Living Toys in Thomas Adès' *Living Toys*: Transforming the Post-Tonal Topic

Topic theory is plagued by a problem: syntax. For Kofi Agawu musical topics 'point to the expressive domain, but they have no syntax'.[1] More recently, William Caplin finds any link between topics and form 'rather tenuous', noting that any topical syntax is subservient to tonal syntax and form-functional implications.[2] Whilst topic theory can wonderfully increase our understanding of the historical contexts through elucidating how composers may have utilised common style types, grasping how these may relate to formal issues is so far relatively limited. But Agawu and Caplin are concerned with tonal music. What happens in post-tonal music when such strictures are no longer present? How might topics relate to the multitude of reimaginings of harmonic, rhythmic, and timbral syntax?

Transformational theory has a complementary issue: choosing *what* to relate in a transformational network. Micheal Buchler succinctly states that 'when you can't buy the segmentation, it is awfully difficult to digest the analysis'.[3] All transformational analyses strike a delicate balance between prioritising segmentation and network clarity. John Roeder lists guidelines for these object and transformation choices, including: aurally-salient objects, complete object family, prominent and repeated transformations, and application of transformations applied to other objects in the piece. Few works satisfy these requirements in a manner that could be deemed equal; in all analyses the art of balancing aural salience and network neatness can lead to significantly different results.

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[1] Agawu 1991, 20.
[2] Caplin 2005, 113.

In conflating these issues, this article proposes that topics—where aural salience is primary—can function as nodes of a transformational network. That is, whereas topic theory is faced with answering 'how to relate' salient objects, transformational theory's issue is with 'what to relate'. Specifically, I take a case study of the harmony of Thomas Adès' early chamber orchestra work *Living Toys* (1993) from the vantage point of topics. Given topic theory's power to aid a critical, sociological, even political interpretation—Caplin calls it 'one of the success stories of modern musicology'[4]—replacing each network node with a topically-rooted characteristics has the potential to enrich both analytical methods.

Approaching texts through networks of meaning echoes the literary analysis of Roland Barthes and Umberto Eco.[5] Through challenging conceptions of self-contained unity, they raised the status of the reader, free to enter a text from any point. No route is correct; there is no unified beginning nor end of a network of associations. Rather, the reader—or listener—slips and slides around the signifiers, each creating near-individualised forms. For example, Barthes describes how an 'ideal text' might be conceived:

> It has no beginning . . . we gain access to it by several entrances, none of which can be authoritatively declared to be the main one; the codes it mobilizes extend as far as the eye can reach.[6]

Evocatively applying Barthes' conception to music, we might view a work's topics as providing 'several entrances' into the work's harmony, rhythm, etc. Due to dependency on listener experience, no single topic can authoritatively be declared the primary entrance point. And as

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[3] Buchler 2016, 45.
[4] Caplin 2005, 113.
[5] Notably texts include Barthes 1974, Barthes 1977, Eco 1979, Eco 1989.
[6] Barthes 1974, 5.

each topic brings a different set of characteristics—also depending heavily on listener

experience—different listeners (or groups of listeners) will prioritise different relations within a

work. Multiple quite different networks of topical relations can exist simultaneously, depending

on what topics the listener identifies. Viewing networks as dynamic both within and across

listeners begins to systematise a culturally-situated pluralist application of transformational

thinking.

Moving transformational thinking towards incorporating cultural objects reflects aesthetic

shifts in the later twentieth century, specifically works showing an influence from the strict pitch,

rhythmic etc. organisation that reached a zenith towards the mid-twentieth century, yet

simultaneously wholeheartedly embrace the freedom to refer to external elements, popular or

otherwise. The latter reflects the experiments in collage; associations with the work's wider

formal relations are been explored by Losada.[7] Although Thomas Adès often quotes other works

in his own or uses other works as palimpsests—such as 'Nimrod' in 'O Albion' from

Arcadiana—he also weaves more subtle external references that, in their more anonymous

heritage, resemble topics. Alongside this, Adès' music provides a rich source of transformational

approaches and discussion of extra-musical material.[8] The composer has described his eclectic

influences, overlapping with attitudes familiar to topic theory:

> I'm also fascinated by the surface, the play of surfaces, in a way that's not to do with style…setting the
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> piece in a location, even if it's an abstract piece, like Beethoven does. All of his work, say, a sonata
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> movement – it has a topos. The topos might be a cantilena, or a recitative and aria, or it might be pastoral,

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[7] Losada 2008, Losada 2009.

[8] For transformational-influenced approaches to Adés, see Roeder 2006, Roeder 2009b, Fox 2014, Stoecker 2015, and Stoecker 2016. For discussions of extra-musical influences, see Gallon 2011, Wells 2012, , Venn 2014, Whittall 2016. [Also Ades Studies book, specifically Roeder's

or it might be a tempest scene, or it might be any number of things in one movement. He doesn't all it these

things, but the point is the pieces have a location…It's a very honest praxis. And often the symphonic

dialogue is a struggle between that topos, or genre, and some logic in the material.[9]

So we have to be honest about these things and not be ashamed to say, 'Oh this?' I got it in the sixteenth

century,' or whatever. Some people get horrified by this. But if the composer has properly heard beneath

the surfaces, you are not really conscious of them: you just see the beauty of the form beneath.[10]

Whilst acknowledging the diversity of influence, in both these quotes Adès demonstrates a

concern for relating the surface-level appearance to some deeper formal logic. In this regard,

Living Toys—a work the composer admits the 'literary influences are very near the

surface'[11]—contains a wealth of references, from distinct topics to obscure quotations. Complex

references to tonality in both Adès' music and topics defined by tonal elements further enrich

this perspective.[12]

After briefly exploring how definitions of a topic might apply to music in the later twentieth

century, I will explore how a Hero and Three Blind Mice topic can form a network. I develop an

Expansion transformation based upon Aligned Cycles to model these relationships. Three more

topics are introduced, pulling away from the initially-established harmonic characteristics

towards the pull of the pitch C. This demonstrates the method's plasticity. Finally, I explore the

limits of Roeder's 'aural salience' by discussing the near-impossible perception of a quotation of

'Daisy Bell' which, despite theoretically present and possible to relate to the other references,

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article]
[9] Adès and Service 2012, 78.
[10] Ibid..
[11] Ibid..
[12] On Adès' relationship to tonality, see Wörner 2017.

might only be identifiable via the movement's title and close score inspection.

