these previously opposed elements into a melody and accompaniment relationship, suggesting 'rest' or 'inwardness'. 4) clusters together string stabs from **B**, broken chord from **D**, and snap and ragtime from **E** to form a temporary new cluster that brings together some of the most rhythmic elements from the previous music, bridging the earlier opposition between clusters, but with **E** now unequivocally in the foreground, lending the topic a new sense of propulsion. The beginning of 5) is also striking, layering **F** against **B** to add a further layer of complexity in a similar manner to the layering of **B** against **A** at 1:05, but this time with a much more negative effect that suggests 'instability' and 'conflict', rather than 'spaciousness' and 'optimism'. These brief examples show how reorienting the combination of topics can allow them to attract new meanings, reflecting Zbikowski's emphasis on categorisation as the basis of musical understanding.21

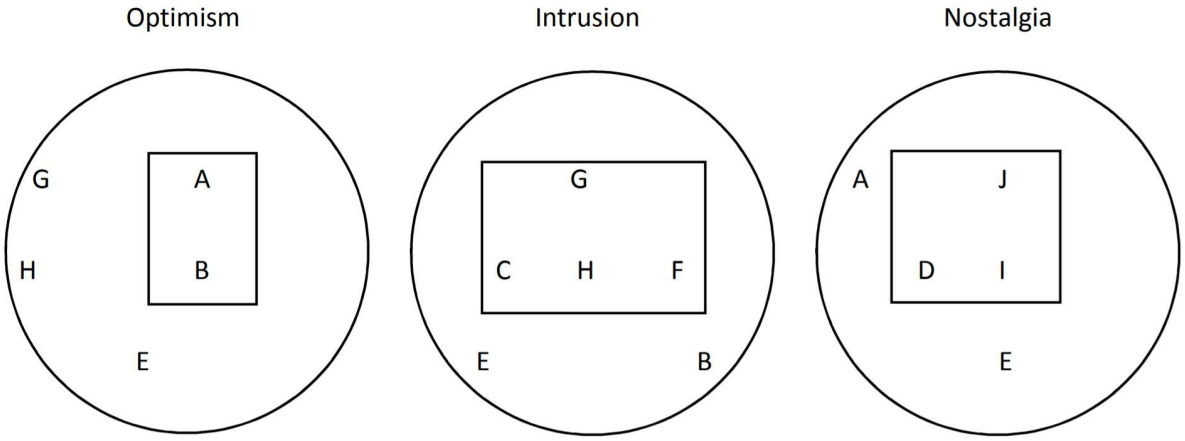
The groupings of elements into clusters also enables interpretation of larger structural units by emphasising the shared qualities between their component parts. Clusters **A** and **B** both potentially suggest *optimism*, uncertain in **A** and then stabilised in **B**. **C** represents a violent *intrusion* that disturbs this sense of naivety. **D** and **E** connote different elements of *nostalgia* and *memory*, with **E** forming something of a bridge to the character of **A** and **B**, through shared rhythmic elements. **F** links to the intrusive quality of **C**, while **G** imparts to this a more directional element from **A** and **B**, which **H** takes further, also suggesting a connection to the opening 'Symphony'. **I** is the most clearly nostalgic section, clarifying the elements introduced by **D**, while **J** takes this element of nostalgia and subjects it to an expressive realignment through the late introduction of a new 'Mahlerian' topic. The combination of topical elements in *Symphony-Antiphony* thus seems to crystallise some of the potential relationships suggested earlier by their shared characteristics (fig. 3). I would suggest that this combination also enables further interpretations that would not be available otherwise. For example, the intrusive 'snap', when combined with 'Mahler' is recharacterized as something like 'dying away', through its sonic profile of attack and decay that Grimley refers to as a 'dusty musical death'.22

Figure 3: Model for interaction of topics



This results in the combination of the clusters into three main groups suggesting *optimism* (**A**, **B**, elements of **E**), *nostalgia* (**D**, elements of **E**, **I**, **J** in altered form) and *intrusion* (**C**, **F**, **G**, **H**) (fig. 4). There are of course also elements for example of 'intrusion' in **E** through the snap topic and even perhaps of optimism in **G** and **H** through the forward-directed motion, but the way that the clusters are grouped brings to the fore certain characteristics that suggest large scale shifts. The creation of these larger scale categories creates rich possibilities for the interpretation of musical form on a higher level, through moving between sections that emphasise these three qualities and bring them into different relationships.

Figure 4: Categorisation of clusters according to prototype theory[22]



Proximity to the centre indicates a typical example of the category. Proximity to the edge indicates an atypical example of the category.

Interactions

Another level of 'interaction' meanings in topics can come from how they interact, rather than how they are grouped. The interaction of 'horn blaring' and 'bells' is clearly oppositional given that the former tends to intrude on the latter at apparently random intervals that interrupt its progress. By contrast, the relationship of 'bells' to 'string ostinato' is clearly supportive, with the two combining neatly together to form a larger composite. The relationship of 'fourths' and 'bassoon' at 2:05 is ambiguous with the two seeming neither to oppose nor support one another but continuing relatively independently. These interactions provide rich potential for interpretation, especially in the case of relationships of conflict which tend to be 'marked' and therefore demand an interpretative response.23

In his writing on multimedia, Cook categorises the types of interaction that can occur between elements as *conformance*, *contest*, and *complementation*.24 *Conformance* implies that the elements are working together or mutually supportive in some way, *complementation* implies that they are carrying out different roles or are in some way separated, *contest* implies that they are opposed or in some way obstruct each other. As Cook himself argues, these concepts do seem capable of wider application, given that music is 'always multimedia', in that it forms meanings through interaction with its immediate and wider socio-cultural contexts.25 Wishart, among others, has suggested similar criteria for electroacoustic music, based on the density of events and their relationships.26 In the case of *Symphony-Antiphony* these criteria can be used to suggest how the interaction of topical layers can create 'associative' meaning.

It is possible to categorise most of the relationships in this piece this way. Although at certain points, like sections 1 and 5, the elements are not clearly separated but blur together, the composition does use changing relationships between materials as a structural principle. The conformant combination of **A** and **B** at 2) starts to show signs of complementation at 2:05, becoming more pronounced with the introduction of glissandi, which then progresses to direct contest between **B** and **C** at 2:50,

exacerbated by the return of **A** at 3:00. This quality of conflict continues into the beginning of 3) and with the introduction of cluster **E** at 1:06, but this gradually returns to a kind of complementation, once the horn blaring ends, with fragments of different topics overlaying a 'broken chord' ostinato and appearing in succession rather than simultaneously. At 4:20 the relationship has returned to a conformant one, combining the 'broken chord' and 'mandolin' topics in a melody and accompaniment formation for the first time.

