Emotions and Musical Analysis After Meyer

By Michael Spitzer

Philosophers and musicians have speculated on the nature of musical emotion for hundreds, even thousands, of years. Leonard B. Meyer's *Emotion and Meaning in Music* (henceforth *Emotion*), first published in 1956, is the most important contribution to this debate in the modern era. Rather than form and expression lying on opposite sides of the fence, as Hanslick had been understood to have argued, Meyer demonstrated that emotions emerged through the cognitive processing of the music's formal patterns. To show this at work, Meyer forged an analytical system grounded in psychological principles capable – at first in theory, increasingly in practice – of empirical verification. Meyer's concise formulation of this idea, repeated ever-after like a mantra, runs: 'Affect or emotion-felt is aroused when an expectation – a tendency to respond – activated by the musical stimulus situation, is temporarily inhibited or permanently blocked' (1956, 31). What precisely constitutes an 'expectation' is an amalgam of universal perceptual principles (studied in the annals of Gestalt psychology and Information Theory) and culturally specific learned conventions (as codified by style historians). This dualism would become polarised and enshrined within the two branches of the mature analytical system presented in Meyer's later *magnum opus*, *Explaining Music*: respectively, the Gestalt processes of (what Narmour would call) the 'implication-realization model' (especially Gap-Fill); and compositional play with stylistic 'archetypes' (or 'schemas').

Strangely, in the course of refining the analytical model, emotion in itself seemed to become less of an issue for Meyer. As its title suggests, *Explaining Music* shares with many of his subsequent texts a focus on musical patterns rather than their

possible affective meanings. Where questions of emotion do arise, they are ostensibly consistent with the original theoretical underpinnings of the 1956 text. Two of these underpinnings are particularly crucial, in view of the radical criticisms Meyer's theory has recently suffered. In the first regard, Meyer upheld a 'deviation theory' of affect, whereby emotion results through departure from a norm: 'Hence deviations can be regarded as emotional or affective stimuli' (1956, 32). Meyer never extensively entertains the possibility that emotion may be produced through *states* rather than *processes*; or through the appreciation of *regularities* (such as 'grooves') instead of subversions. Secondly, Meyer's object was not 'emotion' *per se* but an undifferentiated feeling tone he termed 'affect'. Emotions proper ('love, fear, anger, jealousy, and the like' [17]) emerged, according to Meyer, only through the 'differentiation of affect' in the contexts of specific 'stimulus situations' (19). In a brisk series of moves, Meyer interprets 'emotional behavior' first as purposive, then as communicative, inferring finally that 'designative behavior is a cultural phenomenon, not a natural one' (22). Emotion is thereby parked firmly on the cultural side of the nature/culture (or natural/learned) divide – a dichotomy which governs much of Meyer's thinking. Just as (cultural) stylistic norms inflect (natural) perceptual processes, emotions – associated 'through connotation, mood, or the use of a program or text' – are pertinent only insofar as they 'color and modify our musical affective experience' (270). They are thus *extra-musical*, never penetrating to the heart of musical experience. Emotion's role is thereby severely delimited. In a perspicuous critique, Stephen Davies argues that Meyer's position is not essentially different from the formalism of Hanslick:

> [Hanslick] thinks that thoughts of emotions prompted by music cannot be
> of aesthetic/artistic relevance, because the train of such thoughts must fall

beyond the control of the development of musical materials within the work. Meyer's approach is vulnerable to this attack because it treats the music as a trigger that activates the listener's feeling in an automatic fashion, leaving associations brought from outside the musical context to give that response its emotional individuality (Davies 1994, 290-91).

If Davies were correct, this would be an ironic upshot, given that Meyer's book begins as a polemic against Hanslick. But I shall argue that Davies misrepresents Meyer in several respects.

Three recent books epitomise a paradigm shift in research on music and emotion since Meyer: Juslin and Sloboda's edited collection, *Music and Emotion* (2001); Jenefer Robinson's *Deeper than Reason* (2005); and David Huron's *Sweet Anticipation* (2006). Broadly Neo-Darwinian in their thrust, these new orientations appear to supersede many of Meyer's assumptions, particularly what I have termed his 'deviation theory', and his separation of emotion from affect. (1) They presuppose a much richer and more plural model of emotion as a package of behavior, physiology, autonomic reactions, and intentionality. This brings with it a notion of expression as adaptive behavior, and the idea that this behavior happens within a complex and dynamic cycle of physiological reaction, appraisal, cognitive reflection, and action. (2) They present an equally diverse model of emotional *types*. Thus a Discrete Emotion Theory, considering the various *discrete* emotions as individual systems, rather than aggregating them into a collective phenomenon. In short, within the vast and burgeoning field of current emotion theory, I have found two concepts particularly helpful for my present purpose. First, a two-stage model of emotional perception as a 'quick and dirty' affective appraisal followed by a more leisurely and reflective cognitive re-appraisal. Second, a hypothesis that listeners may process musical patterns not in a single way, as Meyer proposed, but in at least five different

affective 'moods', in line with the five basic emotions of fear, sadness, anger, joy, and tenderness.[1] Can emotions, then, cross over from the extra-musical realm, where Meyer had exiled them, into music itself?

To explore this question, I will take the perhaps surprising tack of *defending* Meyer's original model against the modernisers. I believe that Meyer's oeuvre is rich enough to absorb much of its criticism, particularly the two strands I have identified. Reading Meyer to some extent against the grain, I will revisit his most celebrated and extended analytical study, the essay on the Trio of Mozart's Symphony in G Minor, K. 550.

Ethos

Meyer's thoughts on emotion did in fact develop in a crucial direction, despite the appearance of continuity. The new departure was 'ethos', a concept discussed sporadically through the pages of *Explaining Music*, and defined more carefully (albeit still too briefly) three years later in the article 'Grammatical Simplicity and Relational Richness: The Trio of Mozart's G-Minor Symphony'. According to Meyer's 1976 definition: '*Ethos* refers to those aspects of affective experience that remain relatively constant over time and that are the basis for the characterization of all or part of a composition' (2000, 122).[2] Inspired by Saint-Foix's characterization of the Trio ('moment of sunshine […] calm, reposeful, pellucid, truly idyllic […] charming […] pure and calm […] so Elysian a grace [122]),' Meyer unpacks its ethos in parametric terms as: 'The absence of extremes (or abrupt contrasts) of tempo and register, dynamics and sonority, together with the use of simple, even commonplace, grammatical/syntactic means – melodies made up of easily grasped intervals, flowing

rhythms without marked durational differences, regular meter (with a touch of ambiguity at times), and common triads and chord progressions' (122-3).