Defining a Topic for the later twentieth century

Topic theory has continued to exert an influence on a wider range of music beyond the initial

centralising around eighteenth-century music. Recent expansions into early twentieth-century

music begin to explore the role of topics from a twentieth-century standpoints,[13] but the

implications of topic theory for later twentieth-century music are yet to be fully explored. Given

the predilection for embracing diverse—and recurring—references, this repertoire is particularly

rich, but the precise definition of a topic requires nuancing. Many aspects remain relevant:

Ratner's early definition as simply 'subjects for musical discourse', implying a

conventionalisation and a recurrence,[14] mirrored by Robert Hatten's definition of 'a familiar

style type with easily recognizable musical features'.[15] Danuta Mirka emphasises the importing

of material, or 'musical styles and genres taken out of their proper context and used in another

one'.[16] The requirement to decontextualise and abstract certain styles and genres remains

important in the later twentieth century, but two nuances are necessary.

    First, the more flexible distinction between topic and quotation.[17] Experiments with collage

techniques raised the role of quotation to dominate the work. Occasionally—such as Metzer

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[13] See McKay 2003, Narum 2013, Schumann 2015, Frymoyer 2017, Johnson 2017.
[14] Ratner 1980, 9.
[15] Hatten 2014, 514.
[16] Mirka ibid., 2.
[17] This more flexible interpretation of references echoes Michael Klein's adaption of Kristeva's concept of intertextuality, or the shaping of meaning in one text through its connections to other texts. Whilst my conception of a musical work as a fabric of its surroundings is strongly indebted to Klein, in focusing on specific harmonic characteristics of topics and quotations, I hone in on a single aspect latent in his work. See Klein 2005.

points out with the repeated use of the chorale 'Es ist genug'[18]—the quotation might shift

towards a 'subject for musical discourse' with 'easily recognizable features', contained within

the expressive web of associations. Likewise, topics' listener-dependency might shift

identification: as Raymond Monelle notes, apparently generic horn calls may be specific

quotations, possibly isolated from the composer's own experience.[19] For example, 'Es ist genug'

could be perceived as simply a chorale, without the wide repertoire associations.

Second—related to the first—whether a reference has an anonymous heritage as is central to

a topic or specific quotation may not be immediately evident. For example, the nursery rhyme

Three Blind Mice, to which I will soon refer, has an unclear origin.[20] First published in England

by Thomas Ravenscroft in a collection of songs in 1609, Ravenscroft's authorship of the tune is

unclear and whether he wrote or adapted the words, or neither, as it was a familiar folk song.[21]

Likewise, the melody's recurring quotation (here only the incipit) beings to standardise its

characteristics, leading Monelle to suggest that such instances could be viewed as

'quasi-topics'.[22] Such historical ambiguities shift the status of the reference as a topic or

quotation, but associations with simplicity, innocence, childhood, etc remain. Despite this

overlap, the distinction remains: a topic's type and token is not present in the specific

requirements necessary to refer to a quotation. Nevertheless, as both topic and quotation occupy

the semiotic plane of a culturally-recognisable object signifying beyond the autonomous work

and are common across the twentieth century, I shall refer to quotations in a similar manner as

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[18] Metzer 2018.

[19] Monelle 2006a.

[20] At least the English-language version. The folk song is pervasive across Europe with differing texts, supporting a more 'anonymous' folk-song heritage. Mahler also quotes Three Blind Mice, within a march topic, in Symphony no.7, first movement, bb.487-494 (see also Monelle 2000, 186).

[21] See Ravenscroft 1609.

topics, although the latter is my primary focus.

Topic theory often appears in the same breath as theories of musical narrative. Such explicit narratising of musical events is at odds with Lewin's 'serious problems' with event-based networks,[23] as for him the mapping of literary theory onto musical form can misleadingly represent the listener's experiences: 'precisely because of the strongly narrative temporality, each arrow has to bear enormous weight in asserting some sort of phenomenological presence'.[24] Rather than overburden a musical object with too much responsibility, such weight of presence is apt for topics given their 'easily recognizable musical features', to echo Hatten. I will explore both spatial- and event-based networks; initially I will construct a small spatial network to model two topics, but as more topics are added—themselves increasingly distantly related to the transformational space—I will show that the loosening of the network's stricture can reveal more general topical characteristic associations. Such an expansion may limit the rules of the transformational space, but maintains the analytical integrity.

This raises a question: what is the status of a topic conceived within a transformational space rather than an event network? An event-network model of topics suggests a singular and transient appearance of a topic's, occuring once before disappearing. In contrast, a spatial network suggests that the topic recurs continually at different degrees throughout the work, or a "topic space" where traces of each topic's characteristics are identifiable throughout. This

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[22] Monelle 2006b, 166.

[23] Lewin 1993, 32.

[24] Ibid.. Although soon after he justifies the certain examples because they 'tell a better story' (41). Roeder notes that this attitude is not consistent with Lewin's own writings and other adaptions of his work: 'it is not clear whether he intended these reservations to be general, methodological ones, or whether they are specific to the difficult piece at hand. In any case, event networks dominate the other articles and GMIT, which devotes much discussion to the significance of their "precedence ordering" and "input" and "output" nodes.' Roeder 2009a, 1.6. See Lewin 1987, 209-218.

conception echoes Barthes' conception quoted above of certain 'codes' existing in a work, of which any can function as an entrance to a work and—similar to a transformational space—not every element or process is present in the work.