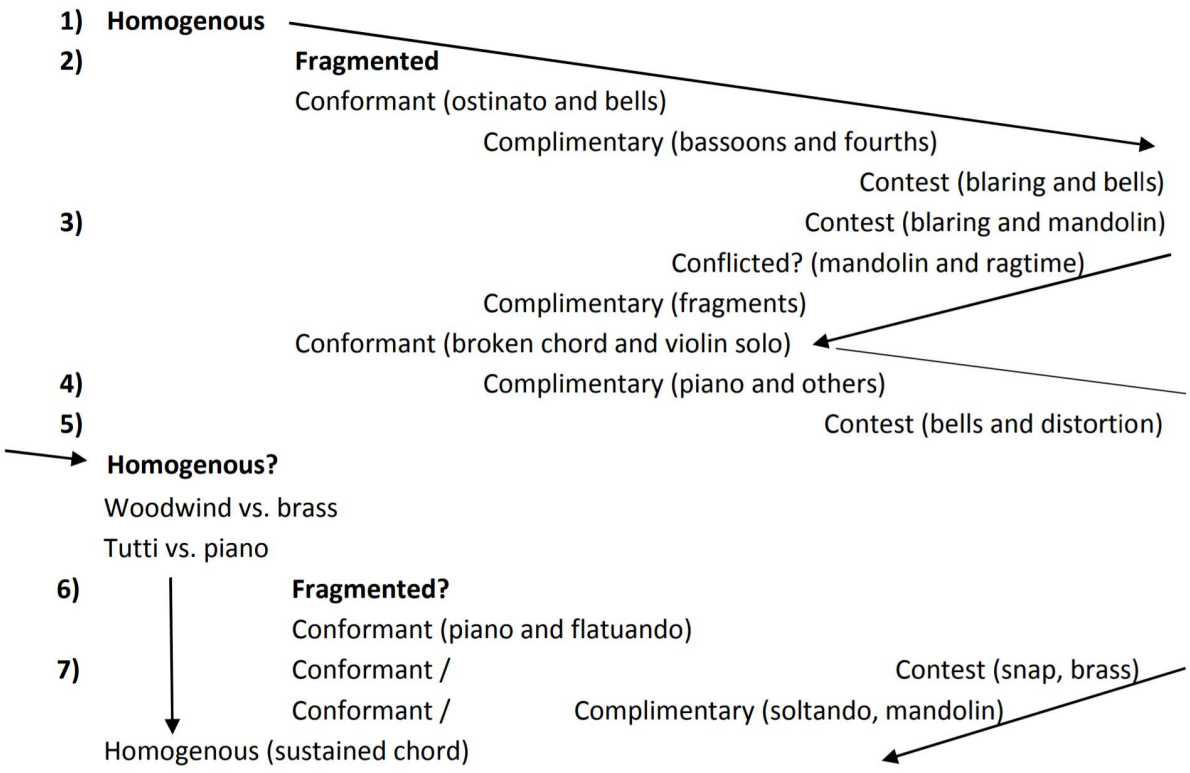
Section 4 layers intrusive elements against a piano solo but avoids a clear sense of relationship between the two. This seems to form a bridge to the outright conflict that the succeeding passage implies through the layering of clusters **B** and **F**. This develops into an opposition between the woodwind section, horns, and heavy brass, trading overlapping entries that gradually move closer, now actively responding to each other rather than co-existing – triggering rather than interactive in Wishart's terminology – and suggesting an escalating conflict.27 Eventually these elements are homogenised into a tutti that is set against various elements – 'snap', a low D-E-F♯ ascent suggesting an augmentation of **A**, and then repeated references to 'ragtime'. This point in the piece seems to represent the apotheosis of the contest relationship, combining various topics and pitting them against a single other.

Section 6 is the apotheosis of the conformant relationship, with all the elements taking part in a melody and accompaniment texture akin to 3) 4:20. Section 7 is more complex. Other elements are layered against the 'Mahlerian' topic in a manner that usually suggests conflict, but the relationship also at times becomes conformant. For example, the 'intrusive' brass chords at 0:50 and 1:47 are synchronised with the string parts, while the 'snap' at 3:40 seems to underline a cadential point. Similarly, the '*saltando*' motif bridges the opposition between 'snap' and the 'Mahlerian' topic, by combining the element of attack and decay with the suggestion of a tonal key area. Even more ambiguous are the bassoon and horn melodies, which are never clearly distinct from nor a part of the music in the strings, at times continuing the Mahlerian effect while at others seeming to reference

other music, such as the B-C♯-D♯-F♯ motif at 7) 3:12, reminiscent of bars 37-39 in the 1st movement of Sibelius's 4th symphony, a useful late-Romantic reference point. The result is to override the pervasive sense of interaction that characterised the earlier part of the piece in favour of a sense of blur and changeability that creates ambiguity over the interaction between elements and the extent to which they can be considered separate at all.

The expressive trajectory of the music can thus be related to the changing way that the topical elements interact. The opening section presents a homogenous mass which collapses, separating into the fragments that make up the rest of the piece. Sections 2 and 3 constitute an arc moving from conformant to conflicting relationships and back again, section 4 acts as a transition to 5 that forms the apotheosis of contest relationships, which immediately finds it opposite in section 6. Section 7 adds an ambiguous note that suggests a return to the more homogenous formation of the opening but with a vastly different aesthetic quality (fig. 5).