How does ethos relate, then, to the affective level of blocked and realised expectations or implications? We remember that the 1956 theory connected affect with quintessentially musical pattern processing, and emotion proper with fundamentally extra-musical associations. The pairings in 1976 seem to switch round. Now, *emotion* moves into the cognitive realm of pattern processing: '*Emotional response*, which changes over time, is a direct result of (and consequently congruent with) cognitive activity. It involves intricate patternings of anticipation and tension, delay and denial, fulfillment and release' (122). Conversely, ethos is now identified with particular character, *and yet, confusingly, also with 'feeling tone'*, which in 1956 was a synonym for 'undifferentiated affect'. This semantic switch has been missed by Meyer's critics. In Davies's words, 'The stimulated affect is, at first, a "feeling tone"; it is not yet a *particular emotion*' (Davies, 287). Likewise, Cook and Dibben talk of 'the kind of undifferentiated affect or feeling tone (in effect a unidimensional variable) that Meyer's theory predicates' (2001, 58).

'Words, words, words',[3] as Meyer might have responded, increasingly fond of quoting the Bard in his later writings. Cutting through the verbiage, the crux of Meyer's position, I argue, is his subsequent point that 'Ethos and emotion invariably qualify each other' (2000, 123). Ethos, or what the 1956 theory called *emotion proper* ('love, fear, anger, jealousy, and the like' [1956, 17]), now has equal standing with the syntax of the implication-realisation model. In fact, ethos slips comfortable into the binary two-tier patterns of Meyer's model: just as learned, cultural, stylistic knowledge inflects and is in turn inflected by innate, natural, Gestalt processes, so the

particular character of ethos now shapes, directs, and qualifies the general tensional relationships of what he now calls 'emotion', and is influenced in turn (see Figure 1):

[Figure 1 Near Here]

I will argue, in due course, that this trajectory of Meyer's thinking converges in part, but not completely, with Discrete Emotion Theory. Ethos is discrete emotion all but in name. Davies's critique is thus wide of the mark. The emotion felt by the listener does not fall 'beyond the control of the development of musical materials within the work'; it is outlined by the dynamic contour of these very materials. The listener will only understand the emotion if he or she cognitively engages with the logical and tensional relationships unfolded within the musical material.

Where Meyer is out of line with current thinking is in his suggestion of a regulative relationship between ethos and emotion; i.e., the model of them *inflecting* each other. Such a view is still quite close to Meyer's established nature/culture dichotomy, where learned knowledge acts as an external pressure point on innate dispositions. By contrast, the model I will propose in this essay (see Figure 2) sees ethos and emotion as parallel streams albeit at different speeds: a 'quick and dirty' channel (ethos) acting simultaneously with a more reflective, finer-grained channel (emotion). Far from being defined by ethos, or even subverting it, musical emotion supports it, relaying the same information at greater length and in finer detail.

[Figure 2 Near Here]

One of the most striking findings of new emotion studies is that listeners are able to 'catch' the music's emotional profile instantaneously, well before its form begins to unfold. Of equal interest is that the intuited emotion conveys information about the piece's likely form or genre. To a certain extent, the music's structure is 'caught' with the emotion; this contradicts the established 'information-processing' paradigm, which holds that form is an abstract mental representation falling at the top of a 'pyramid of processing', long after the perception of the basic attributes of sound (see Clarke 2005, 12-16). How, then, does this 'emotionally intimated form', as it were, relate to the musical form unfolding leisurely in real time, the arena for Meyer's analytical principles? Does it regulate it, match it, subvert it? To address these questions, I should consider what I take to be the five most interesting new orientations in emotion theory; that is, those which seem most pertinent to Meyer's analytical project. As an exercise in extrapolation, this enterprise might have had Meyer's blessing, since he repeatedly desiderates the need for future research in this area: 'The analysis must end here [because] the rigorous analysis of ethetic relationships is beyond my knowledge or skill' (1973, 267).

Five Concepts in New Emotion Theory

1. EMOTION AS MOOD: Musical material presented at the beginning of the piece sets the 'mood' of the music, understanding mood as a kind of longer-lasting, non-transitive emotion which doesn't need to 'be about' anything (Robinson, 392-93). Just as emotions and moods 'regestalt' the world (Robinson, 128), the listener hears the music through the prism of the emotion/mood presented at its opening. (For simplicity, I shall amalgamate 'emotion' and 'mood' into a single term, 'emotion').

2. EMOTION AS HOLISTIC: The implicative function of emotions is holistic, embracing not just melodic patterns but the entire character of the musical material. Meyer's own account here is very revealing: 'Broadly speaking, ethos is delineated both by the disposition of the relatively stable parameters such as tempo and register, dynamic level and mode, and by foreground grammatical/syntactic organization (e.g. the kind of intervals, rhythmic figures, harmonies, and chord progressions)'. He also includes 'conventional iconic gestures' produced through their combination (2000, 122), which brings Meyer into the territory of topic and gesture theory.

3. EMOTION AS BEHAVIOR: Emotions entail not just 'designative behavior', as Meyer had first written (1956, 22), but the whole spectrum of ethology. Thus 'tendency to respond' is extended to what Nico Frijda calls 'action tendencies, directing people towards one kind of behavior instead of another (Sloboda and Juslin, 87). For example, a fearful person faced by the fear-inducing object may react with a variety of action tendencies: closing the eyes, fleeing, or confronting the object. And all these action tendencies are different from those associated with, say, sadness (e.g. withdrawing in order to mourn or reflect) or anger (e.g. attacking or threatening to attack). Izard and Ackerman list the adaptive functions of the discrete emotions (2000, 257-60). Sadness slows the cognitive and motor systems enabling 'a more careful look for the source of trouble and deeper reflection on a disappointing performance' (258). Anger, by contrast, mobilises and sustains 'energy at high levels' (259), preparing the organism for a possible confrontation. As a miming of emotional behavior, music can be expressive in a directly iconic manner, and thus not necessarily through the negative thwarting of expectation. The music's emotion is dynamic rather than static, in spite of Meyer's habitual reference to emotional 'states' (2001, 342). Rather than displaying a sorrowful *quality*, sad music is imitative of

sorrowful *behavior*. Equally, the listener's role is not identificatory but participatory, in the imaginative act of following, understanding, and internalising the 'contour' of the music's unfolding.