Two caveats regarding the current aims. First, I am not writing each topic's cultural history, rather taking one way to conceptualise each. Monelle's extensive excavating of the historical and literary origin of topics is the hallmark of this approach; my focus on the formal associations renders this of secondary importance. Second, I will focus primarily on pitch relations as they are more straightforward to model transformationally, but other factors (rhythm, timbre, instrumentation, texture, framing) inform my approach.

Living Toys

Inscribed the preface of *Living Toys* is a poem:

When they asked him what he wanted to be, the boy did not name any of the men's
occupations, as they had all hoped he would, but
replied: "I am going to be a hero, and dance with angels and bulls, and fight with bulls
and soldiers, and die a hero in a distant place, and
be buried a hero." Hearing the child's words, the men felt small, understanding that they
were not heroes, and that their lives were less
substantial than the dreams which surrounded him like toys.

Allegedly 'translated from the Spanish', the poem is actually Adès' own post-composition

concoction.[25] Unsurprisingly, such imagery can relate to elements in the score, familiar as imported from beyond the current work. For example, the horn's first entry (ex.1) is loosely reminiscent of "heroic" works such as the *Eroica* and *Ein Heldenleben*, through timbre, the rising and falling contour, and key "on" Eb.[26] I will call this topic the Hero. The two distinct elements—rising (y) and descending (y')—are both three notes, spaced equally.[27] Accordingly, we can map y to y', expanding the intervals, followed by T-7R.

A brief aside to define what I term the Expansion operation, adapted from the technique of Aligned Cycles, a favourite device of Adès.[28] An Aligned Cycle is when two (or more, often three) interval cycles unfold in the same direction. The Exp operation follows the same principle, except one pitch is stationary. Example 2 maps a whole expanding three-note group cycle. The subscript refers to the intervals' expansion rather than the surface realisation, such that the highest line E-Gb-G#-Bb is expanding by [2], but the interval is consistent. Expanding beyond local Aligned Cycles allows for modelling of larger-scale relationships, whilst maintaining the same harmonic logic. Furthermore, although Aligned Cycles are primarily conceived as note-against-note sonorities, fundamentally the process is a form of expanding vertical intervals, useful in mapping these relationship when they are expressed melodically. Example 3 maps this transformational process from y to y'. Notice the decimal of Exp(4.5) to approximately account

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[25] Adès mentions this to Tom Service: 'I invented this story, which is in the score, and said it was 'from the Spanish': that was after I'd written the piece, and I felt I had to find a way of explaining it. Wrongly, of course. Music is its own excuse.' Adès and Service 2012, 72.

[26] Although the fundamental is Ab, y starts with Eb; Bb and Ab might be considered as embodying the dominant and subdominant of Ab in y'

[27] The horn's natural tuning renders this slightly fuzzy, but the two non-ET notes tend towards the appropriate pitch: the -31c Gb is closer to G-quarter-flat than Gb and the Bb is only 4 cents sharp.

[28] Aligned Cycles were first identified by Alban Berg and later discussed by George Perle and David Headlam. More recently Philip Stoecker has demonstrated the extent of their appearance and formal role in Adès' music. See Stoecker 2014, Stoecker 2015, Stoecker 2016.

for the pitch deviation.

EXAMPLE 1: First appearance of horn as the Hero topic, showing relationship between the

opening patterns

EXAMPLE 2: Complete three-note Exp(1) cycle.


EXAMPLE 3: Transformational process from y to y'.

Isolating this moment for a transformational treatment can be justified through its topical

association, but the transformational relationship established remains internal to the phrase. Let

us take another prominent reference that recurs throughout: Three Blind Mice. Three Blind Mice

appears gradually gains prominence through repeated iterations the second movement 'Aurochs'

(bb.154-217), persisting into the first 'interlude' movement BALETT. As with the opening horn

phrase, Three Blind Mice (hereafter TBM) is characterised by three notes, equally-spaced, but

always descending. Akin to the "Heroic" key of Eb, TBM in *Living Toys* is primarily centred on

middle C, where many students may learn it. Adès' reflects this, though he only uses the song's

first three notes. We can therefore relate the TBM set to the y and y' relations. Ex.4 maps the

Exp and T/R transformational processes from the y and y' of the Hero's first appearance to the

archetypal TBM. This necessitates first contracting the Hero's intervals to (024) through the

inverse of Exp, followed by a transposition to C (and retrograde). Ex.5 further abstracts these

relationships into a network, clarifying Exp's prevalence across these three isolated objects. Note

that the negative T transposition: this accounts for TBM's *registral* significance around middle C

rather than any C.

Although this repeated occurrence of E-D-C can be readily associated with the quasi-topic of

Three Blind Mice—aided by the poem's context—such a reference is not fixed, instead

depending on listener experience and expectations. Instead, the three notes might evoke a

Schenkerian three-line descent. This reference is not foreign to Adès, as an image of a three-line

Schenkerian analysis in C appears on the cover of his 1990 Chamber Symphony op.2. Indeed,

Adès describes the poem above attached to *Living Toys* as 'my version of Schenkerian analysis,

to do it that way, as a fiction'.[29] That is, a way of interpreting a work *ex post facto*, whether in

literary or musical terms. Regardless of Adès' opinions on Schenkerian analysis, this highlights

the slippery context-dependent nature of the sign. Both can be embodied in an E-D-C descent,

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[29] Adès and Service 2012, 73.