Figure 5: trajectory between different types of relationships using Cook's criteria



Virtual worlds and temporality

Thus far we have established the possibility of a compositional approach that is concerned with the use of distinct 'topical' components, their transformation, their gathering into 'clusters', their recontextualisation and reorientation, and their forms of interaction. All of this suggests the usefulness of some theory drawn from ecological psychology, which formulates pieces of music as 'virtual worlds' that listeners can respond to in much the same way as they would daily life, understanding these elements through criteria of proximity, size, direction, gesture and motion as the above discussion of topic has implied. Eric Clarke argues that this conceptualisation is useful in that it engages with the evolutionary functions of the hearing system, applying Bregman's theory of 'auditory scene analysis'.28 Various others, such as Hamilton and Davies, have argued for the importance of ideas of motion, size and direction in music listening, while Cox theorises that music is always interpreted as 'mimetic' of action.29 This idea is matched by broader conceptualisations, such as Maiese's idea of 'embodied cognition', which suggests that thinking more widely is bound up with ideas of physicality and movement, or Beaumont's argument that, from an evolutionary perspective, recognising these qualities is likely to be a strength of the hearing system.30

Wishart has developed an approach that makes 'landscape' an integral part of the compositional process, for reasons similar to those above.31 I would suggest that his ideas can also be applied to orchestral music, which can create a sense of space in similar terms, albeit to a slightly more limited extent. For example, *Symphony-Antiphony* invites the impression of an opposition between dense, enclosed spaces and open ones. The chromatic funnelling out with which the piece begins suggests a density and claustrophobia that is contrasted with the spacious succeeding music, communicated first through monody and then through the 'open' harmonic character of cluster B. Overall however, sections 1-5 of the piece present a dense space by comparison to the openness of 6 and 7. Sections 2-4 imply something like an urban environment (complete with 'car horn'-like sonorities from the horns), filled with conflicting sounds coming from various places (quite literally in a live setting), which

in turn shift into the foreground and background. This kind of 'landscape' approach is contrasted with section 5, which creates the impression of a single large entity moving progressively closer in a manner more like the opening. Section 6 similarly seems to present a single object, but the effect is one of intimacy. Section 7 returns to the landscape effect but in a transformed version where the density of information is substantially decreased, adapting some of the intimacy of the previous section to suggest an internalised dreamscape rather than an external cityscape, playing on a rest/sleep trope for musical endings as discussed by Brown.32 In this manner, we can understand topics as working on a larger scale: as forming *landscapes* within which interactions can take place, or as coalescing into *gestures* that create expectations of tension, release and direction (table 6).

Table 6: Categorisation of sections through spatial criteria

	Landscape	**Gesture**
External	2, 3, 4	1, 5
Internal	7	6

The distinctions drawn in table 6 also suggest how this approach to structure can be connected to the listening experience by facilitating certain stances. For example, the 'gestural' passages encourage a teleological mode of listening, based on expectations about direction and progression, while the 'landscape' passages promote a more static approach.36 Similarly, *pace* Stockhausen's concept of experiential time, the fluctuations in density of events can suggest fluctuations in temporal experience, so that high density passages create an impression of rapidly moving time for example.33 This is an idea that Jonathan Kramer has written on, stating that a substantial element of music concerns experiencing different forms of temporality that he situates on a continuum between static 'being' and teleological 'becoming', which bear a substantial similarity to these two categories of landscape and gesture.34

The different 'virtual spaces' of *Symphony-Antiphony* seem to encourage changes in listening approaches along Kramer's scale. The opening gesture suggests a 'becoming' form of perception,

through its gradual extension of the pitch field out from the opening note, its rapid expansion of instrumental forces – introducing strings and winds from 0:33, percussion from 0:49, and heavy brass from 1:10 – and its apparent changes of speed, with the motion introduced at 0:33 suggesting an *accelerando* and the *tutti* effect at 1:57 a pulling back. This facilitates a forward-looking listening, oriented towards the catastrophe at 2:03. At the same time, the increasing density of information can also lead to the effect of the listener being 'left behind', as the music progresses at a faster rate than can be processed, creating an overwhelming impression that becomes more akin to 'gestural' time (in that a sense of continuous linear flow is disrupted) .35 In this way the compositional approach can create an effect of musical temporality gradually moving outside of the listener's control through increasing the rate of change and density of information, as discussed by Meyer.36

The following soundscape creates more of a 'being' effect. The energy of the string ostinato proves to be undirected, given that it is almost entirely focussed on just three notes and continuously falters, discouraging a predictive form of listening, which makes the change at 1:05 utterly surprising rather than the product of expectation. Indeed, sections 2-4 all concern the interaction of different materials without an obvious direction, thus facilitating listening that attends to different materials as they come and go without strong expectations of development. The potential for 'vertical' time (by which Kramer means the sensation of a single moment being prolonged) is however broken up by intrusions such as 2) 1:05 and 2) 2:50 and 3) 1:06, which instead encourage 'gestural' temporality. Elements of development are also suggested through the transformation of materials and the thickening and thinning of the texture. While these changes are not oriented towards a particular goal, there is a sense of energy, so that the passage occupies a space between being and becoming.

There follows a transformation of these materials into the strongly goal-directed section 5 that, like the opening, gradually becomes unpredictable as the rate of change escalates and becomes more changeable. Subsequently, an opposition is suggested between two widely distinct temporalities of expectation and reminiscence, through the interspersing of tutti rising gestures with recollections of

the earlier 'ragtime' piano figure at 5) 4:02. This overt layering of temporal streams is an extension of a similar approach in sections 2 and 3, where elements suggesting different temporalities are overlaid, such as 'string ostinato' and 'mandolin', with their distinct connotations of optimism and nostalgia. The presence of multiple temporal streams in music has previously been described by Lewis as 'retrospective time', creating the impression of combining a musical 'present' made up of the rising gestures and 'past' made up of repetitions of music heard earlier in the piece.37 Sections 6 and 7 are the most 'vertical' of the piece, with their relatively low density of information and gradual process of change. This is particularly true of 6, but in 7 elements of surprise are interspersed that require a higher level of information processing. The way that these elements are gradually assimilated – the brass chord becoming quieter and changing from a dominant 7th to a half diminished 7th, the 'snap' becoming synchronised with 'Mahler' – facilitates moving towards a more static temporality, matching the homogenisation of the separate elements discussed above.