4. EMOTIONAL SPACE: In apparent contradistinction to music's 'behavioral' dimension, which presumably needs time in order to unfold, its emotional qualities can be appraised instantaneously via music's sonic parameters. Many researchers have corroborated that performers and listeners are able to 'decode' the cues associated with the expression of the five basic emotions. Patrik Juslin has mapped these cues in 'emotional space' (represented in Figure 3), along the two axes of 'valence' (negative or positive) and 'activity' (high or low intensity).

[Figure 3 Near Here]

Thus, for instance, tenderness is associated with slow tempo, legato articulation, large timing variations etc.; anger with fast tempo, staccato articulation, accents on unstable notes, and so on (2001, 314-15). Critically, these cues are shared by *vocal* expression of these emotions, leading Juslin to propose vocal communication as an evolutionary origin for musical expression (321). In this respect, he follows Meyer in identifying musical 'behavior' as essentially 'designative' in origin. Mappings of emotional space in music have been confined to its sonic parameters; crucially, Juslin's analysis pertains to performers and listeners, but not to the *form* of the music – what I have called its 'formal *behavior*'. Gabrielsson and Lindström have pointed out the 'many gaps, uncertainties, and ambiguities regarding the influence of various structural factors on emotional expression' (2001, 242).

5. THE APPRAISAL/RE-APPRAISAL LOOP: Darwin's evolutionary perspective helps us understand the adaptive role of emotions as enabling us to make a 'quick and dirty' appraisal of a situation, where more considered reflection might prove fatal (as in identifying a snake). The reality of 'affective appraisal' shows that we really do think with our body: decisions can be triggered by physiological and autonomic reactions to novelty or perceived threat. An 'affective appraisal' ('it's a threat!') yields to a 'cognitive appraisal' ('it's a snake!') leading to reflective re-appraisal ('it's behind glass', or 'it's really only a stick'). At a fundamental level, the cyclical interaction (or feedback loop) between affective and cognitive (re-)appraisals is fast and complex, as in Klaus Scherer's theory of the unceasing 'evaluation checks' people carry out monitoring every-day situations (see Scherer 1984). This is true also of Robinson's 'process model' of musical emotion. The point I shall argue, however, is that, on a broader level, the emotions captured by music's sonic cues in Juslin's diagram afford us a 'quick and dirty' affective appraisal, which we can 'catch' with seeming immediacy through what has been called emotional 'contagion' (see Robinson, 391-400). If so, then the formal principles theorised by Meyer are the business of the secondary and tertiary stages: of cognitive appraisal and re-appraisal. First, we 'catch' the emotions via the music's tempo, dynamics, articulation, etc; then we reflect on this emotion by following the music's interplay of pitch, harmonic, and rhythmic patterns.

Returning to Meyer, one may surmise that 'ethos', expressed via 'statistical parameters', corresponds to Juslin's acoustic cues:

When listeners or critics describe music as sad, happy, angry, elated, and so on, [these states] are delineated by the action of what I have called the 'statistical parameters'. These aspects of sound vary in *amount* or *degree*

– for example, register (lower–higher), dynamic level (louder– softer), speed (faster– slower), continuity (gradual– abrupt), and so forth. (2001, 342)

Conversely, what Meyer ultimately called 'emotion' (originally, 'feeling tone') is expressed via the interplay of Gestalt principles, unfolded in form's miming of emotional behavior. Ethos affords affective appraisal; Gestalt rules define cognitive (re-)appraisal. We currently lack a theory for thinking of musical form as emotional behavior. Admittedly, we know even more today than Meyer about the psychology of expectation and anticipation. But little has been written on how patterns of expectancy might mirror behavioral types associated with the discrete emotions. We also need a theory to describe the interaction between these affective and cognitive stages of appraisal. I propose that the music's 'formal behavior' is a synchronic metaphor for the synchronic acoustic cue; that it unfolds the same emotion *in time* that was 'caught' *instantaneously* from its acoustic cues. I here borrow Juslin's own adaptation of Egon Brunswik's suggestive notion of 'vicarious functioning', which describes 'how listeners use the partly interchangeable cues in flexible ways, sometimes shifting from one that is unavailable to another that is available' (324-35).[4] That is, different cues, such as tempo, sound level, timbre, and articulation, are partly redundant in that they may all signal the same emotion – just as different aspects in ecological perception can represent the same phenomenon. Harsh timbre is often expressive of anger; when timbral differentiation isn't available (as in a piano piece), then staccato articulation, certain melodic profiles, or indeed the minor mode itself, can function 'vicariously' to express this emotion. I argue that musical form has a similar 'vicarious functioning'. In some ways, this recuperates the venerable linguistic and philosophical trope of language as a diachronic unfolding (or unpacking) of ideas which are synchronic

within the mind (a model echoed in Schenkerism itself). But it does so in a whole new light.

In what follows, I seek to extend Meyer's ideas in two ways. First, by refracting what he actually said through concepts from new emotion studies. Second, by contextualising Mozart's Trio within the Menuetto which frames it.

The Trio (and Menuetto)

As Meyer does in his analysis, it's helpful to begin with a snap-shot of the Trio's overall structure, taking in the main sign-posts. The movement is in rounded binary form, approximating to a miniature sonata. A first theme (mm. 6) for strings alone is answered by a bridge modulating to the dominant (mm. 6-14), followed by a cadential codetta figures. The development (mm. 18-26) leads back to a recapitulation of all the material heard in the exposition (mm. 26-42), abbreviated from eighteen measures to sixteen (the two bars are shaved off the bridge).

Mozart's handling of the material is exquisitely parsimonious, as one would expect. Everything is implied within the opening measures (Example 2):

[Example 2 Near Here]

The first violin's theme in mm. 1-2 is very rich in possibilities, opened up by its metrical ambiguity. The score says 3/4 with an upbeat, but the ear suggests otherwise, as I will consider shortly. For the present, taking the notation on trust, the quarter-notes outline a broader pattern of a rising step, B-C, which implies a continuation up to D – realised when this pitch is tonicised in the bridge by the flutes (m. 12). D as a

goal is reach at a slightly earlier place when the bridge is recapitulated (the horns D at m. 34).

