

Gestural interconversion and connotative precision

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Why is this article necessary?

The easiest way to answer this question is to describe two everyday scenarios.

Scenario 1

You're a jobbing composer in the media industry. It's three in the morning and you have to deliver cues for a TV series before 9 a.m. You've run out of inspiration and just need to get the job done. You don't recall and you don't have time to check what Goldsmith or Morricone did for similar scenes or bridges, nor to rework some obscure library music track. Perhaps a basic encyclopedia of musical archetypes might help? That might allow you to vary slightly on well-established semiotic patterns of music or provoke you into finding an unusual solution to your audiovisual problem. The trouble is that no such encyclopedia exists and that it is unlikely ever to be produced. If only there were some mental trick to steer your thoughts in the right direction ...

Scenario 2

You're teaching first-year media students and have reached the point in the course where you have to tell them about the various roles of music in film, TV, computer games etc. None of the subject's set books deal satisfactorily with this broad topic and you don't know where to turn. If only there were some guidelines presenting basic tenets of music semiotics to explain what music can communicate, particularly when it occurs in conjunction with moving images.

Caveat and terminology

This article will *not* solve the sort of problems just described but it will, I hope, explain one possible way of thinking about some basic questions of music semiotics relevant to the moving image. Before explaining those processes of gestural interconversion, though, I need to define

two terms—*anaphone* and *genre synecdoche*—, both useful concepts in getting to grips with the basics of musical meaning.

Anaphone

If *analogy* means another way of saying the same thing, *anaphone* just means using an existing model outside music to produce musical sounds resembling that model. An anaphone is basically an iconic sign type and can be sonic and/or kinetic and/or tactile.

A *sonic anaphone* can be thought of as the quasi-programmatic or onomatopoeic *stylistisation* of ‘non-musical’ sound, for example an overdriven guitar sounding like a motor-bike, or the ‘ding-dong bells’ at the start of Steiner’s overture to *Gone with the Wind*, or the thunderstorm in Beethoven’s *Pastorale Symphony*.

Kinetic anaphones entail the stylised musical representation of movement rather than sound. Such movement can be visualised as that of a human or humans riding, driving, flying, walking, running, strolling, etc. through, round, across, over, into, out of, on to, up from, to and fro, up and down, in relation to a particular environment or objects, or from one environment to another. Kinetic anaphones can also be visualised as the movement of animals (e.g. flights of bumble bees, stampedes of cattle) or objects (e.g. rocket launches, truck driving, trains moving) or as the subjectivised movement of objectively stationary objects or beings, e.g. the sort of movement the human hand makes when outlining rolling hills, waves on the sea, quadratic skyscrapers, jagged rocks, etc. (see main part of this article). Even stillness can be stylised as a kinetic anaphone through the very lack of explicit metronomic time in relation to the regular beats of the heart, the regular periodicity of breathing, etc.¹ Of course, since the perception of any sound requires the positioning or movement of a body or bodies in relation to another or others, many sonic anaphones are also kinetic (e.g. a fuzzed ‘motor-bike’ guitar panned from one side to another, horse-hoof clip-clops in 2/4 or 6/8 gallop metre). Similarly, kinetic or sonic anaphones can also be tactile.

The most familiar type of *tactile anaphone* is that produced by slowly moving, romantic string underscores—string pads, as they are often

1. For example the open landscapes like the start of Borodin’s *On the Steppes of Central Asia* (1880), the end of Mussorgsky’s *Night on a Bare Mountain*, (1863), or ‘On the Open Prairie’ from Copland’s ballet suite *Billy the Kid* (1941). See the section on museme 1 in Tagg (2000) for more details.

known because they pad potential holes and fill out spaces in the sonic texture. Such string pads, if performed acoustically, are played by several musicians, rarely solo, in order to produce a thicker, smoother carpet of sound. What they lack in distinct audible attack and decay is made up for by a consistency of envelope rich in partials, all of which produces a sort of warm but shimmering sonic blur that is usually enhanced by extra reverb which further diffuses the sound throughout the acoustic space, producing an even more enveloping texture. This homogeneous, unbroken, thick, rich, viscous sound connotes, by tactile synaesthesia, sensations of luxury, comfort and smoothness. To verify this, just check titles and in-house descriptions of any library music track featuring thick string scoring of non-dissonant sonorities.²

It should be noted that *anaphone types are not mutually exclusive*. For example, Herrmann's well-known music for the famous shower scene in *Psycho* contains anaphones that are at the same time sonic, kinetic and tactile. The sonic anaphone can be heard as stylising the sound of a knife being sharpened or as a repeated female scream (bows scraping harsh dissonances *fortissimo* at high pitch); the kinetic anaphone is that of repeated, deliberate, powerful, regular, angular, disjointed, hacking movement (*staccato e sforzando* for Norman Bates's repeated stabs); the tactile aspect is sharp and piercing (acute, physical pain), the glissando acciacature suggesting the initial resistance offered by the skin before the knife plunges into the victim's body.

Genre synecdoche

Genre synecdoche may be a clumsy term but it is pretty accurate. In verbal language, a *synecdoche* (pronounced sin-*eck*-de-key) is a part-for-whole expression like 'all hands on deck' (all sailors, not just their hands) or 'fifty head of cattle' (not just the heads). By *genre* is meant not just a set of musical-structural rules or traits — a musical *style* — but all cultural rules or traits associated by a particular audience, rightly or wrongly, with the style in question. For example, baggy denims, baseball caps, expletives, sweeping movements of a pointing hand,

2. Note, for example, the tactile qualities ascribed to the following tracks in the catalogue for *Recorded Music for Radio, Film and TV* (Boosey & Hawkes): '*Lullaby Of The City*: soft and velvety, gently flowing'...; '*Penthouse Affair*: ... 'dressed in silk and satin'; '*Amethysts for Esmeralda*: rich and dreamy'; '*Girl In Blue*: lush, smooth'...; '*Valse Anastasie*: romantic, lush'; '*Sequence for Sentimentalists*: rich, romantic'...