but point to distinctly divergent interpretations.
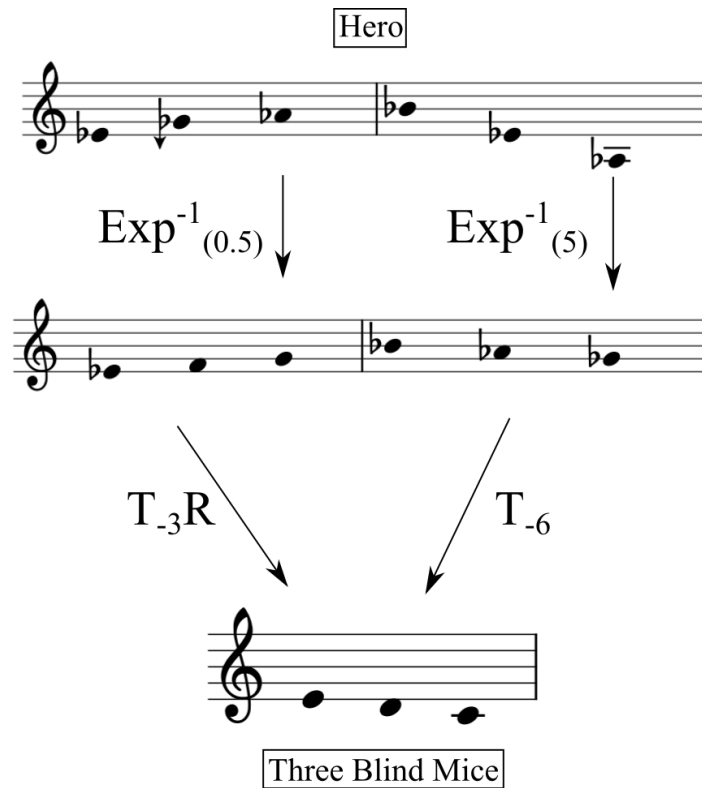
EXAMPLE 4: Hero to Three Blind Mice at Actant levels transformational network.
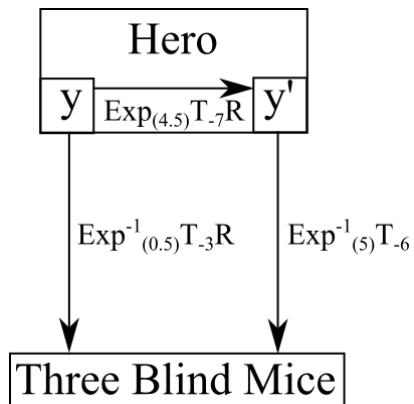
EXAMPLE 5: Hero to Three Blind Mice further abstracted.

Nevertheless, the relationship between the Heroic topic and the E-D-C descent are visceral.

Ex.6 excerpts the opening of the first interlude movement BALETT, showing the interactions

between the TBM and Hero figures. Despite the Hero appearing intially much earlier in the

work, Three Blind Mice is the input node for this excerpt, appearing in b.251 followed by a

return of the rising Heroic pattern from the opening, related through a Retrograde T3 Expansion.

Following these two topics' clear appearances, a version of Three Blind Mice appears transposed

up a minor sixth. Although this retains the (024) structure, the characteristic "in C" is lost,

against the particularly pronounced E-D-C return in the next bar. At this point the isolation of

Three Blind Mice as a single object is lessened. Another line is added in the next phrase,

retaining the three notes descending, but shifts to semitones to further dilute the characteristics,

creating an Aligned Cycle. Significantly, abstract interval structures do not satisfactorily account

for the specific pitch relations of the characteristic "in C" of Three Blind Mice and "on Eb" of

the Hero. Considered in isolation, only those with perfect pitch may establish further associations

with C major and youth, or the historical association of Eb and heroic references. But as *both* are

present, the listener might hear their pitch relationship, thereby cementing these key associations.

In other words, only through the both topics' presence does each gain further meaning.

   Ex.7 abstracts ex.6 to model an event-orientated network. The nestling of the Hero within

Three Blind Mice is clear. Note that the single input of TBM is expanded to three simultaneous

appearances of TBM in the output, forming an Aligned Cycle. Across the passage, the TBM

harmonic characteristics begin to be lost:[30] the transposition T8 moves away from "in C" but

retains the (024) structure; the further transposition and contraction into (012) retains the

three-note equally spaced, but looses the characteristic interval structure and "in C". Given these

iterations quick succession, the loosening of characteristics is visceral.

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[30] This dilution of characteristics is similar to Frymoyer's Hierarchy of Characteristics, though
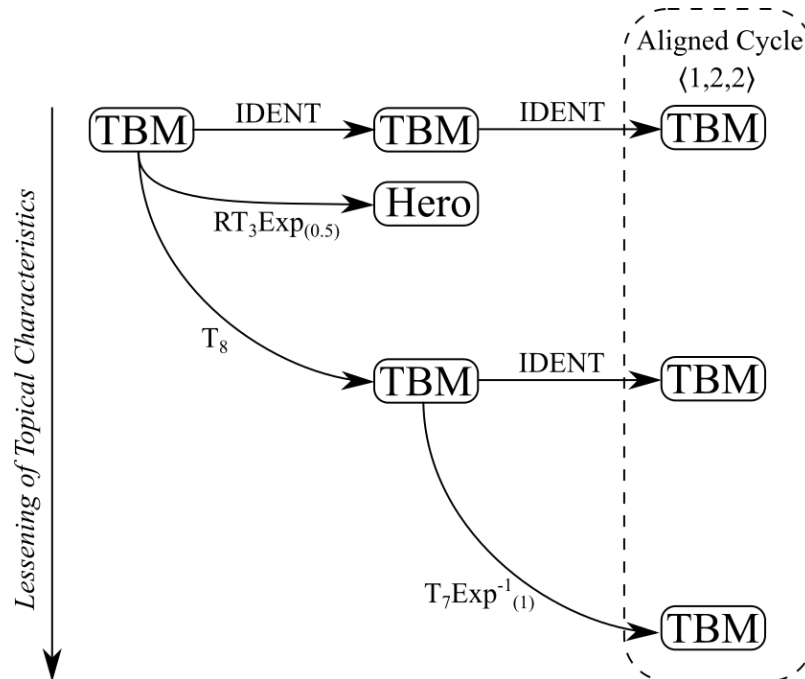these elements do not fit comfortably into her categories. See Frymoyer 2017.