Overall Form

The above section has attempted to show how musical structures can be conceptualised as developing through changes in listener orientation in terms of either the distinction between musical 'landscapes' and 'gestures' or different temporalities. Although it sounds dangerously deterministic to 'compose' the changing states of listeners, I would argue that these changing states are the most important substance of music and are in any case always influenced by the compositional process. The only change here is to actively consider this process of change as a component of musical structure rather than as a subsequent effect of it. By controlling parameters such as the level of predictability, density of events, level of motion and directionality, it is possible to provide stimulation for changing listening stances. Listener responses cannot be pre-determined, but the music 'affords' the prompts that can facilitate responses, which the listener is able to respond to in their own manner. This provides the essential link between the apparent interpretative distance of topic theory and the 'visceral

immediacy' musical experiences, thereby aiding an alignment of compositional and listening grammars.38

The clear correlation between passages of 'being' and 'becoming' and topical elements in *Symphony-Antiphony* helps create this link (table 7). The 'intrusion' grouping is commonly associated with the passages of greatest direction – most obviously in sections 1 and 5 – which seems to match Meyer's writing on the importance of flouted expectations for musical direction.39 It is also worth noting that the appearance of cluster **C** (associated with 'intrusion') at 2) 2:50 leads to the most complex passage throughout sections 2-4, including a number of conflicting layers with different topics undergoing transformations and moving between registers (for example the 'broken chord' shifts to a minor key and 'violin solo' transitions down into the cello). By contrast the 'nostalgia' group is associated with non-directional passages, most notably in the final two sections, but also 3) 4:20 for example. The 'optimism' grouping seems to fall somewhere between these two extremes, being focussed in sections 2-4 which are neither obviously static nor developmental. These changes also align with the different virtual spaces outlined above (table 6). The process of moving between different listening states seems to compliment the semiotic trajectory of the piece to form a large-scale form based around facilitating listener responses and interpretations.

Table 7: Comparison of interpretative and temporal structures

Section	Main interpretations	Temporality	Virtual Spaces
1	Intrusion	Teleological	Object in motion
2	Optimism	Gestural - polytemporal	Cityscape
3	Optimism (nostalgia)	Polytemporal – gestural - static	
4	Optimism (nostalgia)	Gestural	
5	Intrusion	Teleological - polytemporal	Object in motion
6	Nostalgia	Vertical	
7	Nostalgia (intrusion)	Gestural- static	Dreamscape

The topical and spatial elements are connected by their shared emphasis on the play of oppositions. In a visceral sense the piece moves between various extremes, with a high point of intensity, dynamic,

registral breadth, complexity and energy – as in sections 1 and 5 – always followed by one opposed in character – sections 2 and 6. The move towards total stasis in sections 6 and 7 seems to complement the frenetic activity of the first half of the piece; the relatively homogenous sound of sections 5 and the end of 7 are in opposition to the multi-layered character of sections 2 to 4; the soloistic character of sections 4 and 6 are followed by the *tutti* scoring of 5 and 7 – with the former using the woodwind and brass as full sections for the first time and the latter doing something similar for the strings. The gestural-spatial experience of the piece is thus formed around various forms of opposition across successive moments and between different sections.

A similar case holds for the 'associative' structures. There is an obvious opposition in place between the 'optimism' and 'nostalgia' groupings, with optimism in the ascendency in sections 2-4, but with elements of nostalgia coming towards the surface in section 3, and dominating sections 6 and 7. Cutting across this is a further opposition between security and instability, so that **A** constitutes an unstable form of optimism by comparison to **B**, while section 2 constitutes a secure form of optimism by comparison to 3 and 4, which become more ambiguous. Similarly, **D** is more archetypally nostalgic than **E**, as is section 6 by comparison to 7. This relationship is summarised in table 8a, suggesting an overall progression from optimism to nostalgia.

Table 8a: Topical oppositions

	Optimism	**Nostalgia**
Secure	B 2)	D I 6)
Unstable	A (E) 3) 4)	J (E) 7)

Opposition

On another level, the third category of 'intrusion' might represent a kind of destructive nihilism opposed to either of these perspectives. Again, it is possible to delineate this into more secure and unstable forms with the elements **G** and **H** in section 5 constituting a more stable form than the intrusions of **C** in sections 2 and 3 or of **F** in section 7 (table 8b).

Table 8b

	Optimism	Nostalgia	Nihilism
Secure	B 2	D I 6	G H 4
Unstable	A (E) 3 4	J (E) 7	C F (2 3 7)

Opposition

And then, all these elements seem to be a response or opposition to the opening gesture – or symphony – that gives rise to the 'antiphony' (table 8c).

Table 8c

Antiphony				**Symphony**
	Optimism	**Nostalgia**	**Nihilism**	1
Secure	B 2	D I 6	G H 4	
Unstable	A (E) 3 4	J (E) 7	C F (2 3 7)	

Opposition

This is why the cursory sense of opposition implied by Gudmundsen-Holmgreen's title proves to be so important. For these oppositions to form a major part of the listening experience, it is useful to have an interpretative prompt that encourages listeners to actively take up the elements that the music affords and bring them into their hearing of the piece. It is through the play of opposition that the music provides a means of utilising the rich interpretative potential of the various topics by connecting them into landscapes and gestures. As discussed through Agawu's 'narrative' and Newcomb's 'narratology', these types of oppositions provide the basis for narrative archetypes that have a strong history in musical interpretation.40 Various narrative archetypes are implied: the opening 'catastrophe' and its repercussions moving through confusion, to striving and then acceptance; a clash between optimistic and nostalgic impulses, also suggesting an opposition between 'external' and 'internal' soundscapes; the relationship of the individual, in the form of the solo piano, and the collective, that clash in passages like 5) 4:02, with the piano being foregrounded in general in sections 4-6, suggesting its status as a 'protagonist'. This 'narratological' perspective on structure provides a

means whereby the 'associative' meanings created through topics, gestures and landscapes can work on the level of overall form, with their interactions mapping out narrative archetypes that create listening expectations of continuity, succession, conflict, and resolution in an equivalent manner to tonal processes for example.

Conclusion

I believe that *Symphony-Antiphony* is a strong example of how compositional approaches can be mobilised to maximise potential for 'associative' meaning. The majority of the piece is formed through the interaction of individual 'topics'. These have a form of meaning based on *identity*, that can be altered through transformation and elaboration, and on *interaction*, that can be altered through grouping into *clusters*, recontextualisation, and changing the relationships between topics. The clusters themselves can have similar types of interactions and can be combined simultaneously to emphasise similar types of qualities or successively into *gestures* that suggest certain trajectories. The combination of topical elements can in this way suggests *landscapes* where elements can be judged according to criteria of distance, energy, and motion, and which encourage different listening approaches based on, for example their level of directionality or complexity, combining an immediate, visceral form of meaning alongside the referential one based on the connotations of topics. This encourages the construction of larger scale musical *narratives* by listeners based on the different types of interactions between elements and how these succeed one another. This conceptualisation attempts to draw a connection between micro and macro structure, while staying rooted in 'associative' forms of musical meaning. Topics are amalgamated into clusters that are combined to form gestures or landscapes, which create changing sensations of temporality and narrative.