two hands brought down to briefly cover the genitals, etc. are just as indicative of *the genre rap* as are Funky Drummer samples, male Sprechgesang and other traits of *rap as a musical style*. A genre synecdoche is therefore an indexical sign type which, by citing elements of a style of 'other' music, allows a particular audience to associate to another time, place or set of people than their own. By citing a small *part* of the 'other' musical style, a genre synecdoche alludes not only to that other style in its entirety but also to the complete genre of which that other musical style is a subset.³ The fact that listeners of my age and general cultural background can see yellowy-brown tight shirts, wide collars, flares and platform shoes in a 1970s disco environment after no more than one 4/4 bar of wah-wah guitar plus hi-hat close on the last quaver suggests how efficient a genre synecdoche can be.⁴

Gestural interconversion

Gestural interconversion is a two-way process that relies on anaphoric connections between music and phenomena we perceive in relation to music. Since *interconversion* means the conversion into each other of two entities, for example from \$1 (US) into €0.80 and from €0.80 into \$1, *gestural interconversion* means the two-way transfer via a communality of gesture between, on the one hand, particular emotions or feelings which are both subjective and internal, and, on the other hand, particular external objects (animate or inanimate) in the material world. Gestural interconversion entails in other words both the projection of an internal emotion via an appropriate gesture on to an external object *and* the emotional and corporeal internalisation or appropriation of an external object through the medium of a gesture corresponding in some way to the perceived form, shape, movement, grain,

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3. The genre synecdoche is in other words doubly metonymic: (1) *part* of a musical style represents the entire musical style; (2) the *solely musical-structural* (stylistic) aspects of a genre signify the *complete set* of behavioural traits that constitute the genre. *Genre* and *style* are used in the senses put forward by Fabbri (1982, 2000).
 4. Instrumental timbre seems to be the simplest way to pull off a genre synecdoche: koto, *accordéon musette*, tin whistle, bagpipes, sitar and didgeridoo can do wonders for telling a mainstream North American audience that the action is taking place elsewhere unless, that is, you in any way belong to the music traditions of which those instruments are supposedly emblematic. Of course, tonal vocabulary, orchestration and rhythmic patterns are also operative parameters in constructing genre synecdoches: a koto using *Zokugaku-sempô* (e.g. c - ab - g - f - db - c, descending) and an *accordéon* playing an up-tempo major-key *valse musette* will 'do', respectively, Japan and 'old Páree' much more efficiently than if the instruments were to play the Super Mario theme or Thomas Newman's music for *American Beauty* (2000).

density, viscosity, etc. of that object. Of course, different cultures and individuals are liable to exhibit different patterns of gestural interconversion, i.e. there can be no absolute or universal agreement as to which particular objects relate via which particular gestures to which particular emotions and vice versa. How does this work? Let's start with some hills.

Hills, sea, fields, trees and caresses

Fig. 1 Profile of the Clwydian range viewed from the Northeast

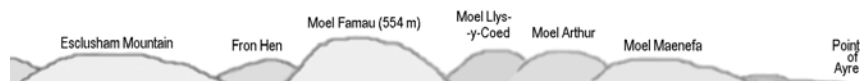


Figure 1 shows the outline of hills in the Clwydian range as seen on a clear day from where I used to live in Liverpool. Moel Famau,⁵ in the middle, is about 35 kilometres away, and the range stretches visibly 45 km in a northwesterly line from left to right. Apart from the vertical axis of figure 1, exaggerated for purposes of clarity, these facts are irrefutable. Equally irrefutable is the fact that if you stretch your arm out partially, with your fingertips around 50 cm from the shoulder and so you can gently swivel your elbow, you will find that the range of hills appears to stretch for about 30 cm from left to right.⁶ You will also find that it takes roughly seven seconds for your fingertips to trace the ups and downs of that skyline from left to right and that three complementary types of movement are necessary in completing this gesture: [1] your upper arm pans gradually from left to right; [2] your wrist swivels to outline the visible contour of each hill and valley; [3] your elbow gently rocks a few degrees at each hilltop and valley bottom. A two-way process of gestural interconversion links the physical characteristics of these hills to the human movements just described. In one direction there is gestural *internalisation* from 45 km of external reality to 30 cm of hand gesture, quite a *small-scale* conversion in terms of map reading (1:150,000). In the other direction there is gestural *externalisation* (projection) from hand gesture to hills on a reciprocally *large* scale. Since musical gesture rather than cartography is at the core of this dis-

5. *Moel* (mutable to *foel*) is Welsh for a rounded hill or mountain. The perceived shape of the hills referred to is therefore also taken into account by those who actually named them. Moreover, the *Famau* in 'Moel Famau' is the mutated plural of *mam* (= mother) and Moel Famau (= 'Mothers Hill') is big and very round (*Collins Gem Welsh Dictionary*, London 1992).

6. The body measurements used here are those of the author whose height is 185 cm.

cussion, the interconversion factor between hills and human gesture will be qualified as *large*, not small.

Figure 2 consists of five shots taken in the Vale of Llangollen in the same range of Welsh hills as in figure 1. A sweep of the hand over the hills shown in figure 2, stretching from left (north) to the knoll on the far right (south) increases the scale of gestural projection to 1:40,000 because a panoramic 33 cm hand sweep over the hills or under the cumulus clouds now covers about 13 km of external reality.

Fig. 2 Dee valley looking east from Plâs Berwyn



Fig. 3 Some patterns of undulant gesturality immanent in Fig. 2



Much closer than the hills in the semi-distance, at about 25 metres from the camera, the tree line presents eight separate waves, all contained within one overall descending sweep spanning about 300 metres, or 33.3 cm at a hand-to-view scale of 1:900. Slightly closer still, at a scale of about 1:600, the foreground terrain descends roughly 200 metres from left to right and is contoured by two rounded dips. The tree on the far right contains its own double bulge at a gestural scale similar to that discussed in conjunction with figure 5, while just to the left of that tree, a sinuous line of other trees down in the valley follow the sweep of a long bend in the river.

Now let's go to the beach.

We shall ignore the distant cordillera in figure 4 and run our hand along the shoreline which traces a gentle curve around the bay for over just over a kilometre while small waves break forward and ebb back close by every seven to eleven seconds. Waves are also visible on the sea, as are changing areas of shadow and sunlight, both producing smooth patterns of movement a few tens of metres away. At least three different scales of gestural interconversion are at work in terms of undulation and of easy hand movements in this scene (max. 30 cm): 1:5,000 for the 1.5 km curve of the beach, 1:70 for the waves on the sea twenty metres away, and 1:20 for the waves coming at your feet from a distance of six metres.