EXAMPLE 6: Extraction of Three Blind Mice and Hero elements at the opening of BALETT,

showing interaction of Three Blind Mice and Hero and descent into an aligned cycle in b.262.

EXAMPLE 7: Transformational network of Three Blind Mice (TBM) and Hero, chronologically

mapping ex.6 to degree of topical presence.

Same Excerpt, More Topics

In the second movement, entitled 'Aurochs', a figure extracted in ex. 8 appears. Multiple

non-musical aspects point towards an Iberian flavour: the movement's title—an auroch is an

extinct bull which populated the Europe until the seventeenth century—the poem's mention of a

'fight with bulls', and the reproduction of Goya's *The Speed and Daring of Juanito Apiñani in*

the Ring of Madrid 1815–16 (1816) on the Faber edition cover of the work. The fast triplet

stepwise triplet pattern in the trumpet perhaps echoes music heard at a bull fight, resembling

elements of Rimsky-Korsakov's *Capriccio Espagnole* and Ravel's *Rhapsodie Espagnol.* I shall

therefore call this the Toreador topic. As with other topics, this appellation is an anonymous

heritage and not intended to refer to a specific version of the pattern.

The topic's pitches resemble the Hero and Three Blind Mice in their isolation of three pitches, but now both ascending and descending. (Each recurrence of this pattern is based around the octatonic, a three-note cycle, accounting for the B in this excerpt.) The prominent first appearance near the movement's opening (b.127) is based upon C, as Three Blind Mice. As the Toreador is another three-note group, we can relate this to TBM, but rather than characterise E-D-C as equally spaced, we can view the pitches through another lens: the first three notes of a C major scale. Accordingly, the Toreador topic is characterised by the first three notes of a C *minor* scale. We can model the relationships between the Hero, TBM, and Toreador topics in ex.9. This adapts the Expansion process central to the previous transformations, but isolates the Toreador's notation to a single pitch descending by semitone. Accordingly, the subscript notation is split into two, the first referring to the top line, the second to the middle line. The numbers' closeness (0.5,0) show little has shifted. Furthermore, the Toreador's ascent/descent pattern incorporates both the TBM and Hero contours, cementing it as a characteristic transformation.

EXAMPLE 8: Toreador topic.

Three
Blind
Mice   Toreador

Hero

y $\text{Exp}^{-1}_{(0.5)}(y)$ $\text{Exp}^{-1}_{(0.5,0)}(y)$
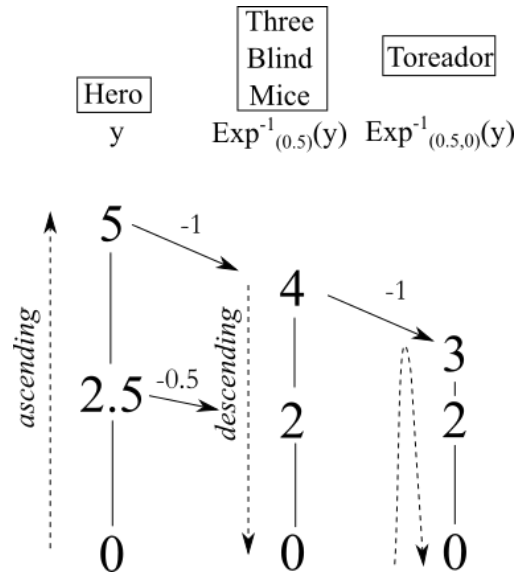
EXAMPLE 9: Intervallic and contour relationships between Hero, Three Blind Mice, and

Toreador, showing nuancing of Exp transformation.

Through disrupting the transformational space constructed in ex.2, we move away from strict

definitions. But this process highlights an important separation: the Three Blind Mice (024),

previously defined by equally-spaced intervals to associate it with the Hero, in relation to the

Toreador topic is defined through an association with the first three notes of the major scale.

With this viewpoint, the relationship between (024) and (023) can be more readily understood as

embodying the major-minor opposition. This echoes the semiotic principle of extracting a

common *seme* as a property of an object, contributing to defining a sign but alone is not

signifying.[31] If we continue this logic of creating different networks from extracting various

characteristics from each topic, we can expand out our network of associations.

Throughout the opening movements is a repeated tolling (ex.10), often on a gong with the

pitches C-G, sometimes G-D. Does this satisfy our definition of a topic? Yes: if we take the

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[31] The concept of 'seme' is developed by Greimas, writing: '*qualities* define *things*, that is, that
the seme *s* is one of the elements constituting the object-term *A* and that *A*, at the end of an
exhaustive analysis, is defined as the collection of semes *s1*, *s2*, *s3*, and so on' [NUMBERS

definitions above, it *is* a decontextualized familiar style type, the common ritualistic

tolling—echoing the opening of Britten's *War Requiem*—which is imported and refers to

something beyond the current work—in this case, as in Britten, death: the 'hero' of the poem

perhaps 'dying a distant death'. Also at the opening, and similarly prominent throughout, is an

iambic pattern (ex.11). This evokes a Scotch Snap, with the fourths/fifths of the repeated gong

accompanying in a manner evoking Scottish reels. Although the Scotch Snap technically only

refers to the iambic rhythm, in *Living Toys* the rhythmic pattern is primarily on C, D, and G

triads, often a fourth or fifth apart as the Ritualistic Tolling, perhaps evoking a wider folk-like

simplicity. More associations are coming into view now: the pitch C recurs, as does a dialogue