In this manner, I would argue that it is possible to build up coherent musical forms with their basis in 'referential' meaning, which provides a means of responding to the issue of engaging with communication in post-tonal music, as discussed in my introduction. In contrast to Wishart's stated

intention, not everything discussed above is entirely subject to 'empirical verification'.41 It does however attempt to engage very closely with musical interpretation, using the concept of 'associative' meaning to try and bridge the gap between compositional and listening grammars. I realise that in doing so, it becomes open to multiple critiques via issues of subjectivity, ambiguity, and authorial intentions, among many others. However, I believe that the potential benefits of drawing a closer relationship between analysis and perception make these problems worth weathering. The approaches I have outlined above have their flaws, but I believe that this is not reason enough to simply avoid engaging with these essential components of musical understanding, as Mcclary for example has argued.42 There is certainly a great deal of further refinement to be made but, as a means of responding to the issue of communication in post-tonal classical music, this avenue is a potentially fruitful one.

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Figures

Table 1: Symphony-Antiphony basic structure

Section	Length (in recording)	Description
Symphony	2:13	Gradual expansion towards collapse
Antiphony 1	3:58	Ostinato, wind intrusions
Antiphony 2	5:17	Wind intrusions, mandolin
Antiphony 3	0:45	'Ragtime cadenza'
Antiphony 4	4:39	'Orgiastic climax'
Antiphony 5	3:25	'Hymnic meditation'
Antiphony 6	7:33	'Mahlerian paraphrase'

Table 2: List of Topics

Name	Introduced at	Name	Introduced at
String ostinato	2) 0:00	Bassoon	2) 1:05
Bells	2) 1:05	String stabs	2) 1:05
Blaring horn and leaping winds	2) 2:50	Fourths	2) 1:20
Mandolin	3) 0:00	Violin solo	3) 0:03
Broken chord	3) 0:03	Woodwind cluster	5) 0:00
Snap	3) 1:06	Growls	5) 1:50
Ragtime piano	3) 1:06	Scales and trills	5) 1:50
Orgiastic	5) 2:11	Flautando	6) 2:00
Mahlerian paraphrase	7) 0:00	Soltando	7) 3:40

Table 3: Shared interpretations of topics

Interpretation	Topics	Interpretation	Topics
Simplicity	Ostinato, broken chord, (Mahler), fourths	**Non-musical**	Blaring, snap, soltando
Energy	Ostinato, bells, snap, ragtime, orgiastic, stabs, scales and trills	**Nostalgia**	Mandolin, ragtime, Mahler, violin solo
Distance	Ostinato, mandolin, ragtime, Mahler, flautando,	**Solitude**	Mandolin, ragtime, violin solo
Optimism	Bells, broken chord, ragtime	**Urban**	Blaring
Spaciousness	Bells, mandolin, Mahler, flautando	**Signal**	Broken chord
Intrusion	Horn blaring, snap, broken chord, orgiastic, cluster, growl	**Folk**	Mandolin
Primitivism	Blaring, orgiastic, growl, scales and trills	**Sublime**	Mahler

Figure 1: Suggested relationships of topics through various parameters

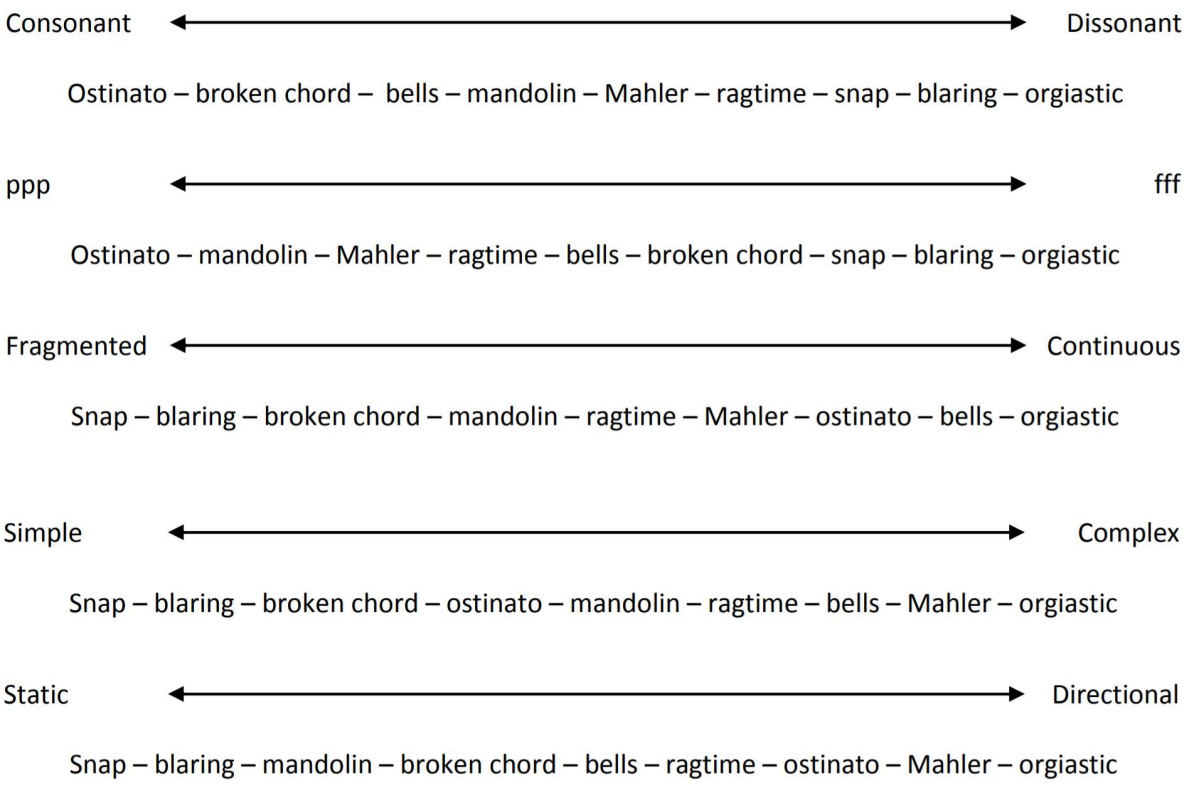


Table 4: 'Clusters' of topics

	Introduced at:	**Topics**
A	2) 0:00	String ostinato
B	2) 1:05	Bells, string stabs, bassoon, fourths (introduced slightly later)
C	2) 2:50	Horn blaring, woodwind leaps
D	3) 0:00	Mandolin, Harp arpeggios, violin solo, broken chord
E	3) 1:06	Ragtime, snap, doleful
F	5) 0:00	Woodwind cluster, distortion, ostinato
G	5) 1:50	Scales and trills, growl
H	5) 2:46	Orgiastic, ostinato
I	6) 0:00	Mandolin (on piano), flautando
J	7) 0:00	Mahlerian paraphrase, horn and bassoon melodies, saltando