Fig. 4 Sunny day on a beach in Baja California



Fig. 5 British elm



The hills in figure 5 are a few kilometres away and we are standing in pasture land or a meadow. The elm is about 15 metres tall and spreads its branches into luxuriant bushes of foliage. Standing 30 metres from the tree, it takes a few seconds to run your fingers slowly down the usual thirty-odd centimetres as you trace the four main curves of the tree's left side from crown to foot. The scale of gestural externalisation has decreased to about 1:70, much the same as for gentle waves viewed from a beach, or as wind waving across the long grass of a meadow, or through a cornfield.

We'll need to zoom in even more for the next set of objects whose outlines call for undulant hand gestures.

In order to see the entire woman in figure 6a, you would need to be at a distance of about three metres. From that distance, a thirty-centimetre sweep of the arm down the curves, exaggerated by the clothing of the day and indicated by arrows, would take the viewer from head to toe in a few seconds, a scale of about 1:7. Gestural interconversion on the same scale is also applicable horizontally to the two reclining women shown as figures 6b and 6c.

Fig. 6 (a) Woman in fin-de-siècle clothing

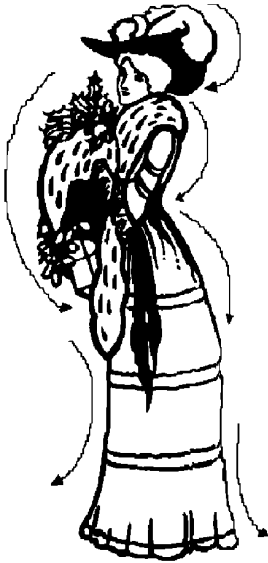


Fig. 6 (b) Maillol: *The Air* (1939)
(Kröller-Müller Museum, Otterloo, Netherlands)

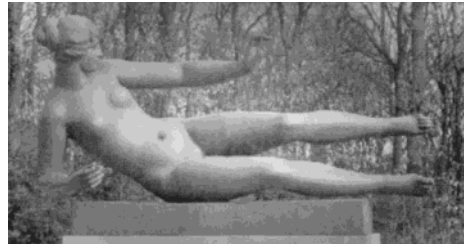


Fig. 6 (c) Goya: *The Nude Maja* (1797)
(Prado Museum, Madrid)



As with the elm in figure 5, note the four main curves of each picture in figure 6: [i] top of head to neck; [ii] shoulder round chest to waist; [iii] waist round hips to knee; [iv] knee round curve of calf to ankle. Note also the four waves of soft cushions emphasising the four main curves of the woman's body in the Goya painting.

Gestural interconversion is reduced to a scale of 1:2 or 1:3 in Virgin and Child portraits of the type shown in figure 7. Head, shoulders and breast are just over a metre away from the viewer, hands and knees a little less, just out of touching distance (1:1, no scale at all). In addition to the little round bundles of baby and breasts, Morales has painted the Virgin with long hair (locks on the left, strands on the right), and emphasised the arc of her neck and shoulders while creating additional

curvature through folds in the smooth and supple material of her flowing garments.

Fig. 7 Morales (c.1568):
Virgin and Child
(Prado, Madrid)



Of course, the Morales Virgin is far from the only European female subject to be portrayed in such terms. Long hair, arc of the neck, body curvature accentuated through exposure of bare flesh or by choice of suitable fabric etc. have been regular features in our culture's visual representations of desirable womanhood and we shall not belabour this obvious aspect of the European male gaze. However, it is important to note that an undulant 30-cm hand gesture fitting the outline of hills and valleys in the far distance, or waves on the sea or of wind in a cornfield at 100 metres, or a tree at 30 metres, etc., etc., corresponds roughly to the actual length of curves in the adult human body,

male or female, for example round the back of the head to the neck, round the nape of the neck to the shoulders, round the shoulders to the elbow, from the elbow round the wrist to the hand and fingers, and so on, right down to the toes. What, you may well ask, does all this have to do with music?

Among the most common connotations mentioned by 607 respondents⁷ on hearing, without visual accompaniment, one of the *Ten Little Title Tunes* analysed in the book of the same name (Tagg & Clarida, 2003: 156-275) were, in descending order of frequency: ROMANTIC, LOVE, [LONG, GREEN] GRASS (usually a MEADOW), SUMMER, COUNTRYSIDE, SEA, A MAN AND A WOMAN, BEAUTIFUL, WALKING, SUN, 19TH CENTURY, [SAILING] BOATS, CALM, PASTORAL, FLOWERS, GIRL, WOMAN, FAMILY, WOODS, COAST, BEACH, UPPER CLASS, WIND, EMOTION, LAKES, HILLS, GLIDING, PIANO, FIELDS, CORNFIELD. The first few bars of the tune eliciting those responses, *The Dream of Olwen*, is shown as example 1. It is worth noting that the tune also scored above average on connotations like SUMMER, WAVY, BECK (CREEK) and RIVER, and that it was the only one to elicit the responses SLOW MOTION, CLASSICAL MUSIC, VALLEYS, ROLLING,

7. For details of these respondents, see Tagg & Clarida (2003: 115-117).

LONG DRESS, LONG HAIR and SHAMPOO [ADVERT]. Of further interest are responses that situate the action to Europe, in particular to ENGLAND, FRANCE, SCOTLAND or AUSTRIA. Finally, *The Dream of Olwen* clocked up nothing in response categories involving speed, conflict, coercion, aggression, crime, asperity, fear, eruption or disorder, and next to nothing in the urban, North American, darkness, danger, modernity or future-time departments.

Ex. 1. Charles Williams: *The Dream of Olwen* (1944)

The musical score for 'The Dream of Olwen' by Charles Williams (1944) is presented in a standard orchestral format. It is in 4/4 time with a tempo of quarter note = 92. The score includes parts for Piano, Violins, Violas, Cello, and Double Basses. The piano part features a melody in the right hand and a bass line in the left hand. The piano part is marked 'mp' and 'legatissimo'. The bass line is marked 'pizz. L.V.' and 'arco'. The score includes four numbered measures with various chords and dynamics. The chords are F, G#/F, C/c, F/a, Cm6, and D7. The dynamics are 'mp' and 'p'. The tempo is '♩ = 92'. The score is for Piano, Violins, Violas, Cello, and Double Basses.