At an intermediate structural level (Example 3), the violin theme traces a changing-note figure, B-A-C-B – what Gjerdingen terms a 'Pastorella' (2007, 117-22):

[Example 3 Near Here]

Much of Meyer's narrative pivots on the remarkable transformation of the theme in the reprise, when it is covered by the horns at mm. 26-30 (Example 4):

[Example 4 Near Here]

The horns' half-notes on the B and C bring out the changing-note figure, which is somewhat latent at the opening of the Trio. What are lost here are the two third skips, B-D and C-E. The bigger picture, however, is the two triadic motions which support these skips: G-B-E and A-C-E. And this takes us back to the issue of metre.

Putting the score down, what our ears tell us is that the Trio doesn't necessarily begin on an upbeat; historians of theory have recently focused on the plasticity of classical meter, which typically works against the grain of musical notation (see Maurer Zenck 2001; Mirka 2008). As Meyer points out, the opening G's tonic status gives it a metrical emphasis. The ambiguity is fostered by the evenness of note-values and the lack of a bass or accompaniment. We are admittedly predisposed to hear the music as 3/4 beginning on G, given the ternary metre of the preceding Menuetto. But I hear a metrical shift to a duple 2/4 metre half way through the

measure, after the D. D is a more stable pitch than B, and suggests a new down-beat. The first (notated) measure and a half thereby becomes three (implied) bars of 2/4 (Example 5):

[Example 5 Near Here]

There are contextual reasons for this interpretation, since the Menuetto is infested with hemiolas, as we shall presently see. The pattern is extremely short-lived, however; it is immediately superseded by a restoration of the 'wrong' 3/4 metre (with C of m. 1 as downbeat), until this is in turn replaced when the authentic 3/4 crystallizes with the cadential figure of m. 5 (Example 6):

[Example 6 Near Here]

This point marks the terminus of an extraordinary stretch of ambiguity, entailing several successive retrospective reinterpretations. But the crux of the matter is that this ambiguity promotes two strands of material which are not apparent when we focus on the written metre (i.e., with B as downbeat).

The first strand is a rising arpeggio, G-B-D, a feature which comes to the fore in the bridge in the stretto quasi-canonic entries of oboes, flutes, and bassoons; and in the cello and bass figures of the development. Indeed, Meyer observes that the 'wrong' 3/4 metre becomes confirmed in the development, subsuming not just the rising arpeggios but also the woodwind descending scales which answer them (Example 7):

[Example 7 Near Here]

The passage mm. 23-26 unfolds a subtle metric modulation, gradually transforming the function of the descending three-note scale figures. That is, the score suggests that the B-A motif at m. 20 is an appoggiatura; Meyer hears the B instead as an unaccented passing note between C and A (Example 8):

[Example 8 Near Here]

Measures 21-22 behave the same way, as would mm. 23-25 where it not for the new bassoon figures. The bassoons' up-beat trochees (strictly speaking, a middle-accented amphibrach leading to a trochee), plus the acceleration of harmonic rhythm undercuts the upper wind, so that two metrical interpretations are locked into delicate equipoise. Thus the flute's D on the first beat of m. 24 is *equally* an unaccented passing note, and an accented appoggiatura. As the climax of this acceleration, the eighth-notes at m. 25 are perfectly timed to finally commute the final beat of the measure into an unambiguous upbeat discharging into triumphant appoggiatura B-A – significantly, the pitches of the original changing-note figure. The figure's strategic placement at the point of retransition, above a 6/4 chord, beautifully sets up the horns' transformation of the violin's melody at mm. 27-30. One of the things the development does, therefore, is to engineer the B-A-C-B changing-note figure's realisation from its erstwhile latency. It is also important to note that the reprise is metrically clear; the ambiguities have been exorcised in the course of the development.

The second strand, ostensibly a 'bit-player' in Meyer's story, is really more important than it knows. It concerns *dialogue*, the nature of which will become one of the most pressing questions of my essay. Dialogue is crystal-clear in the development, between the rising arpeggios in the cellos and basses, and the falling scales/appoggiaturas in the woodwind. It is fainter within the respective canonic entries (oboes, flutes, bassoons) of the bridge, which is the development's immediate model: faint because the arpeggio-scale/appoggiatura alternation is compressed within the single successive voices, rather than unfolded *between* these voices. The first oboe part is most pertinent here: an arpeggiation climaxing on the critical B-A appoggiatura, initiating the ^6-^5-^4-^3-^2-^1 descent prototypical of Gjerdingen's 'Prinner Riposte' (2007, 45-60) (Example 9):

[Example 9 Near Here]

Arpeggio and scale are welded together into a 'single gesture' not by simple virtue of instrumentation, but also because they together constitute a coherent gap-fill pattern. Meyer's highly sensitive analysis bears citing in full here, to convey the masterly 'thickness' of his description:

> Motive *o* [arpeggio-cum-appoggiatura] is essentially a single gesture.
> Though it can be divided into parts, these are cohesive because they are
> functionally related as gap to beginning of fill. Melodic integrity is
> reinforced by harmonic progression, as tonic (mm. 6-7) moves to
> dominant (m. 8). Furthermore, a single instrumental timbre, that of the
> oboes, connects the parts of the motive and links its two registral levels.
> Motive *q* [string arpeggios together with woodwind scales in the
> development], on the other hand, is made up of patently separate, almost

independent, parts: submotives *x* and *y*. The parts are differentiated by instrumental color, strings followed by woodwinds, and by registral contrast, bass followed by treble winds as well as bassoons. Though the submotives overlap (the winds enter before the strings finish) and are related to one another in a kind of "statement/response" dialogue, no implicative melodic process welds them together. They are not understood as gap and fill. Nor does the mere addition of the seventh (C) create enough harmonic change to ensure cohesive connection (93).

The step Meyer omitted to take is to extrapolate this dialogue back to the very opening of the Trio. The notion of 'dialogue welded into a single gesture' is a useful heuristic for appreciating the nuanced parametric and metrical interplay within mm. 1-2. We can detect ripples of this dialogue on at least two levels here: 'horizontally', in the oscillations of its contour (rising tonic triad [G-B-D] answered by falling dominant-seventh triad [C-A-D]; 'vertically', in the embedding of D-C and B-A appoggiaturas, at discrete structural levels, within these arpeggiations. The 'dialogue' is more imbricated than in the bridge, and of course much more latent than in the development.