Table 5: Changing relationships between topics

2)	A	B	C
0:00	Ostinato		
1:05		Bells, bassoon, stabs	
2:05	*Drops out*	Fourths, bassoon	
2:50			Blaring, leaping
3:00	*Returns*	*Full*	

3)	A	B	C	D	E
0:00	*Drops out*	Stabs		Mandolin, violin solo, broken chord, ww. melodies	
1:01				Broken chord in minor	
1:06					Snap, ragtime
1:45			*Disappears*	*Thins to solos*	
1:55	*Fragments*	Fourths			
2:37	*Drops out*	*Fragments*		*Fragments*	*Fragments*
3:30				Minor, bassoon melody	
4:20				Broken chord in harp, violin solo	

4)	B	D	E
0:00	Stabs	Broken chord	Snap, ragtime

5)	A	B	E	F	G	H
0:00	Ostinato	Bells, string melody		Ww. clusters		
0:56	*Drops out*	*Melody out*, stabs			Heavy percussion	
1:50					Growl, scales and trills	
2:11	Agitato hn. ostinato				*Ends*	Orgiastic
2:46	*Ends*	Hn. melody				
3:41			Snap			
3:52					Growl	Low winds
4:02			Ragtime		Scales	
4:32					Growl	Tutti chord

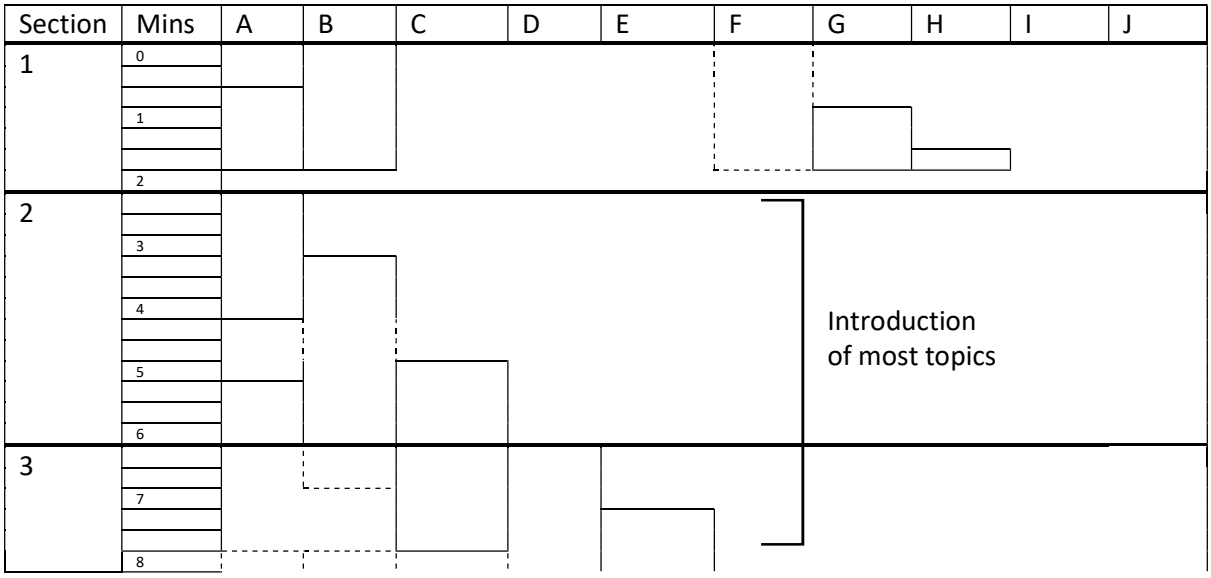
6)	E	I
0:00	Mandolin	
0:53		Archaic harmony
2:00		Flautando

7)	B	C	D	E	F	I	J
0:00							Mahler
0:50	Fourths?	7th chord		Snap			
1:04						flautando	
1:34			Hn. bsn. melodies	Snap	Ww. clusters		*Drops out*
1:47							*Returns*
2:17	Fourths?			Snap			
3:05			Hn. bsn. melodies		*ends*		*Drops out*
3:23			mandolin				
3:40				Snap			*Returns*
4:01		7th chord					Soltando
4:50							Isolated string entries
5:28		Dark chord	*Fading out*				*Fading* to sustained chord
7:15			Mandolin	Snap			

Figure 2: Relationships of clusters

Full lines indicate the presence of a cluster, dotted lines indicated an altered or incomplete presence.

The sections indicated on the right refer to ideas about larger scale structure discussed later.