We have already mentioned some of the tune's most common responses—rolling hills, valleys, trees, rivers, long grass, the sea, beaches, individual women, for example—and there is, as we have seen, a clear common denominator between all these phenomena and slowly caressing 30 cm of the bare skin of the person you most desire. *The Dream of Olwen's* top scores for love and romance are in other words fully compatible, in gestural terms, with hills, sea, beaches and trees, verbal semantics be damned. The objective fact that hills are hard and huge, or the sea immense and perilous, is irrelevant because we are dealing with the precision of musical semiosis, not with the verbal precision required to define the objective traits of particular phenomena.

Musical meaning as precision? Isn't music supposed to be polysemic? What, for instance, does Austria have to do with the sea, how do hills relate to shampoo, and how can shampoo or Austria be mentioned in the same breath as love and romance? We'll deal with the shampoo first, then with Austria and finally, through the medium of gestural interconversion, with the notion of music's supposed polysemy.

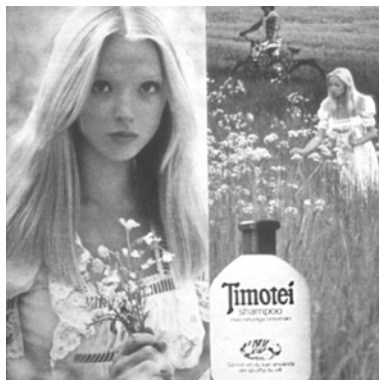
Shampoo and Austria

The Dream of Olwen's shampoo responses describe an advert featuring a young woman, in a long white dress and with flowing blonde hair,

running slow-motion through the long grass of a summer meadow. The five Swedish respondents responsible for this amalgam of images were unequivocally referring to a contemporary commercial for Timotei shampoo (figure 8).

The romantic sensuality of this ad is blatant. The shampoo is not only placed next to an attractive young exemplar of Northern European womanhood with long hair flowing in curves round her head and neck; it is also pictured as belonging to the old-worldly pristine purity of her long, white flowing dress, to the beauty of the simple wild flowers, to the swathes of long grass, and, of course, to the romance implied by the presence of the young man in the background with his bike and his gaze.

Fig. 8 Magazine advert for Timotei shampoo (Elida™ Gibbs®, Sweden, c. 1980)



The sensuality of long, flowing female tresses is sometimes expressed in fantasies of mythical proportions. Apart from Rapunzel,⁸ who has to drop her braids what must logically be several times her own height to hoist her prince up to romance with her, there is a famous scene in Debussy's *Pelléas et Mélisande*,⁹ where the hero, standing below her window high in the castle, asks the heroine to bend over the ledge with her hair untied. Mélisande obliges, her hair cascades down and engulfs Pelléas who bursts into enraptured song.

[Tes cheveux] m'inondent encore jusqu'au cœur; Ils m'inondent encore jusqu'au genoux! Et ils sont doux, ils sont doux comme s'ils tombaient du ciel!¹⁰

The trichogenous 'flooding' of Pelléas and the 'rebounding' of Mélisande's hair both connect with common *Dream of Olwen* responses, such as waves on the sea, the smooth but rippling flow of water courses, and surges of romantic emotion. How does Debussy's orchestral accompaniment underscore this orgy of hair? Pierre Mervant, pro-

8. Jacob and Wilhelm Grimm: *Household Tales* (The Harvard Classics, 1909–14).

9. Act 3, scene 1.

10. [Your hair] drowns me to my very heart; it drowns me right down to my knees! And it's so soft, as soft as if it had fallen from the sky!

fessor at the Paris Conservatoire, describes it in terms of ‘continuous cascading effects’, ‘rises and falls, all legato, covering an octave or more’, ‘plenty of harp’, ‘a rich string carpet’, ‘very waterfall-like’, ‘very much the movement of the sea’.¹¹ Several of these phenomenologically described musical traits are clearly present in example 1, the start of the title tune extract that gave rise to the connotations we mentioned earlier: hills, sea, meadows, water, tree and romance, as well as shampoo. The gestural and tactile amalgam of silky long hair that bobs softly up and down, flows in waves as it moves, sways and engulfs, is often exploited in consumerist propaganda, as shown in figure 9.

Fig. 9 Advert for Pantène Pro Plus Shampoo (Canada, 2003)



Austria may contain three large cities and plenty of jagged mountains but those are not the aspects of the country reported by *The Dream of Olwen*'s two Austria respondents: they specified ‘Tyrol in the sun’ and ‘a trip in an aeroplane over the mountains’. Although the mountains may have jagged peaks when viewed from the ground, a pleasure flight sailing *above* their summits would not present the viewer with a jagged profile of movement, nor would the relatively frictionless, floating movement of the aeroplane produce sudden or harsh gestures.¹² Similarly, the ‘Tyrol’ was not that of downhill skiing or hazardous mountaineering but a summer scene reminiscent of Julie Andrews skipping through meadows singing

Fig. 10 *The Sound of Music* (1958: UK VHS cover, 1986)



11. Phone call, 2001-12-22: ‘effets de cascade’, ‘amplitude d’un octave’, ‘tapis très riche’, ‘il y a aussi de la harpe’, ‘ça fait très chute d’eau, très mouvement de mer’.

12. Unless, of course, there were severe turbulence, or a plane crash, or acrobatic manoeuvres by the pilot. No such dramatic incidents were mentioned as part of the holiday excursion scenario reported by the respondent in question!

'The hills' (not very jagged, either, according to the home video cover art in figure 10) 'are alive with the sound of music'.

Austria and shampoo are rare and extreme examples of responses to the same tune which have been singled out in this article because they serve to polarise one essential difference between verbal and musical precision of meaning. Viewed logocentrically, hills, meadows, sea and shampoo have little or nothing to do with each other but there are numerous gestural common denominators between all these phenomena, if they are contextualised in the cultural setting of those who, like the respondents and myself, belong to a tradition in which certain types of music have been repeatedly heard in conjunction with certain types of visual and/or verbal narrative. Hence, the Austria of *The Sound of Music* and the Timotei shampoo advert both include the European outdoors, summertime, plenty of green grass, and a fresh-looking young woman, in billowing clothes or with flowing hair, moving contentedly through a meadow.