It is remarkable how all these elements – the scale to D; the changing-note figure; the rising triad; and its dialogue with the descent – sit together in such a deceptively simple opening gambit. In Meyer's narrative of 'latency to actuality', the material has the potential to go in any of these directions. The delicacy of this potential would be destroyed were its ambiguity clarified. This cognitive openness is the correlative, I argue, to the emotional category of Tenderness. Conversely, Anger is constituted by the aggressive clarity of the Menuetto, whose driven tactus compels entrainment and narrows possibilities.

The hunt for *Substanzgemeinschaft* (thematic unity) is no longer fashionable in music analysis. Hence one of the surprises at the end of Meyer's essay is its exploration of motivic similarities between the Trio and Menuetto (Example 10).

[Example 10 Near Here]

Meyer shows how the main motive of both movements consists 'of a triad that begins on an upbeat'; and 'part of the triad functions as a gap that is subsequently filled' (123). His purpose, however, is not to celebrate the commonality between the two movements but the opposite: 'motivic variation and transformation are important not primarily because they "unify" compositions but because motivic constancy makes differences in ethos more palpable' (124). It is their very *Substanzgemeinschaft* which throws the contrasting emotional character of the Trio and Menuetto into sharp relief:

> The delineation of ethos is also a matter of context. The serenity, grace, and simplicity of the Trio are especially apparent because they are in marked contrast to the dynamism, irregularity, and complexity of the Minuetto [sic] that precedes and follows. The Minuetto is in the minor mode, the Trio in the major; the Minuetto's dynamics are generally *forte*, those of the Trio *piano*; the rhythm of the Minuetto is vigorous and syncopated, that of the Trio smooth and flowing; the Minuetto is largely contrapuntal, the Trio homophonic – and one could continue listing the differences (123).

One can indeed continue listing these differences where Meyer left off. The main ones are thrown into relief by the striking *similarities* of form, chiefly in that both movements have altered reprises. As we saw, the Trio's tonic reprise is transformed by the horns' 'Pastorella' counter-subject, and their involvement in the bridge. The

changes are a lot bigger in the Menuetto, whose recapitulation is entirely re-composed. Moreover, the transformative effect of a new counter-subject is felt earlier than in the Trio, in the Menuetto's development section. Again, as with the Trio, the heart of the matter is the implicative relationships between the start of the Menuetto and these two changes, respectively in the development and recapitulation. If the Trio's 'narrative' is one of increasing clarification and individuation, then the process in the Menuetto runs in the opposite direction: beginning with a conflicted clarity whose tensions are gradually exacerbated, and whose transparency is clouded, leading to an explosion.

The Menuetto's opening gambit – 'a triad that begins on an upbeat' – is blocked by a suspension on the Bb, a gesture with implications for both pitch and metrical patterns (Example 11).

[Example 11 Here]

It subverts the Bb's inclination to continue the arpeggio up to D (which the oboes and clarinets achieve, supplying the 'rule' which the violins break). The suspension also creates a hemiola: a three-against-two metrical conflict, by which the opening six beats are parsed both as three groups of two beats and two groups of three (Example 12):

[Example 12 Near Here]

Mozart thus opens up two axes of conflict. On the pitch axis, the issue is whether the Bb is heard as a gap to be immediately filled (by the succeeding A-G-F#-G turn

figure), or as a step towards a further gap. These are the 'players' in what Saint-Foix characterises as a 'a bitter and merciless struggle' (Saint-Foix 1947, 19), a drama which comes to a head in the remarkable reprise of mm. 28-36. It is here that both tendencies are fully realised.

Mozart disposes the theme in the reprise canonically between first and second violins, and with every single measure featuring a rising leap. The overlay of canonic entries projects a chain of leaps by covering the gap-fill motions, resulting in a perceived 'disconnect' between gap and fill (Example 13):

[Example 13 Near Here]

This development had been prepared by the remarkable new countersubject in the development, where the triadic cascades following each successive leap of a seventh are metrically too compressed and intervalically too disjunct to function as proper fills. I hear the progressive 'opening up' of the leaps – from a third (m. 1) to a seventh (m. 15) to a tenth (m. 30) – together with the eclipse of countervailing linear motion, as expressing the rhetorical profile of Anger: a series of cries.

Metrically, too, mm. 28-36 constitute a climax: as a through-composed nine-measure phrase (in fact, the longest stretch of continuous music in the piece), it 'completes' the six-measure (3+3) pattern established at the opening of the Menuetto, while simultaneously dissolving its antecedent-consequent articulation. Cohn's article details the astonishing complexity of Mozart's 'counterpoint' between binary and ternary hypermetrical schemes. He indicates a shift from triple to duple hypermetre at m. 7, echoed by a similar metrical modulation at m. 24. The reprise, by contrast, effects not a shift but a *co-existence* between the two schemes: 'The suggestions of

both duple and triple hypermeter from the previous six-measure span are superimposed, creating a direct hypermetrical hemiola' (Cohn, 22).

Altogether, the reprise produces an impression which is the opposite of clarity or indeed 'resolution' proper – an effect more in tune with the Kantian sublime, overloading the ear with superabundance. The listener is cognitively all at sea; the music stimulates our synthesizing faculty through its very fragmentation, while resisting it. If this conflict is already laid out in the Menuetto's opening gambit, it is exarcebated ten-fold in the reprise. One must speak, therefore, not of clarifying an ambiguity (the Trio), but of magnifying an already apparent tension. Yet the process does not run cumulatively along a single track; to do fuller justice to the reprise's Anger, we must unravel its paradoxical two-fold function as, simultaneously, a release of pent-up forces, and a destruction of pattern – both a discharge and a thwarting. It is difficult, in fact, to avoid the discredited 'hydraulic' model of musical emotion here, with its notion of 'inner' forces breaking through to the 'surface' – a model kindred with Meyer's concept of 'latency'. (The problem is that 'depth' and 'surface' collapse into each other on closer inspection).[5] The paradox can be reduced to the dual nature of Mozart's 'pattern' in itself. Its impulses – the beats of Mozart's tactus – drive the Anger on, physically and cognitively entraining us to its regularity. At the same time, the beats themselves comprise isolated gestures, resistant of over-arching grouping within a simple metre.