between major and minor, complementing the Three Blind Mice and Toreador interaction
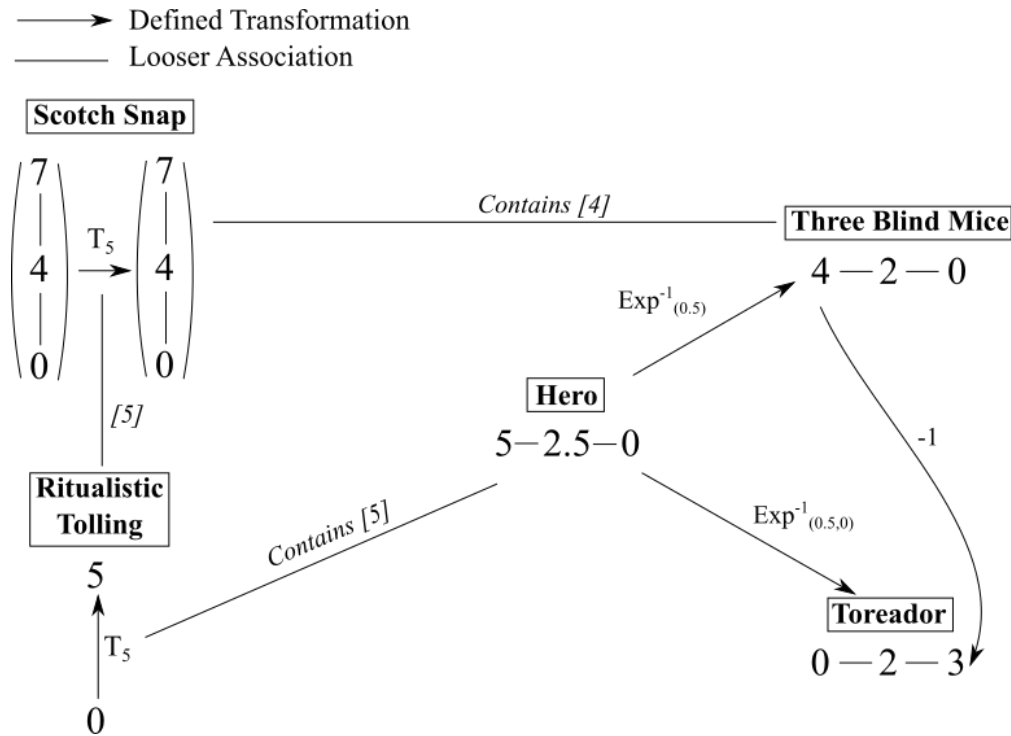
outlined above.

EXAMPLE 10: Repeated tolling at the opening, bb.5-15.

EXAMPLE 11: Instances of a Scotch Snap pattern across the first three movements

From these observations we can expand to a more comprehensive network incorporating both

the transformations established and the looser associations. In the process, we begin to move away from the stricture of a closed transformational space to conceiving through more general, non-transformational associations. Example 12 maps some abstract relations of these five topics. As we add more topics, the major/minor mode increases the significance of [4] and [5], suggestive of topics functioning more broadly as embodying tonal elements present in the work. In changing the focus on a listener prioritising the Scotch Snap and Ritualistic Tolling—even frame it as the initial node of the network—the harmonic language of *Living Toys* shifts from the previous analysis' focus on expansion and contraction to associations of [4] and [5] with major/minor. This demonstrates how the malleability of a network—and therefore harmonic focus—is dependent on the listener's experience with a topic. Though the Scotch Snap pattern is visceral, associating it with the drone of the Tolling as signifying something beyond heightens the harmonic constituents. This approach echoes Agawu's characterisation of 'contextually defined fluidity' when identifying topics,[32] relying on the pluralist understandings of what elements of a musical objects might be conventionalised. With these references we move beyond the more explicit associations with Adès' poem. Thus, to strongly cement any reference would be misleading; rather, the possibility for starkly differing associations is the *richness* of the references. And depending on the listener's familiarity and contexts, they might form different relations. The choice of "what" is aurally-salient to start building a network depends on the listener's experiences and expectations.

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[32] Agawu 1991, 36

Defined Transformation
Looser Association

Scotch Snap

$$\begin{pmatrix} 7 \\ | \\ 4 \\ | \\ 0 \end{pmatrix} \xrightarrow{T_5} \begin{pmatrix} 7 \\ | \\ 4 \\ | \\ 0 \end{pmatrix}$$

Contains [4]

Three Blind Mice
$4-2-0$

$Exp^{-1}{}_{(0.5)}$

[5]

Hero
$5-2.5-0$

-1

Ritualistic Tolling
5

Contains [5]

$Exp^{-1}{}_{(0.5,0)}$

Toreador
$0-2-3$

T_5

0

EXAMPLE 12: Abstract relations and associations between defining harmonic element, incorporating five topics. Note inversional equivalence is assumed for the [5] and [7], as both are common in the Scotch Snap and Ritualistic Tolling.

Now the possible relations between five topics are established, let us return to the same passage in ex.6, including the new material. Example 13 maintains the strict relations established previously, expanding to the looser observations read temporally from left to right. This topically-dense passage shows how the relationships identified in the ex.12 are visceral, shifting towards other significant elements in the harmony if the listener focuses on different topical objects. The isolated Three Blind Mice is productive, extracting the implied C harmony to the C-G Ritualistic Tolling and into triads in the Scotch Snap. In this passage the triads are minor, possibly associated with the previously established prevalence of C major-minor dialogue in the Three Blind Mice and Toreador. The equally-spaced interval structure is extracted for the Hero,

though now the expansion to a fourth Eb-Ab mirrors the G-C fourth of the Ritualistic Tolling. A

diluted version of the Toreador appears in b.258: it maintains the sixteenth-note triplet figure, but

now closely resembles the spacing of the harmonic series—embodied in the Hero—on C, now

increasingly emerging as a gravitional pitch as more topics are added.