Gestural interconversion: a summary

Taking other responses to *The Dream of Olwen* into consideration — waves on the sea, the rolling hills and valleys, the sandy beach, the trees, the fields, and so on— the gestural common denominators, kinetic and tactile, become obvious because: [a] long grass, flowers, corn in a field, trees and seas can all sway, undulate, ripple or flow; [b] clouds can float, hills and valleys roll; [c] rivers, streams, long hair and long dresses can flow; [d] flowing robes and hair can sway; [e] human movement filmed in slow motion floats or glides; [f] the ideal beach has smooth sand and a gently curving shoreline by the waves of the sea. Such observations illustrate the *first premise of gestural interconversion: its shared characteristics do not derive from the unmediated objective qualities of the phenomena in question but from human gesturality, tactility, bodily movement and sensual perception which, within a given culture, can be observed as relating to the same objective phenomena* — hence the waving of corn *and* of the sea, the swaying of hair *and* of trees, the flowing of loose garments *and* of rivers, etc.

The *second premise of gestural interconversion* follows from the first and states that it is possible to *project the same basic set of human gestures on to all matter and objects perceived, in the manner just described, as sharing the same general qualities*. This premise also assumes that the phenomena concerned are perceived from particular

perspectives, i.e. placed at such a distance from the human and viewed at such an angle as to allow a particular type of gesture to coincide with the *perceived* form, shape, surface or movement of the phenomena in question. If, for example, hills and dales are viewed from a distance of ten kilometres, or the cornfield or meadow from a hundred metres, or a large tree or waves on the sea from twenty, or the full figure of a human from three metres, or his/her head and shoulders from one metre, etc., then the size, proportions and curvature of gestures outlining the profile of all those phenomena at the distances just mentioned will be quite similar.

The *third premise* is a reciprocal corollary of the second. Just as the same human gesture can be projected on to a set of gesturally compatible external objects, the same *external phenomena can*, if perceived from the relevant distance, *also be appropriated and internalised through the medium of gesture*.

It is this *two-way process of projection and appropriation through gesture* which gives rise to the term *gestural interconversion*.

The next aspect of this process to explain is how the semantic field of gesturality described in connotative terms relates to the particular 'sounds of music' giving rise to such connotation. To illustrate this final aspect of gestural interconversion we shall return to *The Dream of Olwen*.

Connotative precision

'[To] show a sinuous or sweeping motion as of a... tree or cornfield in the wind,... [to] undulate' is how my dictionary defines the verb *to wave* in the sense relevant to example 1 and its responses.¹³ *The Dream of Olwen* (example 1) contains several layers of musical waves.

1. Using the melodic contour typology presented by Skog & Bengtsson (1977: 489-492), the *Dream of Olwen's* pitch profile is best described as *wavy* or *arched*. It does not fit the other categories: rising, falling, tumbling, V-shaped, centric, terraced or oscillatory.
2. The piece's harmonic movement, with its modulating ii/IV-V-I(i) progressions,¹⁴ inserted at twice the regular harmonic rhythm in

13. *The Concise Oxford English Dictionary* (1995: 1064). Other meanings of *wave* (as in 'waving goodbye', 'heat wave', 'making waves', 'sound wave' etc.), although *verbally* related, do not concern us here since they are constructed according to criteria of similarity other than the sinuous, sweeping and undulant.

the final bar of each phrase (two instead of one chord per bar), provides anacrusic movement producing a series of ebbs (holding back) and flows (surging forward).¹⁵

3. *The Dream of Olwen* was the only one of the ten title tunes to contain a crescendo-diminuendo swell (rise and fall of volume).¹⁶
4. The sostenuto-pedalled legato sextuplets in the pianist's left hand rise and fall throughout the extract at the rate of two per bar (one every 1.3 seconds) —



To clarify the issue of connotative precision in music, we shall focus on the last of these undulatory patterns. Such arpeggiated figures are two a penny in the art-music piano repertoire of the European Romantic era. Apart from Chopin Nocturnes (e.g. in D \flat major), Liszt's *Liebestraum* and Sinding's *Frühlingsrauschen*, these sostenuto arpeggiato rises and falls of the left hand are common in accompaniments to Romantic Lieder, for example Schumann's *Der Nußbaum* or *Im wunderschönen Monat Mai*,¹⁷ and in piano concertos like Tchaikovsky n $^{\circ}$ 1 in B \flat minor (1878) or Rachmaninov n $^{\circ}$ 2 in C minor (1901), or any of the Romantic piano concertante clones featured on albums like *Big Concerto Movie Themes* (1972, including *The Warsaw Concerto*, *The Legend of the Glass Mountain*, *The Spellbound Concerto*).¹⁸ Covering at least a tenth for each rise and fall, these arpeggios are easily distinguished from other types of keyboard broken-chord motorics by their 'wave length', taking a longer time to cover a larger pitch range before recurring than, say, an Alberti bass figure, and not infrequently executed birhythmically as triplets, quadruplets, sextuplets, etc.¹⁹ Since such birhythm implies a metrically related independence of parts, these arpeggiato figures can be used to offset the melodic line in two special ways: [i] consisting of shorter note values, their greater mobility con-

14. For example, bar 5's Cm 6 →D 7 (iv→V) initiates a modified sequential repeat, in G minor (i), of bars 1-4.
15. Mini-rubato phrasing also contributes to the ebb-and-flow character of the piece (Tagg & Clarida, 2003: 168-169).
16. The crescendo-diminuendo swell in bars 12-14 is not shown in example 1.
17. *Der Nußbaum* is n $^{\circ}$ 3 in *Myrten*, Op.25 and *Im wunderschönen Monat Mai* is n $^{\circ}$ 1 in *Dichterliebe*, Op.48. These two Lieder are on pp. 3 and 106 respectively of *Schumann Lieder I* (Schumann 1840).
18. See Musical References: Addinsell (1942), Rózsa (1945), Rota (1948).
19. As in the middle section of Debussy's *Clair de lune* (1890) or of Addinsell's *Warsaw Concerto* (1942).

trasts with the longer note values of the melody, thereby underlining the relative calm of the latter; [ii] by introducing the element of three against two, the lowest common denominator of tone beats (notes) decreases, in the case of *Olwen*, to crotchets —from quavers in the right hand and from quaver triplets in the left. Both these mechanisms serve to broaden the overall rhythmic and gestural effect of the music, in particular that of the melody.