I hear this 'gestural atomism' in the well-formedness of the opening three-measure gambit, its disguised repetition in mm. 4-6, and its *extended* repetition (to an eight-measure phrase) in mm. 7-14 (Example 14):

[Example 14 Near Here]

The phrase in mm. 1-3 is formally closed because of its I-V-I harmony, reworked in mm. 4-6 (compare this with the I-V V-I subject-answer dynamic of the Trio in mm. 1-4). *Pace* Cohn's detection of a hypermetrical shift here, m. 7 marks the onset of a third statement, beginning with the G-Bb leap, but extended now from the expected three measures to eight via a series of cadential evasions. This cascade unfolds an octave transfer of Bb, repeated at m. 11 with a leap back up to the original register and a further descent. Hence Bb's provocative role is intensified: a suspension at m. 1, and agent of the hypermetrical expansion, it becomes the ^6 apex at m. 7, whose registral transfer further extends the hypermeasure from three to five and then eight measures.

The exposition's 'gestural atomism', as threefold repetition, weakens the cogency of its modulation to the dominant minor. As in the Trio, the modulation is achieved via a 'Prinner Riposte'. But there are some instructive differences. The descent from ^6 in the Trio is hidden as an inner voice, covered by the ^7-^8 rise in the flute, and subsumed within the ascending harmonic 5th cycle (G-D-A) of the successive instrumental entries – a 'gradual crescendo' effect which Meyer notes 'creates a sense of destination' (80). As important as its 'gradual' unfolding is the transition's upwards trajectory, which enhances the positive character of tenderness. The 'rising' modulation follows through the contour of the ascending arpeggio idea. Perhaps modulations to the dominant intrinsically 'rise', given the metaphor of 'rising tension'. Nevertheless, everything about the Menuetto's own modulation seems to assuredly *fall*, in a cascade of cadential gestures (mm. 8-14), whereby the descent from ^6 is powerfully projected. But this impression is not quite accurate. Rather than a graduated modulation proper, mediated via a 5th cycle, as in the Trio, we have a

Rückung: an abrupt harmonic shift, pivoting on the reinterpretation of the Eb triad of m. 7 from VI of G minor to IIb of D minor. The naturalised F in the same measure introduces the new key, confirmed a beat later by the C#. The business of modulation is dispatched with fearsome efficiency: the subsequent cascade is technically *post hoc* and supererogatory; a series of rhetorical cadential flourishes, although the tonic resolution is deferred for six measures. We begin to see the connection in angry behavior between fragmentation and redundant repetition. The repeated cadential gestures attempt to retrospectively make good the elided transition, which breaks the exposition in two.

Repetition, then, is operative in the Menuetto both on the note level and the phrase level. It is hard to decide whether the music's inability to properly move or change defines the anger or its cage. Motion begins with the descending third-cycle, Bb-G-Eb of the development, although the three-fold sequential repetition of the three-measure phrase is still mechanical. Motion is confirmed in the reprise's formal continuity, especially in the motivic (regular, augmented, and diminished) fourth-cycle of the successive half-note entries: G-C-F#-Bb-Eb-A (Example 15):

[Example 15 Near Here]

Given the venerable association (since Rameau) of the emotional drives with the cycle of fifths (or fourths), it is tempting to hear this point as a final 'yielding' of affect hitherto repressed. Nevertheless, the experience of anger is dialectical, embracing both the impulse and it check: anger, in competent adults, is seldom expressed in action, and what one feels is the force of *containing* the emotion. It is impossible to decide, therefore, whether the anger of the Menuetto is the teleological drive of the

sequence of repetitions (of beat and phrase), or its blockage at rising levels. At the highest level of all, the reprise both interrupts the pattern, by analogy, metaphorically, to the subversive Bb at m. 1, and marks is culmination.

Of Tenderness, Anger and Other Emotions

Menuetto and Trio confront each other from opposite corners of emotional space (see Figure 3, above). The Trio's 'statistical parameters' match Juslin's expressive cues for Tenderness in most respects at least at the beginning. See its 'low sound level' (piano); 'legato articulation'; 'soft timbre' (violins in mid-range); 'soft duration contrasts' (even quarter-notes). As for its 'large timing variations', I would argue that these can be heard in the metrical ambiguity we have explored, creating an unusually swift cycle of multiple retrospective reinterpretations. The chief difference is the Trio's Allegretto tempo, which aligns it with the category of Happiness ('fast mean tempo'). I will return to this problem in due course. By contrast, the Menuetto matches nearly all Juslin's parameters for Anger: 'high sound level' (tutti and forte); 'sharp timbre' (high wind); 'spectral noise' (minor mode; chromaticism; complex textures); 'fast mean tempo' (Allegretto); 'small tempo variability' (driving tactus); 'staccato articulation' (bass m. 1ff; tutti mm. 11-14); 'abrupt tone attacks'; 'sharp duration contrasts' (quarter-note, half-note, eighth-note differentiation); 'accents on unstable notes' (on Bb, yielding haemiola and hypermetre).

According to Juslin's theory, these musical cues for Tenderness and Anger are consistent with (and possibly evolved from) vocal expressions of the two emotions. A more radical claim would be that musical expression was also congruent with musical form; in other words, that 'designative' behavior was isomorphic with the action tendencies of goal-orientated behavior. There is no reason why this should be the

case; quite the contrary. With Anger, for instance, which is often linked to aggressive behavior, the 'harsh, pressed voice quality' (Ladd *et al* 437) of angry expression may admittedly be analogous to the force used to press the lips in facial expressions of anger (see Ekman 2003, 138). On the other hand,' anger expression may prevent aggression' (Izard and Ackerman, 259), or, as in a baby, can substitute for, or signal frustration at, the very inability to move or act (Lemerise and Dodge, 596).

Equally radical is the hypothesis that musical expression is congruent with differentiated ways of listening; that there are 'tender' and 'angry' modes of music cognition. Let's review the case of Tenderness and Anger in Mozart's Trio and Menuetto, by way of drawing the strands of this essay together.

ACTION TENDENCIES

Tenderness, sometimes called 'Love', is manifest in many of the Trio's formal tendencies which I have earlier associated with the principle of 'dialogue'. Beginning in a state of delicate ambiguity, where the musical strands are imbricated within each other, the material polarises into proper instrumental dialogue, achieving greater individuality and independence, before coming back together in renewed concord around the 3-2 4-3 changing-note schema, or 'Pastorella'. This culminating concord, underscored by the schema's pastoral connotations, is reminiscent of the codas in many of Mozart's love duets (such as 'Fra gli amplessi', from *Così*).