EXAMPLE 13 (previous page): Ex.6 widened to incorporate three new topics. Note how the increasing number of allusions to C raise the status of the "in C" of Three Blind Mice.

The excerpt above is from the opening of *Living Toys'* first interlude movement. The second interlude movement, BATTLE, contains similar interactions between Three Blind Mice and the Hero, but expands the Aligned Cycles, reduced in ex.14. The excerpt starts with Three Blind Mice in the soprano recorder, but diluted through the extremely high tessitura, slow tempo, and "key" of Bb. The piccolo trumpet moves around a whole-tone scale, primarily descending in [2]s. The <1,2,2> aligned cycle frames the three notes G#-F#-E as a group, the (024) pointing toward TBM except for landing on C. During this descent the horn enters, playing a rising gesture suggestive of the Hero but likewise not yet on the idiomatic key and *piano.* The piccolo trumpet begins to creep towards C in the second phrase, but in the third phrase overshoots to Ab. Only in the phrase from b.402 is E-D-C stated, this realisation of TBM coinciding with two events: first, the top line of the aligned cycle is shifted such that the final sonority is a bare fifth C-G, suddenly cementing the "key" of C referent; second, the Hero is realised through rising, "in" Eb, and *f-ff*. In reprising the opening Eb-G[qt]b-Ab, the Exp relationship between the two topics is visceral re-established alongside the defining Eb-C pole. These various passes through expanded harmonies and aligned cycles cements these transformations as characteristic.

EXAMPLE 14: Interactions of Three Blind Mice and Hero characteristics at the opening of

BATTLE

HAL and the Limits of Perception

In terms of topics and quotations, Roeder's aural salience condition centralises the listener's

familiarity with the reference. Whilst quotations are often framed, they may be more hidden. As

Edward Venn notes, in *Living Toys* the song 'Daisy Bell' appears in the double bass and

contrabassoon from bb.353-369 (ex.15).[33] Though the listener might be primed for recognising

the melody through the movement's title 'H.A.L.'s Death',[34] the low register, *ppp* dynamic, lack

of clear metre, and slow tempo render the quotation barely audible even if the listener is prepared

for an appearance. If a listener does identify it as semantically—and therefore potentially

formally—important, the networks above could expand further. For example, the elements

labelled x and y can relate to the networks already established: x is a falling arpeggio, possibly

opposed to the rising harmonic series of the Hero; a three-note rising figure y could relate to the

three-note figures outlined initially in ex.9, with the (023) interval structure directly mirroring

the Toreador.

But neither of these relationships are aurally salient. Despite this potential for a

theoretically-neat placing into dialogue with the topics above, such an enigmatic quotation

distant from the other topics limits any visceral transformational relationship. Even on repeated

hearings, the listener would likely require the score and familiarity with *2001* to reach this

association. Nevertheless, if a listener were to centralise Daisy Bell's characteristics through this

association they would shift the harmony focus, further widening possible hearings of the

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[33] Venn 2017, 30.

[34] H.A.L is likely a reference to the artificial intelligence main antagonist HAL9000 of Stanley
Kubrick's *2001: A Space Odyssey*. In the film, HAL shifts from the dependable member of the
ship's crew to increasingly untrustworthy, but as HAL begins to malfunction, the crew decide to
shut HAL down. Faced with this prospect, HAL continues its goals, in the process attempting to
kill the crew. Finally one of the astronauts decides to go into the airlock to deactive HAL. This
scene is without music except for the computer singing 'Daisy Bell (bicycle built for two)' as it

harmony of the same music depending on the listener's experience. Allusions to the scotch-snap

pattern in the third movement of Janáček's *Sinfonietta*—subtitled 'Military Sinfonietta'[35]—and

the opening of Strauss' *Ein Heldenleben* might expand these networks further.

EXAMPLE 15: (a) Daisy Bell, original version, bb,1-8 (b) appearance in *Living Toys*,

contrabassoon and contrabass only.

Conclusion

Building transformational relations through an element as aurally-salient as a topic allows the

cultural objects to contribute to form. This approach may not reach the level of syntactical

progressions hoped for by Agawu and Caplin but, in mirroring transformational thinking, this

approach begins to establish ways of conceiving topical relations. Through systematically

relating groups of pitches signify reaches a systematisation strived for—but difficult to reach—in

literary theories. Greimas and Barthes aims of systematising sign relationships through opposing

and relations *can* be reached in the medium of music, permitted through the translation of pitches

---

dies.
[35] Adès' appreciation of Janáček's music is well established, notably in his contribution to
Janáček Studies Adès 1999. More recently, he described the *Sinfonietta* as 'my absolutely

into distinct groups. Post-tonal music which slips into external references is a particularly rich

source.

   But this mathematical ideal limits the potential role of topics, especially the culturally- and

socially- (even politically-) rooted place of the listener. These multiple readings of BALETT

demonstrate the potential to instigate further multiple simultaneous perspectives. From the

varying emphasis on different topics, different characteristics are deemed important for the form;

that is, what is decided to satisfy Roeder's 'aurally salient' requirement relies upon the listener's

recognition of the topic.[36] Listeners approaching a work with different generic expectations and

experience will therefore focus on different topics, consequently different networks can be

constructed simultaneously of the same work. Returning to Barthes' description of his approach

to analysing Balzac's *Sarrasine*, he describes how

> The five codes create a kind of network…the blanks and looseness of the analysis will be like footprints
>
> marking the escape of the text, for if the text is subject to some form, this form is not unitary, architectonic,
>
> finite.[37]

His conception of form as flexible, loose, with parts of the work (the 'blanks') not systematically

accounted for reflects this approach. Roeder's characterisation of transformational thinking

mirrors elements of Barthes, noting that transformational analyses are 'at best imperfect and

---

favourite piece of music' (see Maddocks 2020).