Another important aspect of this type of long-phase left-hand legato arpeggio is the fast speed at which its constituent notes are executed. Although the basic pulse of the piece is relatively slow and the phase of the riff quite long, there are subdivisions of this easy tempo into two (at the bottom and top of each rise and fall) and into six (constituent notes in each sextuplet). Rises and falls of this type can be visualised as waves (like the widely accepted metaphor used in acoustics to map sounds) with phase length, amplitude, etc. It is therefore not surprising to find that legato (smooth, rounded), high amplitude (large pitch range) and long-phase (duration) arpeggiato figures containing constituent notes of much shorter value than the basic pulse have frequently been used, not only in the Romantic piano repertoire generally speaking, but also in particular as accompaniment to such wavy paramusical phenomena as the sea, flowing water or wind in the trees, which all embody the smooth movement of a large, perceptually fluid body containing much smaller, sometimes barely distinguishable, sounds or movements. To grasp this point more tangibly, one need only think, for example, of individual droplets of spray in a wave breaking on the shore, or the individual leaves of a tree blowing in the breeze, or individual ears of corn moving about their own axis as the wind blows across the whole field, or individual blades of grass or wild flowers brushing against your legs as you walk through a summer meadow, or, as shampoo advertisers exploitatively suggest, strands of hair that tickle pleasantly as the swathe they belong to is swept across bare skin.

The kinetic and tactile value of the repeated 1.3-second anaphone in the *Dream of Olwen* pianist's left hand was pretty clear to the hundreds of respondents hearing the piece in our test sessions and who mentioned summer meadows, rolling hills, fields, the sea, long hair and long dresses (even Austria and shampoo.) Obviously, I am not suggesting that the piano arpeggio 'is' or 'means' or 'signifies' any of these phenomena, but rather that it contributes to creating, in a given cultural context, sensations of whatever, in terms of gesturally mediated touch

and movement, all such phenomena are perceived as sharing in common. There are no words to denote that 'whatever' because it constitutes a gesturally and musically, not verbally, defined connotative field distinguishable, without difficulty for members of the relevant culture, from other gesturally and/or musically mediated connotative fields. The piano arpeggio is, to put it simply, incompatible with, for example, the gestural 'whatever' that computer motherboards, overhead projectors, anvils, cliffs and high-rise buildings might have in common.

Of course, the gesturally mediated 'whatever' of *Olwen's* legato piano arpeggios is a more precise than we have explained so far because: [1] its constituent pitches build tertial chords that are phenomenologically consonant;²⁰ [2] the whole piece is conceived in the harmonic idiom of the Romantic era of European art music;²¹ [3] the arpeggio anaphone accompanies a flowing (wavy/arched) melody containing more than its fair share of sighing intervals;²² [4] it is heard as just one ingredient in a symphonic orchestral texture; [5] it is played low-to-mid register on the piano, not high in the pianist's right hand, nor is it performed by guitar, celesta, bassoon, oboe, bagpipe, bouzouki or kazoo. These five simultaneously occurring factors give the arpeggio anaphone a much tighter connotative focus than has been suggested so far. Unfortunately, there is room here to discuss just one aspect of only one of those factors refining the perceptual field of the anaphone under discussion.

The fact that the legato arpeggio is played low-to-mid register on the piano is significant because such figures played on that particular instrument in that particular way function semiotically not only as an anaphone but also as a genre synecdoche (see p. 3). This aspect of the arpeggio may require some explanation.

20. Yes, the chords are *tertial*, as opposed to quartal, not 'triadic', as opposed to dyadic or tetradic. For an explanation of this terminology, unfortunately necessary, see 'Triads and tertial harmony' in *Tagg's Harmony Handout*, p. 7 at <http://tagg.org/articles/xpdfs/harmonyhandout.pdf> (see also Tagg & Clarida, 2003: 809). Yes, the chords are all *phenomenologically* consonant, even though they may not be so according to conventional European harmony teaching definitions. If the chords had been phenomenologically dissonant, the positive romance connotations would turn sour. Curvilinear, caressing dissonances would suggest unhealthy aspects of the same tactility and gesture.

21. Several of these chords have particular pathos value, most notably the 'Ave Maria' chord and the half-diminished chord. See Tagg & Clarida (2003: 173-216).

22. See 'Swoons and sighs' and 'Grace notes and disjunctive flooding' in Tagg & Clarida (2003: 217-231).

Fig. 11 Holman Hunt: *The Awakening Conscience* (1853)



With its central position in the social space of the nineteenth-century bourgeois home, the piano fulfilled a number of important social functions. It could be used for entertainment but it was also an instrument for raising and maintaining the status of the family rich and 'cultivated' enough to own one. It was to such ends that daughters of the European haute bourgeoisie were encouraged, or forced, to learn to read and play music befitting the family's status on an instrument also befitting that status. Many are the descriptions and drawings of mademoiselles seated at the keyboard, surrounded by male

admirers in the parlour, playing solo or duet, or accompanying a vocal or instrumental soloist. It was not uncommon for one of those males, invited into the family circle on account of his desirable social status, to have been the daughter's suitor, or at least someone rich or famous the ambitious parents wished to foist on her. In such instances, a daughter's classical skills at the keyboard spelt class, while also giving promise of a future home with an excellent hostess for social soirees. However, piano playing in the bourgeois parlour could mean much more than that if the daughter were to provide her suitor's solo efforts with tasteful, gentle and flowing accompaniment at the keyboard, e.g. in the form of some rippling legato arpeggios. The situation could become even more intimate if the couple were to play together a classical symphony in one of those highly popular duet arrangements which gratuitously demanded that they cross hands and grope into each other's registral territory.²³ Seen in this light, it is not unreasonable to assume that the piano, at least in bourgeois circles, had some connotations of