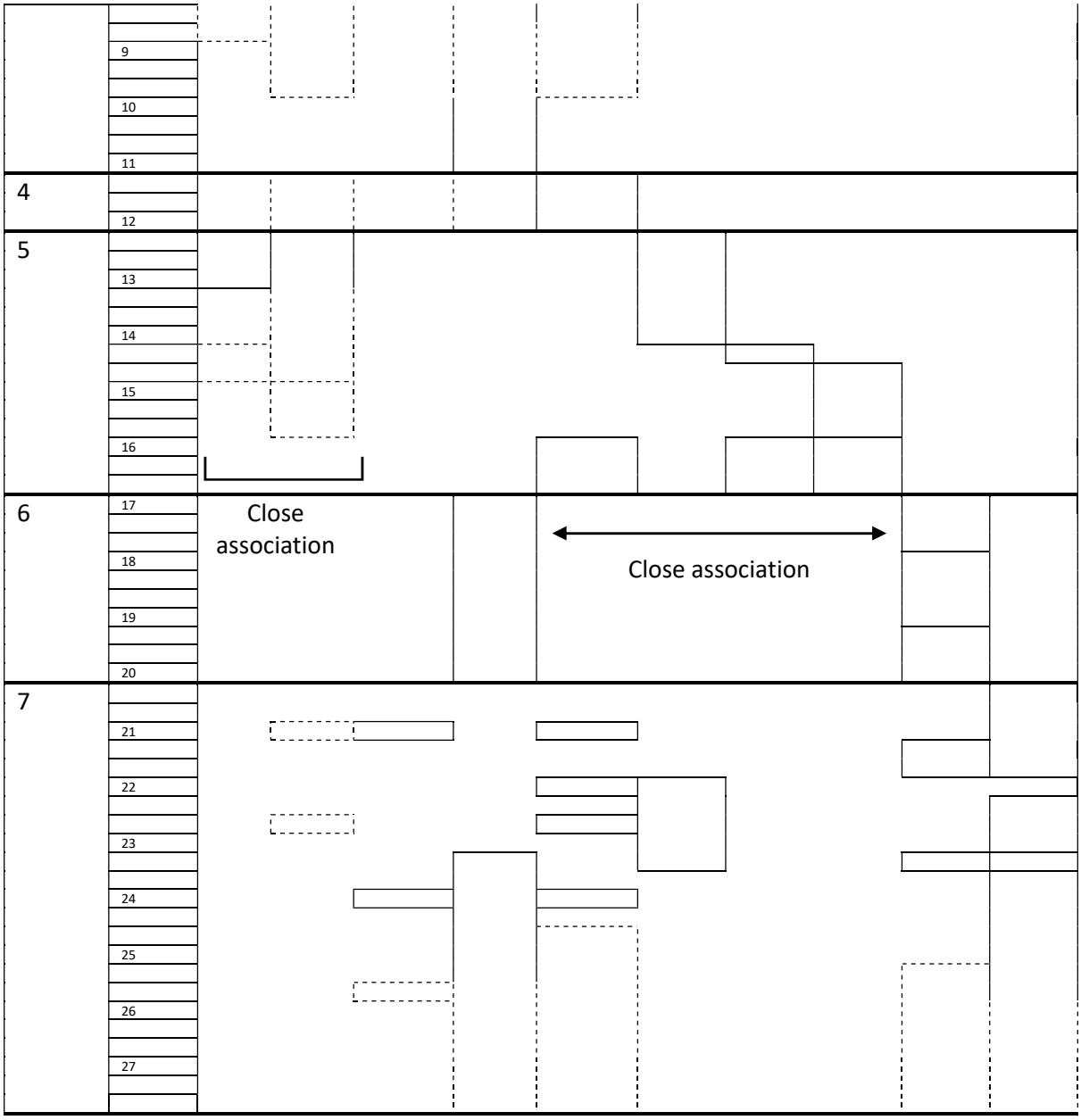

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Figure 3: Model for interaction of topics

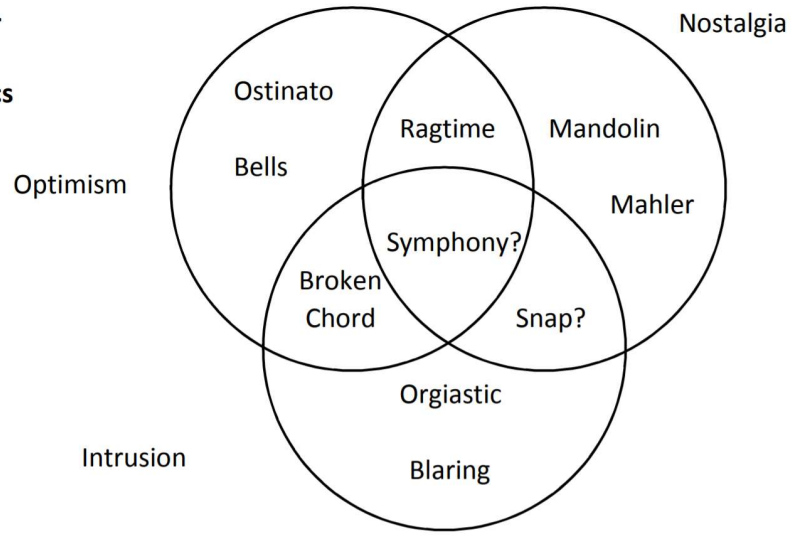
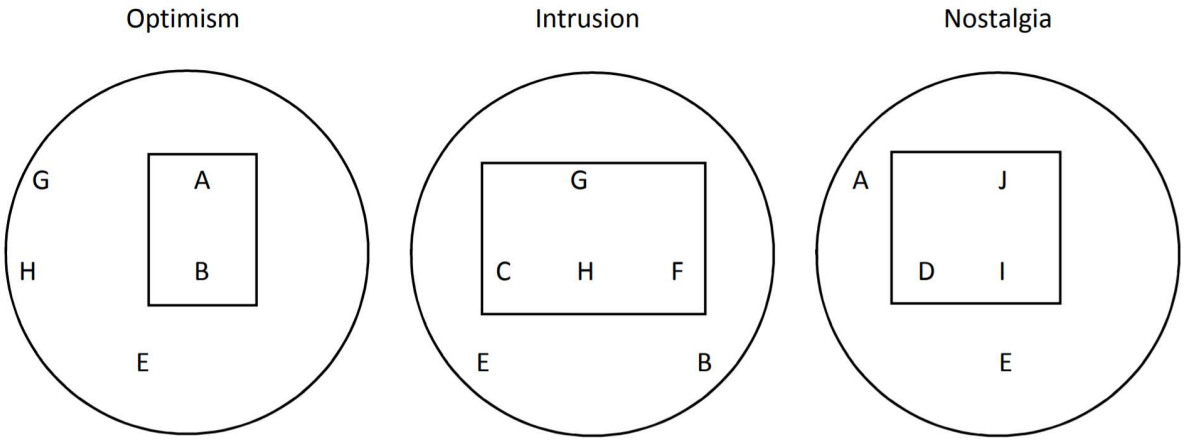


Figure 4: Categorisation of clusters according to prototype theory



Proximity to the centre indicates a typical example of the category. Proximity to the edge indicates an atypical example of the category.