Anger is epitomised in the Menuetto's metrical conflict, which essentially interrupts the music's kinetic drive. After being exarcebated in the development, this conflict erupts into expressive outbreak in the altered reprise, which discharges suppressed emotion as much as it breaks the original pattern all the more powerfully.

The key attribute of a 'tender' way of hearing is a metaphorically 'intersubjective'

dialogue between the listener and the music ('metaphorical', because literal

intersubjectivity operates between people). The Trio invites attention on account of its

pastoral sweetness, accommodates listeners through the openness of its ambiguity,

and entrains them through the protean interplay of its patterns. The Trio's metrical

ambiguities, subject to retrospective reinterpretation, draw the listener into a dialogue:

attending to the music, inferring a pattern, matching it with the musical reality,

inferring a corrected pattern, and so on. A useful reference is the 'happy

protoconversations' reported by Colwyn Trevarthen (1999-2000, 177): the 'primary

intersubjectivity' enacted in mother and infant's rhythmic turns of cross-modal

dialogue.[6] Despite mature lovers' growing ability to integrate closeness and

independence with age, psychologists of emotion agree that peoples' love schemas

'are shaped by children's early experiences and are thus relatively permanent'

(Hatfield and Rapson, 656). The attributes, then, of a 'tender' mode of listening are:

interest and attention to detail; openness to possibility; a yearning towards

clarification of initial ambiguities.

By contrast, an 'angry' way of hearing entails cognitive dissonance, provoked

by contradictory impulses in the music. The Menuetto implies goal-directed behavior

through its kinetic rhythmic drive, yet blocks these goals; it stimulates the search for

over-arching connections through its rhetoric of contrasts and fragments, while

thwarting synthesis; it throws patterns into irresolvable stalemate; it eventually pitches

the listener into a sublime storm of information. Entrainment here is coercive rather

than seductive. The Menuetto enacts not a dialogue with the listener but a conflict.

Driven by antipathy (not attraction), constrained by rigid regularities (not liberated by

ambiguity), the 'angry listener' is driven along a pattern of repetition towards ultimate destruction.

These two listening types really emanate from two nuggets of ancient folk wisdom: the pleasures of unity, and our antipathy toward disunity. It is important to unpack their various entailments (respectively, as Tenderness and Anger) so as to deconstruct the erroneous opposition between cognition and affect. Emotions are not extrinsic add-ons to music cognition; they emerge in its course. Meyer taught us that. His project, nonetheless, was compromised by his tendency to think of emotion proper as a cultural – and therefore external – pressure-point acting upon more primal psychological principles. Adapting Juslin's Brunswikian 'lens model' of expressive communication (Juslin, 324), I have reconfigured the relationship between what Meyer termed 'ethos' and 'emotion' (see Figure 4).

[Figure 4 Near Here]

The music's perceived emotion results through intercorrelation between various cues. Whereas Juslin indicates only 'expressive cues' (corresponding to Meyer's 'ethos'), I have complemented these with a second box, for the music's formal process (corresponding to Meyer's Gestalt-driven 'emotion' proper). Expressive cues yield a 'quick and dirty' affective appraisal; formal process is perceived via a more reflective cognitive appraisal and re-appraisal.

It is essential to my argument that the Gestalt principles unfolding in this analysis do not comprise a generalised affect, shaped and differentiated into distinct emotions through the influence of 'ethos'. On the contrary, they afford a Brunswikian 'vicarious functioning' of the expressive cues, conveying the same emotion, but over

a greater stretch of time and in finer detail. Thus the Gestalt realm is not a kind of neutral plasma; it entails distinct emotional categories. This much was always suggested in Meyer's talk of the surprise, bewilderment, relief, anxiety, and sheer pleasure elicited in the play of implications. Despite his commitment to the Gestalt principles of wholeness, Meyer never attempted to represent these emotions as holistic packages of parameters, nor to align them with specific strands of his analytic theory (ambiguity, pattern continuation, gap-fill, changing-note schemas, etc.).

A dividend of this two-stage model of musical emotion is that it gives space both to the normative shallows and artistic pinnacles of creativity – Mozart's 'simplicity' as well as his 'richness'. The emotions of the Menuetto and Trio are affordant at a musical glance, and don't demand of the listener much learning or multiple hearings. Technically speaking, the information garnered through repeated listening is 'redundant', albeit beautiful in its finer-grained details.

It may be that the concordance between the 'designative' and 'formal' dimensions of musical expression is partly what makes music so special. It helps define musical emotion's peculiar ontology. Another aspect of this ontology is musical emotion's categorical character: expressive cues, designative of a particular emotional category, tend to be stable over the entire duration of a piece. And yet the protean and mixed quality of emotional experience has been celebrated at least as far back as Spinoza, who held that:

> everyone will agree from what has been said, that the emotions may be compounded one with another in so many ways, and so many variations may arise therefrom, as to exceed all possibility of computation. (cited Izard, 264).

Spinoza's pessimism notwithstanding, I follow contemporary discrete-emotion theorists such as Izard in proposing that people tend to understand basic emotions as 'natural kinds', and use them as 'emotion schemas' in everyday life. I would extend this argument to aesthetic musical experience, in the face of strong counter-arguments from psychologists such as Zentner (2008). This position is compatible with the theory that emotional categories tend to operate in pairs, in situations of dynamic interaction: for instance, 'Sadness occurs in several dynamically significant patterns, [such as] the joy-sadness pattern, "tears of joy". One other important pattern is the sadness-anger pattern that characterizes some low moods, such as depression' (Izard and Ackermann, 259).

Mozart's Trio seems to be regulated by the interaction of a Tenderness-Happiness pair. Note the 'staccato articulation' and 'sharp duration contrasts' (grace notes) at mm. 4-6, joined by the 'high sound level' (forte) and 'bright timbre' (oboes and flutes) at mm. 6-14, all of which comport with Juslin's table. Happiness is latent at the start of the Trio, by virtue of tempo, and emerges to the surface as the movement progresses. Happiness, even more than Tenderness, expresses a cognitive openness to contrast; an ability to synthesise divergent materials within schematic patterns. The higher activation of Happiness, of course, is what links it to Anger, given that it is the Menuetto's tempo which sets the pace for the Trio. Otherwise put, there is an aspect of exhilarating joy to Anger's very activation. It is a fallacy that Anger is a uniformly negative emotion. As Lemerise and Dodge make clear, it can yield physical and social benefits as well: 'Anger organizes and regulates internal physiological and psychological processes related to self-defence and mastery, as well as regulating social and interpersonal behaviors' (594).