23. Thanks to Ola Stockfelt and his selection of duet arrangements of Mozart's 40th symphony (Stockfelt, 1988).

seduction and romance before the arrival of the fully fledged Romantic piano concerto style so pertinent to the extract under discussion.²⁴

Figure 11 (p. 18) brings together several of the synecdochal and anaphonic values of *The Dream of Olwen*'s piano part. Using common respondent connotations (in small capitals, below), the Holman Hunt painting can be described as follows. A LONG-HAIRED YOUNG WOMAN, wearing a LONG, FLOWING DRESS, is in the process of rising from the lap of the young man who appears to be her LOVER or suitor. The COUPLE is pictured in a EUROPEAN, NINETEENTH-CENTURY, BOURGEOIS SALON. A LEAFY TREE in the SUMMER GARDEN is visible in the mirror, as is the woman's LONG HAIR falling down her back. The COUPLE have been seated at the PIANO. The couple's sheet music is three-staved, probably in the CLASSICAL vein. Perhaps she has been singing? Maybe his left hand has just stopped playing some *Dream-of-Olwen*-like arpeggios —his right foot is still by the sostenuto pedal— or have the fingers of his left hand been executing more AMOROUS sextuplets? The COUPLE's posture and the painting's title certainly suggest that there have just been some ROMANTIC goings-on.

Romantic and parental love

The genre synecdoche explained above helps listeners zoom into the specifically romantic connotations of the piano part under discussion, not that sensations of romance are absent without the bourgeois parlour connection (remember the 30 cm for hills, trees and the human body); it is just that the arpeggios' anaphonic (iconic) value is made clearer, more precise, by the indexical connection just explained. Nevertheless, to substantiate claims of music's connotative precision, it is necessary to demonstrate how particular differences of structural detail in music correspond with particular differences of perception that can be mediated in terms of gesturality and tactility. There is no room here to illustrate more than one small set of such differences of musical semiosis.

'Wavy' and 'swaying' were among the most common descriptors of movement reported by respondents hearing *The Dream of Olwen*. However, although *Olwen* convincingly beat all the other nine tunes in

24. *The Dream of Olwen* appears on *Big Concerto Movie Themes* (1972). Halliwell (1989) describes the films associated with tracks on that album in terms of 'tragic suffusion of hope and love'; see Tagg & Clarida (2003: 203).

terms of undulation, none of our respondents mentioned *lullabies*. This absence of allusion to what must be one of the most widespread functions of wavy, swaying motion in music —rocking a little child to sleep— might seem strange, for three reasons: [i] all *Olwen*'s pleasantly littoral and pelagic connotations imply waves which own some gentle lulling qualities; [ii] the lullaby concept of 'rock-a-bye baby on the tree top' aligns well with everything undulatory mentioned in the pastoral and horticultural sections of *Olwen* responses; [iii] many lullabies in Western culture, such as those shown in example 2, feature piano arpeggio figures spanning the same pitch range as the *Olwen* pianist's left hand.²⁵ So why did our respondents not associate in this direction? Two interrelated sets of factors can help explain this dilemma.

The first set of factors is musical-structural and can be summarised as follows: [i] the lullaby arpeggio surface rate is much slower than *Olwen*'s; [ii] the lullaby melodies are much simpler, more conjunct, and consist of shorter phrases; [iii] the lullaby harmonies are less complex, often featuring droned chord shuttles, and modulate less; [iv] *Olwen*'s dynamics feature overall crescendo and diminuendo swells (bars 6-15) while lullaby dynamics are either constantly low or restricted to small, regularly repeated fluctuations, as in ex. 2c.

Ex. 2. Lullaby arpeggio figures: a) Fauré (1896): *Berceuse*; b) Ijinsky: *Berceuse*
c) Wright: *Lullaby*; d) Sokolowski: *Sérénade*

25. The Fauré example was title music for the BBC's lunchtime children's story spot *Listen with Mother* in the late 1940s. The other three examples are all incipits from pieces in the Lullabies section of Rapée (1924).

The second set of factors is paramusical and relates to the sort of lullaby situation illustrated at the end of this line. As parents we assume that complex melodies including ‘difficult’ intervals, frequent modulation, dramatically swelling crescendi, rippling romantic piano concertante arpeggios, etc. are all somehow unsuitable for lulling a little child to sleep. However, just as there are musical similarities between ‘big concerto movie love themes’ for grown-ups and lullabies for little ones, there are also, as the ubiquity of ‘baby’ in US pop lyrics suggests, patent similarities between being passionately in love and singing a little child to sleep: both involve intense love, deep feelings, great tenderness and bed. Such similarities can also be understood in gestural, tactile and kinetic terms, for example the smooth, rounded movement of a caress, or the similarly curvilinear envelopment of an erotic embrace or of pulling up the bed covers round a sleeping child’s shoulders to provide warmth and comfort, or the to-and-fro of your body gently rocking your ‘baby’ or *the* baby, or being rocked *by* your ‘baby’, or memories of being rocked *as* a baby, etc.



Of course, all these common denominators of gesturality can become a minefield of incestuous confusion—a topic too complex to be discussed here!—if no distinctions are made at an early stage in life between these patently interrelated but nevertheless distinct areas of tactile and kinetic experience. Such distinction is rarely expressed in words and is learnt through gestural and tactile cognition. In musical terms, then, it should come as no surprise that sinuous melodies containing intervallic sighs, dramatic modulation and the tingling titillation of *Olwen*-style sextuplet swell are all absent from lullabies: those sounds and gestures seem to belong to the realm of consenting adults, so to speak. Indeed, only one of 607 respondents (one tenth of the average) mentioned any children at all in conjunction with the piece,²⁶ whereas love-story and lover connotations all exceeded the average by a factor of three, romance by a factor of six, and couples by ten. Does this mean that *Olwen*’s piano arpeggios have sexual overtones?