[36] Klein expresses this concept succinctly: 'Our Derridean visions of the unfixed sign pointing everywhere at once become the measure of how fragile musical meaning can be, even to those listeners born within the time and place of the historical work' Klein 2005, 55.

[37] Barthes 1974, 20. Note that what Barthes calls 'codes' are not synonymous with semes…. Nevertheless, his description of relating their meaning and expressions in this manner is still evocative for interpreting topics.

incomplete signifiers of musical experience'.[38] Whilst Lewin's conception *does* strive to account

for every note, the transformational space contains elements not appearing in the work, evoking

'blanks' of the form. And the movement through space highlights certain nodes as 'special

functions':

> The piece [Stockhausen's *Klavierstuck III*], in this sense, makes several "passes" through sections of its
>
> network; the beginnings and endings of the path-segments thereby acquire special functions. Furthermore,
>
> as the path-segments fill or suggest the totality of the network, they constitute one way in which the piece,
>
> articulated chronologically into its several "passes," projects form.[39]

Simply put, these aurally salient 'special functions' gain more perceptual relevance if they are

topics.

What is the status of an aesthetic hovering between the poles of exploiting cultural units and

more abstract numerising? Maintaining a cohesive harmonic, rhythm etc. logic alongside

exploring a plethora of external influences is characteristic of art in the later twentieth century.

As Losada confronts in her analysis of collage-based works of Rochberg, Berio, and

Zimmerman, the oft-presumed disunity of collage is not necessarily the reality, rather familiar

serial process such as chromatic aggregates persist. This cohesion of otherwise disparate found

materials is, for Fredric Jameson, an identifiable historical trend: works 'no longer simply

"quote", as a Joyce or a Mahler might have done, but incorporate into their very substance'.[40]

This restricting of collage's more extreme characterisations moves strongly towards an aesthetic

of formal cohesion. Such a delicate balancing of using cultural objects within form is noted by

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[38] Roeder 2009a, 12.2.
[39] Lewin 1993, 17.
[40] Jameson 1991, 3.

Adès:

> I would write something, it would suggest a borrowing, I would push that borrowing into my own language
>
> and take it to an absurd point of distortion and from that, still other music would pop out. It is a dream
>
> logic, I suppose.[41]

More broadly, the 'dream logic' echoes elements of Surrealist aesthetics, a framework already applied to Adès' music.[42] Specifically, a central element of Surrealist aesthetics is associating two objects through an unfamiliar medium, or what André Breton called a 'previously neglected association'.[43] Applied to topics in transformational theory, one element of the topic (in this case, harmony) associates topics with no immediate expressive correspondence. For example, the poetic images of a Hero and Three Blind Mice do not immediately overlap; but their pitch structures *can* be associated through transformations. Adès' reference to toys in the title is highly suggestive of an aesthetic centred upon innocent play of objects rather than serious critical dissection, or what Jameson's characterising of the 'postmodern moment' as 'the emergence of a new kind of flatness or depthlessness, a new kind of superficiality in the most literal sense'.[44]

Embedding references in the text pushes back against parody or irony often associated with topics in the twentieth century, or what Susan McClary dismally describes as 'explicating Picasso's *Guernica* by proudly identifying the 'horsie', without somehow noticing the creature's

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[41] Adès and Service 2012, 27.

[42] For discussion of Surrealism and Ades' music, see Taruskin 2009, Massey 2018, Brian Moseley (in Ades Studies). Adès' mother is a well-known authority on Surrealism.

[43] Breton 1969, 26. See Donaldson 2020 for an extended discussion of Surrealist aesthetics as they might apply to music. A similar standpoint is mentioned by Rochberg, see Losada 2009, 96: 'As Rochberg puts it: "Pluralism, as I understand it, does not mean a simplistic array of different things somehow struck together in arbitrary fashion but a way of seeing new possibilities of relationships; of discovering and uncovering hidden connections and working with them structurally; of joining antipodes without boiling out their tensions"']

anguished grimace of the other figures on the canvas'.[45] Parody, as conceived by Linda

Hutcheon, relies on exaggeration or distortion and marking out an object against its context,

neither of which overtly appear in these excerpts, despite Adès' more general assertion above.[46]

Whilst the analysis outlined above can incorporate interpreting references in a broader social or

political context, the lack of overt manipulation of referential materials in the analysis above is

more suggestive of Jameson's dehistoricised spatial pastiche rather than Hutcheon's more

actively critical model.[47] And viewing this way is primarily formal: traces of the topics'

characteristics are 'footprints' across the text. Rather than marked out against the prevailing

style, the topics contribute to the work's tapestry whilst maintaining their identity as imported

styles or genres taken out of their proper context.

In sum, whilst the influence of Barthes and other literary theorists has tended to focus on

music's expressive meanings in context—or as Nicholas McKay puts it, the 'what it is' rather

than the 'how it's done'[48]—if we view topics in post-tonal music *through* the lens of a network

(i.e. 'how it's done'), we can reach a different perspective on certain post-tonal forms. And if we

acknowledge that the wide range of potential topics in recent music might each be identified

from different standpoints—each creating subtly different formal constructions—then we *can*

acknowledge multiple subjective conceptions. By identifying multiple 'what it is' or 'what they

are', we achieve a pluralistic 'how it's done'. In short, we can hear the living toys in *Living Toys*.

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[44] Jameson 1991, 9.

[45] McClary 2001, 326.

[46] Hutcheon 1985. Yayoi Uno Everett uses Hutcheon's model of parody to detail expressive interactions in Ligeti's *Le Grand Macabre*, a work which is significantly more apt for Hutcheon's model than *Living Toys*.

[47] The heavily-manipulated quotation of 'Daisy Bell' is an exception to the other five topics' notably less distorted treatment.

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[48] McKay 2007, 160.

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