Figure 5: trajectory between different types of relationships using Cook's criteria

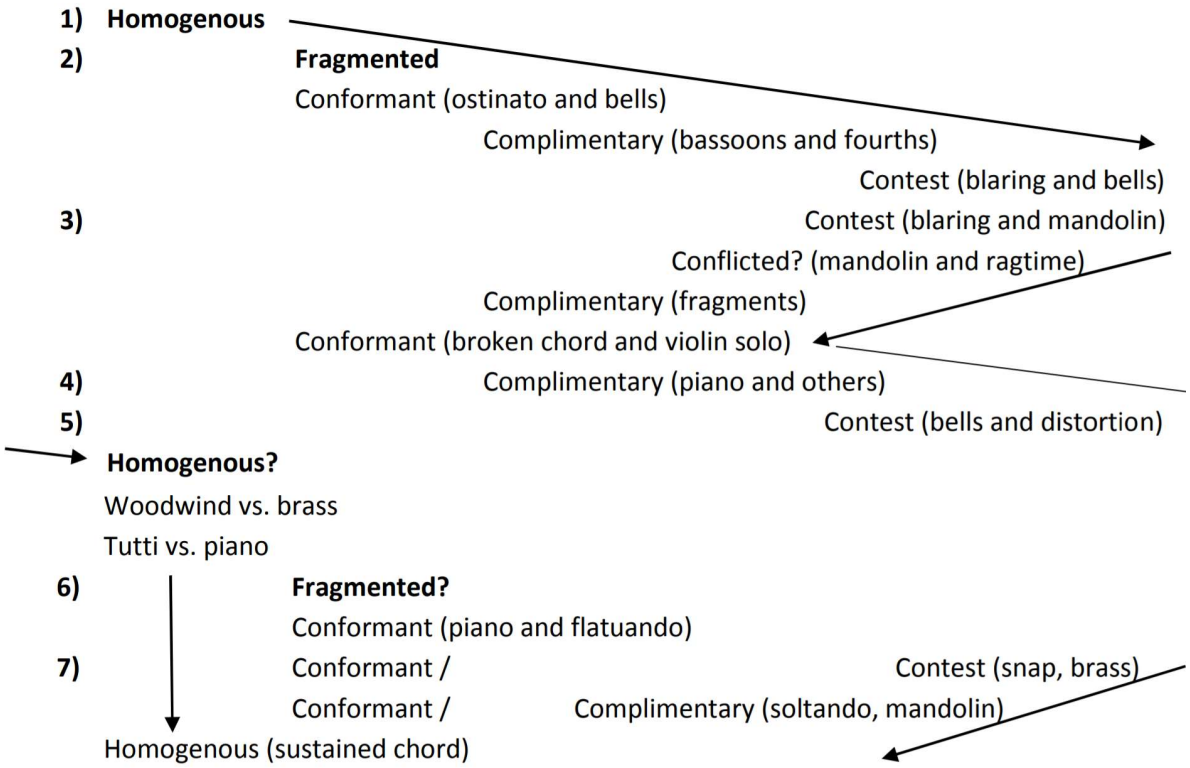


Table 6: Categorisation of sections through spatial criteria

	Landscape	**Gesture**
External	2, 3, 4	1, 5
Internal	7	6

Figure 7: Implied changes in temporality

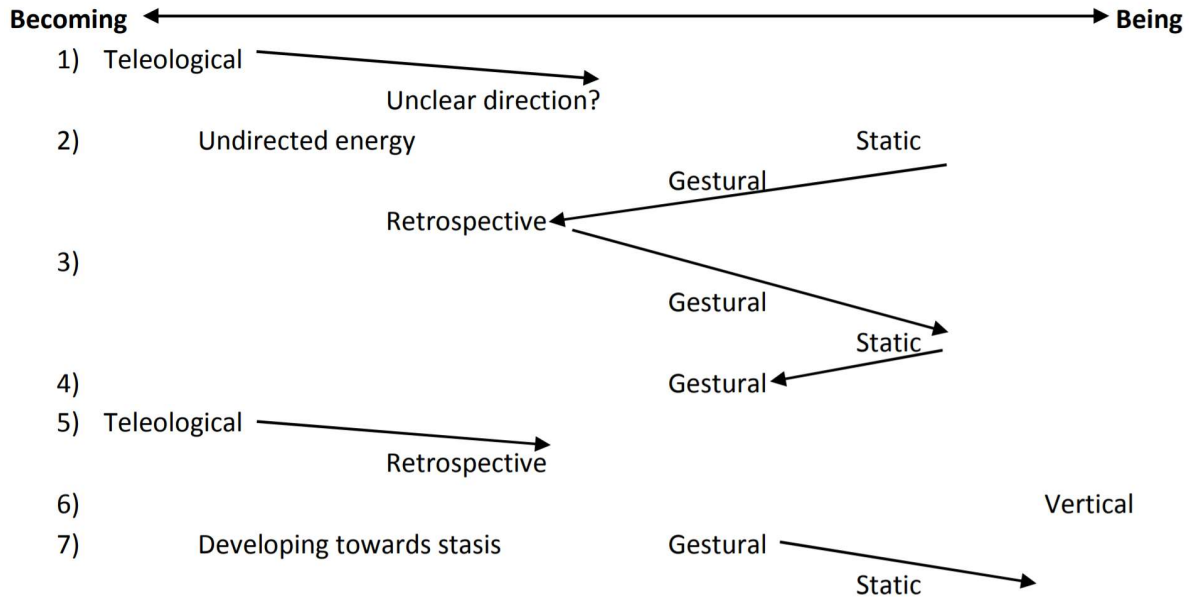


Table 7: Comparison of interpretative and temporal structures

Section	Main interpretations	Temporality	Virtual Spaces
1	Intrusion	Teleological	Object in motion
2	Optimism	Gestural - polytemporal	Cityscape
3	Optimism (nostalgia)	Polytemporal – gestural - static	
4	Optimism (nostalgia)	Gestural	
5	Intrusion	Teleological - polytemporal	Object in motion
6	Nostalgia	Vertical	
7	Nostalgia (intrusion)	Gestural- static	Dreamscape

Table 8a: Topical oppositions

	Optimism	**Nostalgia**
Secure	B 2)	D I 6)
Unstable	A (E) 3) 4)	J (E) 7)

Opposition

Table 8b

	Optimism	**Nostalgia**	**Nihilism**
Secure	B 2	D I 6	G H 4
Unstable	A (E) 3 4	J (E) 7	C F (2 3 7)

Opposition

Table 8c

Antiphony				**Symphony**
	Optimism	**Nostalgia**	**Nihilism**	1
Secure	B 2	D I 6	G H 4	
Unstable	A (E) 3 4	J (E) 7	C F (2 3 7)	

Opposition