The short answer is ‘no’ because respondents heard *Olwen* as imbued with amiability, love, romance and tenderness but as seriously under par in the erotic department compared to average scores for all tunes

26. That one respondent wrote: ‘Children running through a summer meadow’. This scenario is clearly one of late teenage or adult nostalgia for childhood, rather than of domestic dysfunction.

in the text battery. Other *Olwen* scores suggest a similar pattern: there was plenty of the curvilinear motion related to love and tenderness, but well under average or none at all by way of the excitement, drama, stimulation, action, adventure, abandon, asperity, simultaneity, suddenness, pulsation, eruption and tumescence that one might also associate with sex. In fact the difference between the 'love' in *Olwen* and that of the lullabies cited as example 2 does not seem to be directly related to sexuality, since *Olwen* (nor, obviously, the lullabies) led listener associations in that direction. The 'consenting adult' character of *Olwen* needs explaining in other terms.

Significant child or children responses were elicited by only two of the ten title tunes. One of those two produced images of children in festive circumstances, usually in a crowd, eating ice-cream and watching a parade or circus, while the other connoted lonely, individual children in the countryside without human company. It is worth noting that neither of those two tunes nor *Olwen* gave rise to responses resembling the EMOTIONAL ABANDON, ECSTASY, OBLIVION, PASSION, WILD or HOT LOVE associated with two of the test battery's more urban tunes. In short, our listeners as a collective were, it seems, able to distinguish musically, not only between romantic and parental love but also between an urban type of eroticism and romantic love (as in *Olwen*).

The way in which these musically elicited distinctions between erotic desire, romantic love and parental tenderness tie in with changing patterns of gender, family and social economy constitutes the topic of another tome altogether. Suffice it here to state that music seems able to communicate clear differences of gestural, tactile, corporeal and emotional behaviour in relation to basic issues of human welfare and survival. At least our respondents were in no doubt as to the kind of love communicated in *The Dream of Olwen*.

The similarities and differences between *Olwen* and the lullabies of example 2 can be summarised as follows.

- The similarities of pitch range, period and phrasing between the *Olwen* pianist's left hand and the lullaby accompaniment waves are anaphorically related to the same swaying movement of a human body gently rocking or being rocked in someone's arms or in a cradle or rocking chair, or in a boat.
- The differences in the waves' surface rates (sextuplet semiquavers in *Olwen*, much slower in the lullabies) may be linked to sensations of tingling and titillation that parents do well to avoid when trying

to lull their little ones to sleep.

- Lullaby tunes, unlike *Olwen*, contain no large intervals, no sudden turns of contour, no large ‘sweeps of the melodic hand’, no dramatic swells of volume.
- Lullaby harmonies remain relatively static while *Olwen* relies on ii-V-i directionality and half-diminished chords as pivots to modulate to a number of different keys.

Therefore, even though the two types of left-hand accompaniment show striking similarities, the structural differences just listed between lullabies and romantic piano concertante music of the *Olwen* type are, it seems, more important in determining perception of a specific *type* of love. The gestural and ideological qualities of these two types of love are quite clear and music seems able to present the distinction between them clearly and efficiently. If, as our respondents reported, this is the case, and if the anaphones and synecdoches acting as musical signifiers of such difference can be identified, as we have tried to show in this article, then there is no reason to subscribe to the widespread academic view that music is polysemic, unless, that is, you prefer to believe that a logocentric approach is appropriate to the analysis of non-verbal symbolic systems. Rather than belabour the incongruity of such an approach to musical meaning, I will let two respected musicians air their view on the conventional ‘wisdom’ of music’s ‘polysemy’.

‘The thoughts which are expressed to me by a piece of music... are not too indefinite to be put into words, but on the contrary too definite.’ (Felix Mendelssohn-Bartholdy)²⁷

‘If a picture is worth a thousand words, a sound is worth a thousand pictures.’ (Dave Thomas)²⁸

Music’s connotative precision can also be seen as an efficient means of vehiculating the kind of culturally constructed concepts that Lakoff (1987: 12, ff.) calls *functional embodiment*, and which he explains as follows.

‘[C]ertain concepts are not merely *understood intellectually*; rather they are *used* automatically, unconsciously, and without noticeable effort as part of normal functioning. Concepts used in this way have a different, and more important, psychological status than those that are only thought about consciously.’

27. Quoted by Cooke (1959: 6)

28. Dave Thomas, leader of avant-garde band Pere Ubu, in *Ear* magazine, vol. 13/10: 27 (February 1989).

If, as appears to be the case, at least in the culture I belong to and with distinctions between different types of love, music contributes to the social patterning of emotion, gesturality and tactility, then music contributes to the construction of concepts that 'have a more important psychological status than those that are only thought about consciously'. In order to do so, music has to be precise.

Since a category is conceptual and since it is by definition 'one of a possibly exhaustive set of classes among which all things might be distributed',²⁹ no two categories can be the same. If this is so, music clearly has to vehiculate different emotional, gestural and tactile concepts with considerable precision. If it were not so, members of the culture my respondents and I belong to would not be able to distinguish between sonic representations of parental, romantic and erotic love. In fact there would be no social need for music if it were unable to embody such socially essential differences, and we musicologists could regress to that stage in our disciplinary evolution when music was still understood vaporously in terms of either 'mere entertainment' or 'high art'.³⁰ The difficulty here is that, since musicology has yet to emerge fully from those epistemic dark ages, and since the understanding of music is still largely overshadowed by the logocentric conventions of formal education and research, it is going to be necessary, for some time to come, to put *noticeable effort* into the *explanation* of approaches and concepts designed to make *intellectual sense*, at a *conscious* level, of a phenomenon —music— whose emotional, gestural and tactile concepts are *repeatedly used* at an *unconscious* level and do *not* generally require the same sort of 'noticeable effort' to produce or understand.

As for the teacher in scenario 2 (p. 1) who has to explain the functions of film music to his/her students, and as for scenario 1's jobbing composer whose inspiration (or unconscious conceptualisation) has run out, I regret that the 'noticeable effort' invested in this text means that I have also run out, not so much of inspiration as of space in which to suggest how conceptual tools like anaphora, genre synecdoche and gestural interconversion can help. True, I never promised to solve the problems of the jobbing composer or media studies teacher in this article, but I do hope this discussion of those concepts will encourage the reader to *think* about music as if it meant something quite tangible.

29. *Concise Oxford Dictionary* (1995: 206-207).

30. See 'The rise of musical absolutism' in Tagg & Clarida (2003: 3-32).

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