The Menuetto and Trio as a whole constitute an Anger-Tenderness pair. One could say that the Trio 'comforts' a distressed Menuetto. This is to challenge the popular theory of emotional 'contagion', which suggests an identification between expressed and induced emotion on the basis of physiological and mirror-neuronal sympathy (Robinson, 391-400). Thus a display of anger may not necessarily elicit angry feelings in the listener; he or she may equally experience fear, or even feelings of tenderness, as towards a distressed child. In this respect, the Menuetto *implies* the Trio's response at a powerfully affective level. That the Trio in its turn implies a da capo of Anger only on the level of generic norm (i.e., what the classical style tells us should happen) compounds the pathos of the tragic shock.

The distinction between expressed and induced emotion takes us back to the problem of negative emotions. On this question, psychological research on Anger and Tenderness is strikingly polarised. Anger is the emotion which is easiest to recognise in every-day life (see Scherer *et al* 2001, 83-84), yet hardest to feel in music (Zentner 2008, 504). Listeners practically never report experiencing anger in music. Conversely, Tenderness (like 'wonder', 'transcendence', 'nostalgia', and peacefulness') corresponds to that select group of intrinsically musical emotions: emotions typically evoked by music (see Zentner, 504). A number of lines of inquiry open up. Could it be that musical semiosis – music's ability to signify expressive meaning – is dominated by negative emotions, because these are easier to objectify at a distance? This might explain Robert Hatten's discovery that it is overwhelmingly the *minor-mode* piano sonatas in Beethoven's oeuvre which have received expressive titles ('Moonlight'; 'Pathétique'; 'Tempest'; 'Appassionata'). Because of its rarity, the minor mode was semiotically 'marked' against the Classical style's stereotypical horizon (Hatten 1994, 36). The correlation with Scherer's experiments on vocal-

expressive recognition is striking: 'there was a considerable drop in recognition for joy. This result is mainly due to the frequent confusions of the joy stimuli with the neutral stimuli' (Scherer *et al* 2001, 83-4).

The positive emotions' expressive 'neutrality' is kindred with the privileged position they occupy in musical aesthetics. In this regard, Mozart's Trio is privileged because it is possible for listeners to feel the same emotion they recognise: expressed and induced emotions coincide, promoting a phenomenal 'bonding' between music and subject, extremely suggestive of the mother-child primal scene signalled by the pastoral topic. Conversely, the Anger of the Menuetto is constituted by this emotion's very distance from musical experience. In other words, one needs to work 'harder' to feel musical anger, to get past the hedonic thrill of its high activation. As Aaron Ridley reminds us, the fact that we need to understand (and to have once personally experienced) displayed musical emotions in order to even recognise them as such undermines the expression-induction opposition (Ridley 1995, 131). The elusiveness of felt anger is particularly well served by the two-stage model I have described. If Anger in the Menuetto is initially only expressed (by its ethos), then one of the functions fulfilled by cognitive (re)appraisal is to bring this emotion home to the listener. Anger falls at the very bottom of Zentner's list of sixty-six possible emotions felt by listeners, below Sorrow and Depression (505). This disparity is eloquent witness to one of the disciplinary chasms between psychological and music-theoretical approaches to emotion. It also suggests that the kind of dedicated, reflective, engagement demanded of listeners by the richest artworks currently falls far from music psychology's chief concerns. These are chasms, however, which we are beginning to bridge.

Finally, we are left with the suspicion that Tenderness (Love) and Joy, as well as comprising discrete emotions in themselves, also constitute a basal foundation for the kinds of cognitive principles Meyer investigated. It cannot be purely circumstantial that Meyer chose the Trio from K. 550 as the vehicle for his most sustained analytical exploration. Promoting interest and openness of outlook, Tenderness and Joy describe the ideal listening practice. To listen 'mimetically' with 'exact imagination', as a great German philosopher ostensibly very distant from Meyer's world has argued, is tantamount to *love*.[7] Love as the basis for Meyer's theory of emotion? For a writer so strongly linked with tension and anxiety, and whose last major pronouncement on the subject picked out 'cultural uncertainty' as a chief aesthetic determinant (Meyer 2001, 357), that would indeed be a consummation devoutly to be wished.

NOTES

1. The number and membership of the select club of basic emotions is controversial, particularly as regards music. I here follow Juslin (2001, 314). It is also notable that the chief felt musical emotions (including wonder, nostalgia, and transcendence) are not central categories in general emotion theory. I shall explore this issue at the end of my essay.

2. See also his comment in *Explaining Music*: 'A more basic problem is that, in the absence of an adequate theory of ethetic change and transformation or without a text or program explicitly connecting the character of earlier events to later ones, it is difficult to explain the succession of characteristic gestures or the sequence of different sorts of feeling-tone' (Meyer 1973, 246).

3. *Hamlet* 2.2.192.

4. Egon Brunswik (1903-55), like his contemporary James Gibson, was a pioneer of ecological perception. Although Gibson's ideas became influential in music psychology (e.g. Clarke 2005), Brunswik's approach is arguably better suited to emotion theory because it models the interaction of separate parameters: 'A "Brunswikian" conceptualization of the communicative process in terms of separate cues that are "integrated" – as opposed to a "Gibsonian" conceptualization in terms of more holistic "higher-order" variables – seems to be supported by studies of the physiology of listening' (Juslin 2001, 325).

5. For a critique of the 'hydraulic model' of emotion, attributed to William James, see Solomon (1993), 77-88.

6. Trevarthen sees protoconversation comprised of two elements: '(a) coordination between the various channels of expression and modalities of awareness of the infant' with '(b) a mutual comprehension or empathy by means of which infant and partner improvise an integrated and patterned engagement or performance' (177).

7. The philosopher is Theodor Adorno: 'What is called intellectual is for the most part only what demands work and effort on the part of the hearing [*Gehör*], what demands strength of attention and memory, what demands, in fact, *love*' (cited in Nicholsen 1997, 19).

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